BM PERFORMANCE SYSTEM

ARTISTIC GYMNASTICS COACHING & PERFORMANCE REFERENCE MANUAL

MAG • WAG • Coaching Science • Planning • Safety

Baher Magdy

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For qualified coaches; not a substitute for federation rules, supervised practical certification or medical guidance.

Contents and scope

This edition includes 27 evidence-informed coaching chapters, applied planning tools, apparatus frameworks, observation templates and a reference list. It is not a complete element-by-element technical encyclopedia or official FIG/USAG rulebook.

01 — Coaching philosophy and athlete welfare

02 — Growth, maturation and readiness

03 — Functional anatomy for gymnastics

04 — Biomechanics of rotation and flight

05 — Motor learning and feedback

06 — Assessment and baseline screening

07 — Warm-up and movement preparation

08 — Strength and conditioning foundations

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23 — Injury prevention and emergency response

24 — Communication, safeguarding and inclusion

25 — Session design and coach documentation

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01 · Coaching philosophy and athlete welfare

Core principle

Long-term development should balance technical progress, confidence, enjoyment, schooling, recovery, and athlete voice. Evaluate the training environment before evaluating the athlete.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

Errors and corrective responses

Observation	Likely coaching response
Loss of body shape	Reduce complexity and return to a controlled static or slow pattern.
Inconsistent rhythm	Use a short rhythm drill and a consistent start signal.
Fear or hesitation	Offer a lower-height version and invite athlete feedback.
Pain or repeated collapse	Stop the task, document and follow the appropriate referral pathway.

Coach audit checklist

☐ Objective written ☐ Equipment checked ☐ Readiness confirmed ☐ Cue concise ☐ Technique observed ☐ Progression decision documented ☐ Athlete wellbeing checked

Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

02 · Growth, maturation and readiness

Core principle

Chronological age is not the same as biological maturity. A growth spurt may temporarily change coordination, joint tolerance and recovery. Adapt tasks individually rather than applying rigid age-only standards.

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03 · Functional anatomy for gymnastics

Core principle

Study the shoulder complex, scapular control, spinal stability, hip extension, knee alignment, wrist loading and ankle stiffness. Observe movement quality rather than assuming a single muscle explains a complex skill.

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04 · Biomechanics of rotation and flight

Core principle

Rotation depends on angular momentum, body configuration and take-off conditions. A tighter shape may increase rotational speed in flight, but cannot replace correct take-off mechanics.

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05 · Motor learning and feedback

Core principle

Use demonstrations, concise external cues, purposeful practice and appropriate variation. Reduce feedback frequency as athletes gain autonomy; distinguish performance during practice from retained learning.

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06 · Assessment and baseline screening

Core principle

Record readiness, prior exposure, pain status, range of motion under control, strength endurance, landing mechanics and psychological confidence. Screening is not a medical diagnosis.

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07 · Warm-up and movement preparation

Core principle

Move from general pulse raising to joint-specific control and apparatus-specific patterns. The warm-up should reveal readiness, not merely cause fatigue.

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08 · Strength and conditioning foundations

Core principle

Develop pushing, pulling, bracing, hinging, squatting, jumping and landing patterns with controlled progressions. Quality, supervision and recovery take priority over arbitrary repetitions.

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09 · Mobility and flexibility

Core principle

Differentiate passive range from active control. Build shoulder flexion, thoracic extension, hip extension and split positions gradually; avoid forced stretching and pain.

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10 · Landing, deceleration and impact

Core principle

Teach quiet, balanced landings with hip-knee-ankle alignment and stable trunk. Progress surface, height and complexity only when the athlete repeatedly demonstrates control.

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11 · Floor exercise progression

Core principle

Organize floor work around shapes, rolls, support inversion, cartwheel patterns, handstand control and connected movement. Advanced aerial skills require qualified supervision and approved progressions.

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12 · Vault preparation

Core principle

Separate run mechanics, hurdle rhythm, board contact, first flight, hand support, block and landing. Do not increase approach speed before board accuracy and postural control are reliable.

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13 · Pommel horse and circles

Core principle

Develop front support, shoulder shift, rhythmic weight transfer, leg tension and controlled circle patterns on suitable preparatory equipment before complex sequences.

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14 · Still rings foundations

Core principle

Prioritize shoulder positioning, hanging control, support stability and swing timing. High-load strength holds and dismounts require readiness, progressive loading and expert spotting.

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15 · Parallel bars foundations

Core principle

Progress support walks, swings within control, shoulder elevation, hand placement and basic transitions. Maintain clear landing zones and controlled apparatus setup.

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16 · High bar foundations

Core principle

Teach hanging shapes, grip awareness, tap-swing timing and body tension. Releases, giants and dismounts belong to qualified high-level instruction with appropriate systems.

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17 · Uneven bars foundations

Core principle

Build hollow-arch awareness, grip endurance, support positions, pullover prerequisites and controlled swings. Protect hands and monitor shoulder and wrist loading.

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Errors and corrective responses

Observation	Likely coaching response
Loss of body shape	Reduce complexity and return to a controlled static or slow pattern.
Inconsistent rhythm	Use a short rhythm drill and a consistent start signal.
Fear or hesitation	Offer a lower-height version and invite athlete feedback.
Pain or repeated collapse	Stop the task, document and follow the appropriate referral pathway.

Coach audit checklist

☐ Objective written ☐ Equipment checked ☐ Readiness confirmed ☐ Cue concise ☐ Technique observed ☐ Progression decision documented ☐ Athlete wellbeing checked

Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

18 · Balance beam foundations

Core principle

Teach posture, gaze control, foot placement, locomotion, turns and landing confidence at low height before elevated combinations. Psychological readiness matters.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

Errors and corrective responses

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

19 · Skill progressions and spotting decisions

Core principle

Use a readiness gate: prerequisites, consistent execution, environmental checks, athlete consent and qualified supervision. Never use spotting as a substitute for missing strength or technique.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

Errors and corrective responses

Observation	Likely coaching response
Loss of body shape	Reduce complexity and return to a controlled static or slow pattern.
Inconsistent rhythm	Use a short rhythm drill and a consistent start signal.
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Coach audit checklist

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

20 · Annual periodization and phase design

Core principle

Plan general preparation, specific preparation, pre-competition and competition/recovery phases. Adapt the duration to the competition calendar, growth and individual response rather than assuming every phase must be equal.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

Errors and corrective responses

Observation	Likely coaching response
Loss of body shape	Reduce complexity and return to a controlled static or slow pattern.
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Pain or repeated collapse	Stop the task, document and follow the appropriate referral pathway.

Coach audit checklist

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

21 · Weekly microcycles and load monitoring

Core principle

Track session duration, perceived exertion, skill contacts, landings, sleep and pain reports. Review trends and avoid abrupt changes; no single ratio or number guarantees safety.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

Errors and corrective responses

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Loss of body shape	Reduce complexity and return to a controlled static or slow pattern.
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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

22 · Competition preparation and judging literacy

Core principle

Use the current governing-body rules for the athlete’s discipline, level and competition year. Distinguish execution deductions, difficulty requirements and local event regulations.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

23 · Injury prevention and emergency response

Core principle

Maintain equipment inspections, incident documentation, emergency action plans and referral pathways. Stop loading painful injuries; coaches do not diagnose fractures or clear return to sport.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
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4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

24 · Communication, safeguarding and inclusion

Core principle

Use transparent parent communication, respectful feedback, boundaries and reporting procedures. No humiliation, coercive stretching or unsafe pressure to perform through pain.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
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Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

25 · Session design and coach documentation

Core principle

Write a session objective, prerequisites, equipment plan, station rotation, progression criteria, observation notes and next-session decision. Keep each session traceable.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
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Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

26 · Recovery, nutrition and athlete wellbeing

Core principle

Coordinate with families and qualified professionals regarding sleep, hydration, adequate energy intake and stress. Avoid body-shaming, restrictive dieting and supplement advice outside scope.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

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Inconsistent rhythm	Use a short rhythm drill and a consistent start signal.
Fear or hesitation	Offer a lower-height version and invite athlete feedback.
Pain or repeated collapse	Stop the task, document and follow the appropriate referral pathway.

Coach audit checklist

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

27 · Coach quality assurance and professional learning

Core principle

Audit lesson delivery, safety checks, progression decisions, parent feedback and athlete retention. Build a cycle of observation, reflection, peer review and targeted education.

> **Coaching decision rule**
>
> Advance the athlete only when movement quality, consistency, confidence, and the environment support the next demand. A failed attempt is information, not a reason to force a repetition.

Practical teaching sequence

1. Identify the specific movement objective and one observable success criterion.
2. Check prerequisite strength, mobility, previous experience, emotional readiness and equipment.
3. Demonstrate a simplified version, then practise at a lower risk or lower complexity.
4. Use one clear cue at a time; allow repeated quality attempts with adequate recovery.
5. Observe the most common error and change task constraints rather than merely repeating verbal corrections.
6. Record the result and decide: progress, repeat, regress or refer.

Applied coaching example

At the start of a station, ask the athlete to show three controlled prerequisite repetitions. If the trunk shape or landing alignment deteriorates, lower the task complexity. If technique remains stable, add one carefully selected constraint, such as a longer hold, more precise target, or a controlled connection. Record what changed.

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Fear or hesitation	Offer a lower-height version and invite athlete feedback.
Pain or repeated collapse	Stop the task, document and follow the appropriate referral pathway.

Coach audit checklist

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Evidence anchors: IOC youth development (2015, 2024); NSCA LTAD; IOC load management (2016). Apparatus details are educational coaching frameworks, not official compulsory routines.

Applied appendix A: 60-minute developmental session

Component	Minutes
Arrival, equipment and wellness check	5
Dynamic warm-up and landing patterns	10
Shape and support station	10
Apparatus skill station A	15
Apparatus skill station B	15
Cool-down and coach log	5

This is an illustrative template, not a fixed prescription. Reduce duration or intensity when readiness, facility, age or recovery requires it.

Applied appendix B: 12-week development cycle

Weeks	Emphasis	Decision gate
1–3	Baseline, shapes, landing and apparatus confidence	Individual readiness review
4–6	Strength control and prerequisite consistency	Individual readiness review
7–9	Skill linking and variable practice	Individual readiness review
10–11	Routine quality and competition simulation	Individual readiness review
12	Review, recovery and next-cycle planning	Individual readiness review

Applied appendix C: coach monitoring record

Field	Record
Date and training phase	_____
Apparatus and task	_____
Prerequisite quality	_____
Pain or illness report	_____
Perceived effort	_____
Technical error observed	_____
Corrective drill selected	_____
Next-session decision	_____

Exercise library: 36 coached movements

Each entry gives purpose, setup, cues, common faults, regressions and a decision rule. These are textual teaching cards; technical photos remain to be commissioned and verified.

01 — Hollow hold

Apparatus / category: Floor

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Keep lower ribs down and pelvis controlled.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

02 — Arch hold

Apparatus / category: Floor

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Lengthen through shoulders and hips without compressing lumbar spine.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

03 — Handstand wall line

Apparatus / category: Floor

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Stack wrists, shoulders, pelvis and ankles with active shoulder elevation.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

04 — Forward roll

Apparatus / category: Floor

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Tuck chin and distribute contact through rounded upper back.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

05 — Cartwheel line

Apparatus / category: Floor

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Maintain hand sequence and clear lateral travel path.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

06 — Stick landing

Apparatus / category: Floor

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Absorb through hips, knees and ankles without inward knee collapse.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

07 — Run-up rhythm

Apparatus / category: Vault

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Build repeatable acceleration and consistent final steps.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

08 — Hurdle to board

Apparatus / category: Vault

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Coordinate arm action and two-foot contact on a safe surface.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

09 — Straight jump rebound

Apparatus / category: Vault

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Use tall posture and a controlled vertical impulse.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

10 — Front support

Apparatus / category: Pommel

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Keep shoulders active and transfer weight deliberately.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

11 — Side support transfer

Apparatus / category: Pommel

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Move shoulders over the supporting hand without twisting collapse.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

12 — Mushroom circle prep

Apparatus / category: Pommel

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Maintain leg tension and consistent support rhythm.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

13 — Active hang

Apparatus / category: Rings

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Engage shoulder girdle while retaining a long stable body line.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

14 — Ring support prep

Apparatus / category: Rings

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Develop stable elbow extension on appropriate low equipment.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

15 — Controlled swing shapes

Apparatus / category: Rings

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Alternate hollow and arch shapes without uncontrolled amplitude.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

16 — Parallel support hold

Apparatus / category: Parallel bars

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Press through hands and keep shoulders lifted.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

17 — Support walk

Apparatus / category: Parallel bars

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Shift weight smoothly without dropping shoulders.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

18 — Low amplitude swing

Apparatus / category: Parallel bars

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Control swing range before increasing amplitude.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

19 — Long hang shape

Apparatus / category: High bar

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Maintain grip and shoulder alignment with an engaged trunk.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

20 — Tap swing preparation

Apparatus / category: High bar

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Coordinate shape change and timing under supervision.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

21 — Grip endurance

Apparatus / category: High bar

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Use brief controlled hangs and stop before grip failure.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

22 — Low-bar front support

Apparatus / category: Uneven bars

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Establish straight arms and safe hand position.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

23 — Hollow-arch hang

Apparatus / category: Uneven bars

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Move through controlled shapes rather than kicking aggressively.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

24 — Pullover prerequisites

Apparatus / category: Uneven bars

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Develop pull strength and hip-to-bar control before full skill.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

25 — Beam walk

Apparatus / category: Beam

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Look ahead and place feet deliberately.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

26 — Beam releve hold

Apparatus / category: Beam

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Control ankle position and posture at low height.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

27 — Beam turn preparation

Apparatus / category: Beam

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Coordinate arms, spotting and foot pressure.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

28 — Scapular push-up

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Move shoulder blades with elbows stable.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

29 — Assisted pull-up

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Maintain body control and use enough assistance for clean reps.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

30 — Dead bug

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Maintain pelvic control as opposite limbs move.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

31 — Side plank

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Keep a straight line and avoid shoulder collapse.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

32 — Split squat

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Control knee tracking and trunk alignment.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

33 — Single-leg balance

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Use stable foot tripod and quiet pelvis.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

34 — Calf raise

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Rise and lower through full controlled range.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

35 — Wrist load preparation

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Progress wrist loading gradually and stop with pain.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

36 — Shoulder band external rotation

Apparatus / category: Conditioning

Purpose

Improve the movement quality and physical prerequisite needed for safe technical progression. The objective is repeatable control, not maximal repetitions.

Setup and execution

Prepare a clear training zone and suitable apparatus height. Demonstrate one clean attempt, check athlete readiness, then practise with a coach observing alignment and tempo.

> **Primary technical cue**
>
> Keep elbow position stable and use light resistance.

Typical errors and corrections

Error	Correction
Loss of alignment	Shorten the lever, reduce range or add support.
Speed replaces control	Slow the task and add a brief pause at the key position.
Fatigue changes technique	End the set and increase recovery before reassessment.

Scaling and dosage

Example only: 2–3 short sets of 3–6 technically controlled repetitions, or 8–15 seconds for a static hold, with adequate rest. Adapt or omit according to age, strength, medical clearance, and apparatus demands. Stop on pain.

Progression gate

Progress only after three consistently controlled trials, athlete confidence, equipment checks and coach approval; complex skills may require additional prerequisites and qualified spotting.

References and official source portals

The following publications and official portals informed the educational framework. Official gymnastics rules change by discipline, cycle, age and jurisdiction; verify the current applicable documents before coaching or judging.

1. International Olympic Committee consensus statement on youth athletic development (2015)

   https://doi.org/10.1136/bjsports-2015-094962

2. IOC consensus statement on elite youth athletes (2024)

   https://bjsm.bmj.com/content/58/17/946

3. IOC consensus on load in sport and injury risk (2016)

   https://doi.org/10.1136/bjsports-2016-096581

4. NSCA Youth Training and Long-Term Athletic Development

   https://www.nsca.com/about-us/position-statements/youth-training-and-long-term-athletic-development/

5. NSCA Position Statements: Youth Resistance Training

   https://www.nsca.com/about-us/position-statements/

6. FIG Official Website: Technical regulations and Codes of Points

   https://www.gymnastics.sport/

7. USA Gymnastics Official Website: Education, safety and development

   https://usagym.org/

Editorial note: This original manuscript does not reproduce copyrighted textbook chapters or federation Codes of Points. Exercise doses and examples are coaching templates requiring individual adaptation.

Functional Anatomy

Scapular upward rotation

overhead handstand support

Scientific foundation

This module examines scapular upward rotation in the context of overhead handstand support. The relevant anatomical or mechanical consideration is serratus anterior and trapezius. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of overhead handstand support before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Observe whether the scapula rotates and elevates as the arms reach overhead. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled overhead handstand support task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Rotator cuff

ring support and bar swings

Scientific foundation

This module examines rotator cuff in the context of ring support and bar swings. The relevant anatomical or mechanical consideration is supraspinatus, infraspinatus and subscapularis. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of ring support and bar swings before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Separate shoulder stability from simply pulling the shoulders down. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled ring support and bar swings task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Elbow and forearm

bar grip and support

Scientific foundation

This module examines elbow and forearm in the context of bar grip and support. The relevant anatomical or mechanical consideration is elbow flexors, extensors and forearm pronators. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of bar grip and support before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Monitor grip position, wrist alignment and accumulated hanging volume. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled bar grip and support task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Wrist complex

floor hand support

Scientific foundation

This module examines wrist complex in the context of floor hand support. The relevant anatomical or mechanical consideration is wrist extensors, flexors and carpal joints. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of floor hand support before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Progress weight-bearing gradually and stop for persistent localized pain. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled floor hand support task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Spinal segments

hollow and arch shapes

Scientific foundation

This module examines spinal segments in the context of hollow and arch shapes. The relevant anatomical or mechanical consideration is cervical, thoracic and lumbar segments. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of hollow and arch shapes before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Identify where extension occurs rather than calling every shape a backbend. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled hollow and arch shapes task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Deep trunk control

body-line drills

Scientific foundation

This module examines deep trunk control in the context of body-line drills. The relevant anatomical or mechanical consideration is transversus abdominis, obliques and multifidus. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of body-line drills before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Assess breathing and rib position while the athlete resists rotation. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled body-line drills task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Hip flexion

pike and leg lifts

Scientific foundation

This module examines hip flexion in the context of pike and leg lifts. The relevant anatomical or mechanical consideration is iliopsoas, rectus femoris and abdominal stabilizers. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of pike and leg lifts before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Distinguish hip range from compensation through lumbar flexion. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled pike and leg lifts task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Hip extension

takeoff and bridge preparation

Scientific foundation

This module examines hip extension in the context of takeoff and bridge preparation. The relevant anatomical or mechanical consideration is gluteus maximus and hamstrings. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of takeoff and bridge preparation before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Look for pelvic control instead of uncontrolled lumbar arching. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled takeoff and bridge preparation task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Knee mechanism

landing and takeoff

Scientific foundation

This module examines knee mechanism in the context of landing and takeoff. The relevant anatomical or mechanical consideration is quadriceps, hamstrings and patellar tendon. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of landing and takeoff before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Track knee alignment relative to foot and landing direction. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled landing and takeoff task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Functional Anatomy

Ankle and foot

beam balance and landing

Scientific foundation

This module examines ankle and foot in the context of beam balance and landing. The relevant anatomical or mechanical consideration is calf complex, tibialis anterior and intrinsic foot muscles. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of beam balance and landing before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Check ankle stiffness, foot contact and single-leg control. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled beam balance and landing task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

ATP-PC energy system

short maximal efforts

Scientific foundation

This module examines atp-pc energy system in the context of short maximal efforts. The relevant anatomical or mechanical consideration is rapid ATP regeneration. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of short maximal efforts before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Keep explosive sets brief and allow quality recovery. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled short maximal efforts task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Glycolytic contribution

longer floor combinations

Scientific foundation

This module examines glycolytic contribution in the context of longer floor combinations. The relevant anatomical or mechanical consideration is carbohydrate breakdown. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of longer floor combinations before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Avoid treating every technical routine as a conditioning test. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled longer floor combinations task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Aerobic recovery

between-effort recovery

Scientific foundation

This module examines aerobic recovery in the context of between-effort recovery. The relevant anatomical or mechanical consideration is oxygen delivery and mitochondrial function. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of between-effort recovery before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use low-intensity movement to support recovery without extra fatigue. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled between-effort recovery task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Neuromuscular adaptation

strength skill learning

Scientific foundation

This module examines neuromuscular adaptation in the context of strength skill learning. The relevant anatomical or mechanical consideration is motor-unit recruitment and coordination. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of strength skill learning before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Prioritize consistent movement quality over arbitrary loading. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled strength skill learning task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Tendon adaptation

repeated support and takeoff

Scientific foundation

This module examines tendon adaptation in the context of repeated support and takeoff. The relevant anatomical or mechanical consideration is collagen remodeling and load tolerance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of repeated support and takeoff before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Change support volume progressively and track soreness patterns. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled repeated support and takeoff task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Fatigue mechanisms

late-session skill work

Scientific foundation

This module examines fatigue mechanisms in the context of late-session skill work. The relevant anatomical or mechanical consideration is central and peripheral fatigue. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of late-session skill work before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Stop high-risk skills when attention and coordination decline. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled late-session skill work task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Growth and maturation

youth training groups

Scientific foundation

This module examines growth and maturation in the context of youth training groups. The relevant anatomical or mechanical consideration is individual maturation timing. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of youth training groups before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use readiness rather than chronological age alone to progress. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled youth training groups task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Recovery and sleep

weekly planning

Scientific foundation

This module examines recovery and sleep in the context of weekly planning. The relevant anatomical or mechanical consideration is restorative sleep and adaptation. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of weekly planning before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Record sleep and fatigue before increasing training density. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled weekly planning task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Hydration and heat

hot gym environments

Scientific foundation

This module examines hydration and heat in the context of hot gym environments. The relevant anatomical or mechanical consideration is thermoregulation and fluid balance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of hot gym environments before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Plan accessible drinking breaks and emergency response. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled hot gym environments task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Exercise Physiology

Training response

progression across weeks

Scientific foundation

This module examines training response in the context of progression across weeks. The relevant anatomical or mechanical consideration is stress, recovery and adaptation. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of progression across weeks before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Compare response trends instead of assuming equal adaptation. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled progression across weeks task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Center of mass

balance beam control

Scientific foundation

This module examines center of mass in the context of balance beam control. The relevant anatomical or mechanical consideration is center-of-mass projection. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of balance beam control before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Observe body-mass position over the support base. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled balance beam control task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Base of support

handstand stability

Scientific foundation

This module examines base of support in the context of handstand stability. The relevant anatomical or mechanical consideration is support polygon and balance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of handstand stability before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Change hand spacing before changing difficulty. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled handstand stability task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Torque and moment arm

lever strength drills

Scientific foundation

This module examines torque and moment arm in the context of lever strength drills. The relevant anatomical or mechanical consideration is force times perpendicular distance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of lever strength drills before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Shorten the lever to reduce demand without changing the objective. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled lever strength drills task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Angular momentum

somersault rotation

Scientific foundation

This module examines angular momentum in the context of somersault rotation. The relevant anatomical or mechanical consideration is moment of inertia and rotation rate. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of somersault rotation before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Explain why tuck position changes rotation speed after takeoff. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled somersault rotation task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Impulse

vault board takeoff

Scientific foundation

This module examines impulse in the context of vault board takeoff. The relevant anatomical or mechanical consideration is force applied over time. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of vault board takeoff before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Measure contact quality before demanding higher vaults. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled vault board takeoff task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Ground reaction force

landing mechanics

Scientific foundation

This module examines ground reaction force in the context of landing mechanics. The relevant anatomical or mechanical consideration is vertical and horizontal force components. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of landing mechanics before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use quiet controlled landings as an observation cue, not a force measurement. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled landing mechanics task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Projectile trajectory

flight phase

Scientific foundation

This module examines projectile trajectory in the context of flight phase. The relevant anatomical or mechanical consideration is takeoff velocity and angle. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of flight phase before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Analyze takeoff rather than assuming the athlete can steer in flight. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled flight phase task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Swing pendulum

high bar swings

Scientific foundation

This module examines swing pendulum in the context of high bar swings. The relevant anatomical or mechanical consideration is gravity, angular speed and timing. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of high bar swings before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Separate rhythm errors from strength deficits. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled high bar swings task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Video frame analysis

technical review

Scientific foundation

This module examines video frame analysis in the context of technical review. The relevant anatomical or mechanical consideration is frame rate, viewpoint and parallax. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of technical review before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use a consistent camera angle and avoid false precision. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled technical review task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Movement Biomechanics

Technique variability

repeated skill attempts

Scientific foundation

This module examines technique variability in the context of repeated skill attempts. The relevant anatomical or mechanical consideration is movement consistency and adaptability. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of repeated skill attempts before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Compare multiple attempts before drawing conclusions. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled repeated skill attempts task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

External focus

shape correction

Scientific foundation

This module examines external focus in the context of shape correction. The relevant anatomical or mechanical consideration is attention to movement effects. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of shape correction before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use a simple target such as pushing the floor away. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled shape correction task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Feedback frequency

novice lessons

Scientific foundation

This module examines feedback frequency in the context of novice lessons. The relevant anatomical or mechanical consideration is knowledge of results and performance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of novice lessons before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Avoid correcting every repetition with many cues. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled novice lessons task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Blocked practice

initial skill acquisition

Scientific foundation

This module examines blocked practice in the context of initial skill acquisition. The relevant anatomical or mechanical consideration is repetition under stable conditions. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of initial skill acquisition before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use when safety and basic coordination are not established. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled initial skill acquisition task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Variable practice

skill transfer

Scientific foundation

This module examines variable practice in the context of skill transfer. The relevant anatomical or mechanical consideration is adaptation across constraints. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of skill transfer before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Vary safe conditions after foundational technique is stable. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled skill transfer task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Part-whole method

complex skills

Scientific foundation

This module examines part-whole method in the context of complex skills. The relevant anatomical or mechanical consideration is segment learning and integration. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of complex skills before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Do not isolate a component that loses the skill rhythm. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled complex skills task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Progression criteria

level advancement

Scientific foundation

This module examines progression criteria in the context of level advancement. The relevant anatomical or mechanical consideration is readiness and consistency. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of level advancement before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Require safe independent repetitions before advancing. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled level advancement task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Spotting decisions

supported learning

Scientific foundation

This module examines spotting decisions in the context of supported learning. The relevant anatomical or mechanical consideration is risk and athlete autonomy. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of supported learning before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Only trained coaches should provide skill-specific spotting. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled supported learning task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Fear and confidence

return after hesitation

Scientific foundation

This module examines fear and confidence in the context of return after hesitation. The relevant anatomical or mechanical consideration is perceived safety and graded exposure. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of return after hesitation before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Offer a safe easier option without coercion. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled return after hesitation task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Retention testing

next-session evaluation

Scientific foundation

This module examines retention testing in the context of next-session evaluation. The relevant anatomical or mechanical consideration is learning beyond immediate performance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of next-session evaluation before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Check the skill after a delay rather than only at session end. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled next-session evaluation task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Motor Learning

Transfer testing

apparatus progression

Scientific foundation

This module examines transfer testing in the context of apparatus progression. The relevant anatomical or mechanical consideration is adaptation to a new context. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of apparatus progression before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Verify transfer under controlled supervision. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled apparatus progression task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Hollow body

trunk stiffness

Scientific foundation

This module examines hollow body in the context of trunk stiffness. The relevant anatomical or mechanical consideration is rib-pelvis coordination. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of trunk stiffness before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Regress by bending knees before adding duration. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled trunk stiffness task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Arch body

posterior chain

Scientific foundation

This module examines arch body in the context of posterior chain. The relevant anatomical or mechanical consideration is thoracic extension and hip extension. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of posterior chain before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Avoid hinging only through the lower back. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled posterior chain task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Scapular support

parallel bars

Scientific foundation

This module examines scapular support in the context of parallel bars. The relevant anatomical or mechanical consideration is shoulder girdle control. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of parallel bars before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Build short clean holds before unstable variations. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled parallel bars task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Hanging strength

bar apparatus

Scientific foundation

This module examines hanging strength in the context of bar apparatus. The relevant anatomical or mechanical consideration is grip and shoulder capacity. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of bar apparatus before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Increase duration only with pain-free control. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled bar apparatus task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Leg compression

pike lifts

Scientific foundation

This module examines leg compression in the context of pike lifts. The relevant anatomical or mechanical consideration is hip flexors and trunk stability. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of pike lifts before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Reduce range rather than sacrificing posture. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled pike lifts task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Single-leg control

beam preparation

Scientific foundation

This module examines single-leg control in the context of beam preparation. The relevant anatomical or mechanical consideration is hip-knee-ankle alignment. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of beam preparation before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use low-risk balance tasks before beam height. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled beam preparation task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Landing strength

jump preparation

Scientific foundation

This module examines landing strength in the context of jump preparation. The relevant anatomical or mechanical consideration is eccentric control. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of jump preparation before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Progress landing height only after reliable mechanics. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled jump preparation task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Plyometric dosage

reactive jumps

Scientific foundation

This module examines plyometric dosage in the context of reactive jumps. The relevant anatomical or mechanical consideration is elastic energy and contact quality. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of reactive jumps before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Count contacts and stop as quality deteriorates. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled reactive jumps task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Mobility versus laxity

split development

Scientific foundation

This module examines mobility versus laxity in the context of split development. The relevant anatomical or mechanical consideration is active range and joint stability. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of split development before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Avoid forcing end range or painful stretching. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled split development task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Physical Preparation

Conditioning integration

apparatus stations

Scientific foundation

This module examines conditioning integration in the context of apparatus stations. The relevant anatomical or mechanical consideration is task-specific strength endurance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of apparatus stations before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Keep apparatus conditioning separate from final general conditioning. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled apparatus stations task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

MAG floor

floor shapes and landings

Scientific foundation

This module examines mag floor in the context of floor shapes and landings. The relevant anatomical or mechanical consideration is line, direction and rebound. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of floor shapes and landings before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Start with floor-level drills before acrobatic flight. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled floor shapes and landings task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

Pommel horse

support and circles

Scientific foundation

This module examines pommel horse in the context of support and circles. The relevant anatomical or mechanical consideration is weight shift and hip extension. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of support and circles before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use mushrooms and supported shapes before full horse circles. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled support and circles task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

Still rings

swing and support

Scientific foundation

This module examines still rings in the context of swing and support. The relevant anatomical or mechanical consideration is scapular stability and line. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of swing and support before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Do not rush strength elements before basic control. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled swing and support task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

MAG vault

run and board

Scientific foundation

This module examines mag vault in the context of run and board. The relevant anatomical or mechanical consideration is speed conversion and blocking. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of run and board before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Require safe landing setup and qualified supervision. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled run and board task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

Parallel bars

supports and swings

Scientific foundation

This module examines parallel bars in the context of supports and swings. The relevant anatomical or mechanical consideration is support alignment and timing. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of supports and swings before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Teach shoulder position and controlled swings first. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled supports and swings task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

High bar

grip and long swing

Scientific foundation

This module examines high bar in the context of grip and long swing. The relevant anatomical or mechanical consideration is pendulum timing and body shape. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of grip and long swing before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Inspect grips, bar and landing area every session. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled grip and long swing task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

WAG vault

run, hurdle and board

Scientific foundation

This module examines wag vault in the context of run, hurdle and board. The relevant anatomical or mechanical consideration is rhythm and force transfer. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of run, hurdle and board before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Develop approach rhythm before difficult vault entries. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled run, hurdle and board task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

Uneven bars

hang and swing

Scientific foundation

This module examines uneven bars in the context of hang and swing. The relevant anatomical or mechanical consideration is grip transition and body line. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of hang and swing before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Progress swings with clear readiness checks. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled hang and swing task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

Balance beam

walk, turn and leap

Scientific foundation

This module examines balance beam in the context of walk, turn and leap. The relevant anatomical or mechanical consideration is postural control and visual focus. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of walk, turn and leap before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Transfer from floor line to low beam before height. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled walk, turn and leap task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Apparatus Coaching

WAG floor

dance and acrobatics

Scientific foundation

This module examines wag floor in the context of dance and acrobatics. The relevant anatomical or mechanical consideration is rhythm, expression and landing. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of dance and acrobatics before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Coordinate choreography with fatigue-aware acrobatic practice. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled dance and acrobatics task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Equipment inspection

pre-session checks

Scientific foundation

This module examines equipment inspection in the context of pre-session checks. The relevant anatomical or mechanical consideration is apparatus integrity. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of pre-session checks before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Log mat gaps, loose fittings and corrective action. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled pre-session checks task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Pain response

training modification

Scientific foundation

This module examines pain response in the context of training modification. The relevant anatomical or mechanical consideration is symptom recognition. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of training modification before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Stop loading painful areas and refer when appropriate. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled training modification task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Training log

weekly records

Scientific foundation

This module examines training log in the context of weekly records. The relevant anatomical or mechanical consideration is exposure and readiness. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of weekly records before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Record duration, skills, difficulty and athlete feedback. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled weekly records task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Session RPE

internal load

Scientific foundation

This module examines session rpe in the context of internal load. The relevant anatomical or mechanical consideration is perceived exertion. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of internal load before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Ask athletes to rate effort consistently and interpret context. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled internal load task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Skill readiness

new progression

Scientific foundation

This module examines skill readiness in the context of new progression. The relevant anatomical or mechanical consideration is prerequisite screening. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of new progression before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Document prerequisites and rescue procedures before trials. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled new progression task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Emergency plan

incident response

Scientific foundation

This module examines emergency plan in the context of incident response. The relevant anatomical or mechanical consideration is roles and communication. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of incident response before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Assign first responder, emergency contact and access route. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled incident response task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Safeguarding

coach conduct

Scientific foundation

This module examines safeguarding in the context of coach conduct. The relevant anatomical or mechanical consideration is safe sport boundaries. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of coach conduct before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use transparent supervision and approved communication channels. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled coach conduct task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Parent communication

progress reporting

Scientific foundation

This module examines parent communication in the context of progress reporting. The relevant anatomical or mechanical consideration is clear expectations. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of progress reporting before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Report observable skills rather than vague promises. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled progress reporting task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Competition taper

pre-event week

Scientific foundation

This module examines competition taper in the context of pre-event week. The relevant anatomical or mechanical consideration is fatigue management. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of pre-event week before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Preserve technique quality while reducing unnecessary volume. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled pre-event week task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Safety and Monitoring

Return to sport

after injury

Scientific foundation

This module examines return to sport in the context of after injury. The relevant anatomical or mechanical consideration is medical clearance and progression. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of after injury before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Follow qualified clinician guidance and gradual exposure. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled after injury task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Needs analysis

season planning

Scientific foundation

This module examines needs analysis in the context of season planning. The relevant anatomical or mechanical consideration is athlete and apparatus profile. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of season planning before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Prioritize limiting factors supported by observation. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled season planning task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Annual periodization

macrocycle

Scientific foundation

This module examines annual periodization in the context of macrocycle. The relevant anatomical or mechanical consideration is general to specific preparation. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of macrocycle before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Plan flexible phases rather than fixed dates for all athletes. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled macrocycle task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Mesocycle design

four-week block

Scientific foundation

This module examines mesocycle design in the context of four-week block. The relevant anatomical or mechanical consideration is progressive objectives. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of four-week block before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Set a technical goal and measurable readiness criterion. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled four-week block task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Microcycle design

weekly distribution

Scientific foundation

This module examines microcycle design in the context of weekly distribution. The relevant anatomical or mechanical consideration is load and recovery balance. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of weekly distribution before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Separate demanding landings across suitable days. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled weekly distribution task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Session structure

daily coaching

Scientific foundation

This module examines session structure in the context of daily coaching. The relevant anatomical or mechanical consideration is warm-up, skills, strength and review. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of daily coaching before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Place high-coordination skills before avoidable fatigue. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled daily coaching task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Testing validity

fitness assessment

Scientific foundation

This module examines testing validity in the context of fitness assessment. The relevant anatomical or mechanical consideration is reliability and standardization. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of fitness assessment before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Use the same setup and instructions for retesting. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled fitness assessment task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Progress dashboard

monthly review

Scientific foundation

This module examines progress dashboard in the context of monthly review. The relevant anatomical or mechanical consideration is trend tracking. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of monthly review before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Combine quality scores with athlete wellbeing notes. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled monthly review task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Individualization

mixed-ability group

Scientific foundation

This module examines individualization in the context of mixed-ability group. The relevant anatomical or mechanical consideration is readiness-based scaling. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of mixed-ability group before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Offer regressions and progressions in one station. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled mixed-ability group task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Planning and Evaluation

Coach reflection

post-session review

Scientific foundation

This module examines coach reflection in the context of post-session review. The relevant anatomical or mechanical consideration is decision quality. A coach should analyze movement range, force direction, sequencing and how the observed solution changes with fatigue, maturation and experience; the final body shape alone is not sufficient.

Apparatus application

Begin with a low-risk representation of post-session review before progressing to full-apparatus practice. Observe the setup, initiation, force-production interval, transitions and finish. Compare repeated attempts rather than interpreting one isolated performance as the athlete’s stable capability.

Suggested teaching sequence

1. State one observable movement goal. 2. Demonstrate a safe simplified task. 3. Collect three to five high-quality attempts with adequate rest. 4. Give one actionable cue. 5. Reassess consistency and readiness before increasing task complexity.

Common errors and corrections

Watch for compensatory motion, unstable alignment, premature timing and technique loss under fatigue. Write one effective cue and one change for next time. Persistent pain, distress or deteriorating coordination are reasons to stop or modify the task, not signals to force additional repetitions.

Coach analysis

Note whether the issue occurs from the first repetition or emerges only late in the set. Test whether one clear cue, a lower task demand, or a change in support surface improves the outcome. Record the response before deciding that the athlete needs more strength or flexibility.

Practical worksheet

Compare two athletes during a controlled post-session review task. Record the date, prerequisite skill, successful attempts, one qualitative movement observation, perceived exertion and the next progression decision. This worksheet is a coaching example, not a medical assessment or an official judging rule.

Scientific references and source material

These references support further study and verification. Applied worksheets are original coaching examples, not quotations or official judging regulations.

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