



Strength in the Gym

PHYSICAL FITNESS MODULE



24 exercises with two-sided cards

Illustrated manual for high school

Muscles involved and movement phases

Workloads, recovery, variations and 6 circuits

ML

Find your exercise

LEGS AND GLUTES

- 01 · Controlled step-up
- 02 · Bulgarian split squat
- 03 · Assisted single-leg squat
- 04 · Feet-elevated bridge
- 05 · Calf raise on a wall-bar rung
- 06 · Bench squat
- 07 · Supported reverse lunge

PUSHING

- 08 · Bench push-ups
- 09 · Floor push-ups
- 10 · Feet-elevated push-ups
- 11 · Pike push-up

PULLING

- 12 · Low-bar row
- 13 · Assisted **pull**-up
- 14 · Isometric towel **pull**
- 15 · Resistance-band row

TRUNK AND PARTNER CHALLENGES

- 16 · Short crunch
- 17 · Forearm plank
- 18 · Partner plank with a stick
- 19 · Kneeling side plank
- 20 · Wall-bar knee tuck
- 21 · Mat duel
- 22 · Dead bug

LARGE APPARATUS

- 23 · Climbing-frame traverses
- 24 · First steps on the rope

The circuits

C1 and C2 introduce strength work. C3 and C4 extend combinations using benches and pulling exercises. C5 and C6 offer progressions for students with established technique.

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Before the lesson

Choosing equipment and level

The teacher checks fixings, support surfaces and intended equipment use against the manufacturer's instructions. Bars, wall bars and assistance systems must suit the expected load. Choose raised surfaces at heights that allow controlled movement.

Teach before increasing the demand

Allow about 8 minutes of gradual warm-up and try 2-3 repetitions before the set. Start with the **accessible variation** and increase **one demand at a time** once every repetition retains sound supports and **alignment**. End the set while the student still maintains good quality.

Organizing a class of 24

For circuits, form **six groups of four** and allocate one zone to each group. On individual cards, one student works at a time. On cards 18 and 21, two partners work together while the others wait and observe an agreed indicator. Rotate on the shared signal, with equipment free and passageways clear.

Adapting the task

Workloads are initial teaching suggestions to adapt to individual ability and the school's existing guidance. Stop the attempt if pain, dizziness or loss of control occurs and reassess the variation. Cards 23 and 24 require **direct assistance** and separate management by the teacher.

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Using the module

Two sides for each exercise

The front presents aims, equipment, position and movement with a representative illustration. The back shows the muscles involved and their roles during movement phases. Coral marks the main groups; blue marks supporting muscles. Figures locate superficial regions; deep muscles are explained in the text. Workload, recovery and variations follow. Use the text to reconstruct the full sequence.

General scientific reference

Stricker P.R., Faigenbaum A.D., McCambridge T.M. Resistance Training for Children and Adolescents. Pediatrics, 2020;145(6):e20201011. Report reaffirmed in November 2024. doi.org/10.1542/peds.2020-1011 The report guides supervision, technique learning and progression of strength work in young people.

Progression suited to the student

Introductory, intermediate and advanced labels describe technical demands. The teacher selects the level by observing movement control and familiarity with the equipment. An **accessible variation** may remain the most useful choice throughout a student's learning journey.

Muscles and movement phases

Anatomical plates: Termininja, Muscular system and Muscular system-back, Wikimedia Commons. CC BY-SA 3.0. MotoLab adaptation: grayscale and coloured regions. Adapted plates retain the same license. Muscle-group references: NASM Exercise Library and ACE Exercise Library. Phase descriptions are adapted to this module's exercises. Concentric contraction: the muscle shortens; eccentric: it brakes as it lengthens; isometric: it holds position.

01

Controlled step-up

Equipment: Stable low bench



Aims and objectives

Develop leg drive and control when descending from a raised surface. Students learn to keep the whole foot supported and complete the ascent with a stable pelvis.

Starting position

Place one whole foot on a low bench, keeping the torso tall and the free leg close to the raised surface.

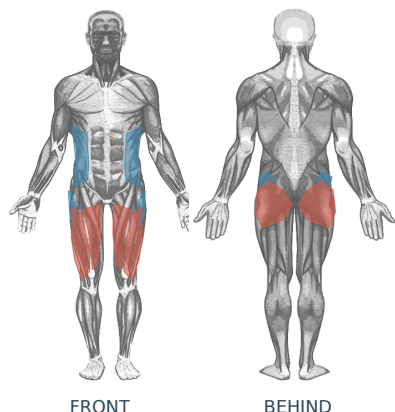
Execution

Push through the supported foot to rise and bring the free leg beside the supporting leg. Lower it slowly to the floor before repeating on the same side.

01

Controlled step-up

Muscles in action



- Movement / hold
- Stability and supports

Main muscles

Quadriceps and **gluteus maximus**

During the movement

Ascent: **quadriceps** and **gluteus maximus** extend the knee and hip of the raised leg. **Descent:** the same muscles brake the return eccentrically.

Stabilisation

Gluteus medius and trunk muscles keep **pelvis** and torso stable. Hand support helps balance in assisted variations.

Workload

Initial workload: 1-2 sets of 6 per side. **Recovery:** 60-90 seconds between sets. **Station time:** about 3-4 minutes including practice and recovery. Repetitions follow a **controlled rhythm**; stop counting when posture needs correction.

Teacher observation

The leg on the bench produces the drive; the knee follows the foot's direction. Choose a height that allows a stable **pelvis**.

Accessible variation

Use a lower step and try 5 repetitions per side.

Progression

Slow the **descent** to 3 seconds, keeping the raised surface at the same height.

Station organization

Prepare space for one performer and a waiting area to the side. Before each turn, check supports and equipment are ready and agree the starting signal. Observers follow the stated technique indicator and wait for the changeover signal.

Self-check

After recovery, describe how you controlled the movement and which variation you want to repeat.

Achieved: _____

To improve: _____

02

Bulgarian split squat

Equipment: Low raised support and mat



Aims and objectives

Train front-leg strength through asymmetric work. Students choose a distance between supports that allows balance and controlled depth.

Starting position

Place one foot behind you on a low raised surface; leave enough space in front to bend the front leg with balance.

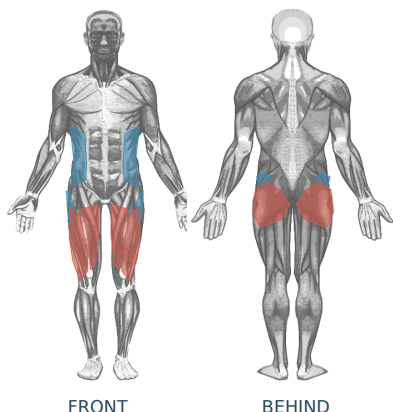
Execution

Lower slowly by bending the knees; rise by pushing through the front foot. Keep a depth that allows a steady pelvis and finish one side before changing.

02

Bulgarian split squat

Muscles in action



● Movement / **hold**

● Stability and supports

Main muscles

Quadriceps and **gluteus maximus**

During the movement

Descent: front-leg **quadriceps** and **gluteus maximus** brake flexion. Ascent: they shorten to extend knee and hip.

Stabilisation

Gluteus medius and trunk muscles keep **pelvis** and torso stable. Hand support helps balance in assisted variations.

Workload

Initial workload: 1-2 sets of 6 per side. **Recovery:** 60-90 seconds between sets. **Station time:** about 3-4 minutes including practice and recovery. Repetitions follow a **controlled rhythm**; stop counting when posture needs correction.

Teacher observation

The raised support stays still; the front foot bears most of the weight. The support spacing allows a comfortable **descent**.

Accessible variation

Perform the same movement with the rear foot on the floor.

Progression

Descend in 3 seconds and add a brief pause at a depth already mastered.

Station organization

Prepare space for one performer and a waiting area to the side. Before each turn, check supports and equipment are ready and agree the starting signal. Observers follow the stated technique indicator and wait for the changeover signal.

Self-check

After recovery, describe how you controlled the movement and which variation you want to repeat.

Achieved: _____

To improve: _____

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C1 · Learning the supports

Purpose and set-up

Support control and rhythm learning. Use the most accessible variations; spend the first effort finding a comfortable position. **Equipment:** Low benches, clear wall, wall bars and mats.

Zone	Card and task	Maximum workload per turn
1	06 · Bench squat	4-6 repetitions
2	08 · Bench push-ups	4-6 repetitions
3	04 · Feet-elevated bridge	4-6 repetitions
4	05 · Calf raise on a wall-bar rung	4-6 repetitions
5	16 · Short crunch	4-6 repetitions
6	21 · Mat duel	1 challenge of 8-10 s

Turn timings

In partner zones, alternate two pairs across **four 30-second turns**. Each pair works for **8-10 seconds**, using the remainder to recover and make room for the next pair. In plank, release once per person; in the duel, award the point at the end. Each zone lasts **2 minutes** with **four 30-second turns**. Each person works for at most 20 seconds, using 10 to clear and reset the station. For bilateral tasks, alternate sides within the turn. Time is a work limit; stop earlier once the assigned workload is complete. For single-leg exercises, split repetitions between sides and change the starting side in round two.

Two rounds with recovery

Six 2-minute zones make one 12-minute round. Allow **2 minutes'** recovery after round one. The main section therefore lasts **26 minutes**; each student makes two short efforts on each exercise.