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Baseline Physical Screening of an 11-Year-Old Right-Handed Batter: Push-Up Endurance, Lateral Trunk Endurance and Overhead Squat Kinematics

Athlete: [redacted] · *Assessed by the PlayCortex field team*

This report documents a baseline physical screen of an 11-year-old, school-level right-handed batter. Height was 144.8 cm and body mass 38 kg (BMI 18.1 kg·m^{-2}). He completed four field tests on 25 October 2026. Each test is reported separately, with skeleton overlays and joint angles added to the photographs using pose tracking. He completed 8 push-ups and held both side planks for 25 s, with no difference between the sides. In the Apley scratch test the hands clasped in both directions. In the overhead squat the thigh reached 22° above parallel on both sides. The shins travelled well forward (41–46° from vertical) while the trunk stayed more upright (31–32°), and the arms stayed close to the line of the trunk. From behind, the squat was deep, the knees tracked over the feet and the pelvis stayed close to level.

Key words: cricket, batting, youth athlete, field screening, trunk endurance, overhead squat, pose tracking

Batting asks the body to hold a low, flexed stance and then rotate quickly through it. A right-handed batter leads with the left shoulder and hip, loads the back (right) leg, and turns the trunk from right to left through the shot. Running between the wickets and fielding add sprints, turns and pick-ups from the ground.

This report records the results of a field screen for one young athlete. Each test is reported on its own, with the photographs taken during it and the observations made at the time. It is a baseline record. It does not prescribe training.

Method

Participant

The athlete is an 11-year-old male right-handed batter who plays at school level. Height was 144.8 cm (4 ft 9 in) and body mass 38 kg, giving a body mass index of 18.1 kg·m^{-2}. No current injury was reported before testing.

Procedures

Testing took place outdoors at a cricket ground on 25 October 2026. The overhead squat and Apley photographs were taken on a smartphone at 10:50 local time. The tests are listed in Table 1. The assessor timed the holds, counted push-ups and recorded observations of form during the session.

Table 1. Test protocol

Test	Instruction
Push-ups	Clean repetitions counted; stopped when form broke
Side plank (L, R)	Timed until the hips dropped; maximum 45 s per side
Apley scratch	One hand over the shoulder, the other behind the back; both ways
Overhead squat	Arms overhead (ball or bat); slow squats from both sides and from behind; bottom position photographed

Image analysis

The overhead squat photographs were analysed with a 33-landmark human pose-estimation model, reduced to the standard 17 keypoints. The detected skeleton was drawn over each image and checked visually: red for the upper arm and thigh, green for the forearm and shin, blue for the trunk, and orange dots for joint centres. In the side views, the knee angle (hip–knee–ankle), hip angle (shoulder–hip–knee), thigh angle relative to horizontal, and trunk, shin and arm inclination from vertical were calculated for the side of the body nearest the camera. From behind, the ratio of knee width to ankle width and the height difference between the hips were calculated. In the two Apley photographs the raised arm hides the head, and the model could not place the shoulders, so the upper-body keypoints were placed by hand. Angles from single 2D photographs are approximate (±5–10°).

Data treatment

A repetition or hold was counted only while form was maintained. Side-to-side asymmetry in the side planks was calculated as (longer hold − shorter hold) / longer hold.

Results

Table 2 summarises all results. Each test is then reported separately, with its photographs and observations.

Table 2. Results at a glance

Test	Result	Observation
Push-ups	**8**	Counted until form broke
Side plank	**R 25 s · L 25 s**	No difference between sides
Apley scratch	**Full reach, both sides**	Hands clasp both ways
Overhead squat	**Thigh 22° above parallel**	Knees travel well forward; trunk more upright than shin; knees track over feet

1. Push-ups

Result: 8 reps (counted to form break).

Upper-body pushing endurance, counted until form broke.

[redacted] completed **8 push-ups**. No specific form faults were recorded during the set.

2. Side plank

Result: R 25 s · L 25 s (of 45 s maximum per side).

Endurance of the side of the trunk and hip, timed until the hips dropped.

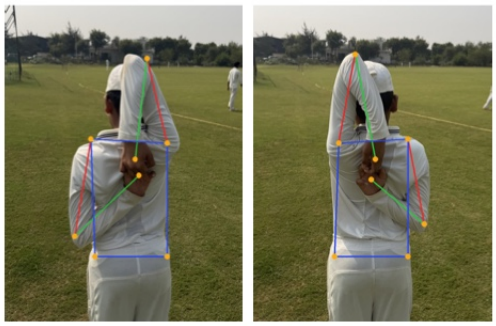
He held both sides for **25 s**, with **no difference between right and left**. Both holds ended at a little over half of the 45 s protocol maximum.

3. Apley scratch test

Result: Full reach (both sides).

Shoulder rotation: one hand reaches over the shoulder and the other behind the back, to see whether the fingers meet. Tested both ways.

[redacted] reached well past the point where the fingers meet in both directions, with no clear difference between the sides. The hooked grip may have helped close the gap.



(a) (b)

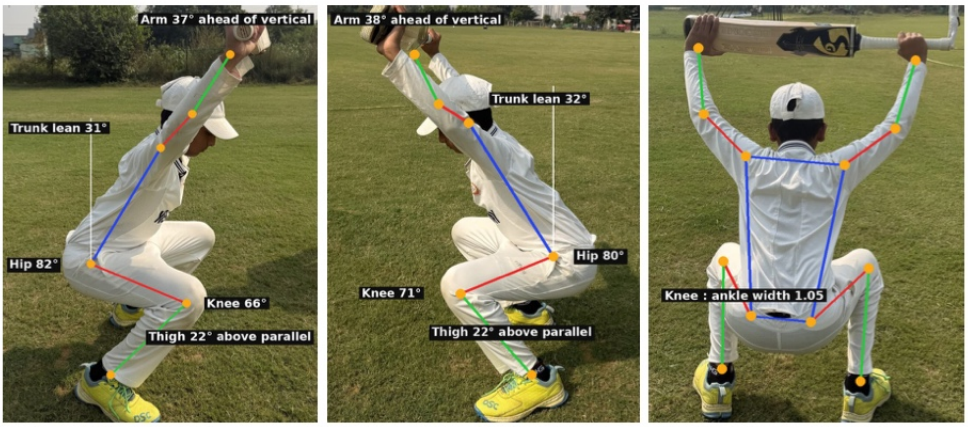
Figure 1. Apley scratch test. **(a)** IMG 8429 · Right arm over. The right arm reaches over the shoulder and the left reaches up behind the back. The hands overlap and the fingers hook together. **(b)** IMG 8430 · Left arm over. The left arm reaches over the shoulder and the right reaches up behind the back. The fingers interlock.

4. Overhead squat

Result: Thigh 22° above parallel (knees travel well forward).

A slow squat with the arms overhead (holding a ball or a bat), photographed at the bottom from both sides and from behind.

The thigh reached **22° above parallel** in both side views, the same on each side. His **shins travelled well forward** (41–46° from vertical) with the heels down, while his **trunk stayed more upright (31–32°)**, so most of the depth came from the knees and ankles. The arms were 37–38° from vertical, only about 6° in front of the trunk line, so they stayed in line with the trunk rather than drifting forward. In IMG 8428 his head tilted down and forward under the arms. From behind, his **knees tracked over his feet** and his hips were close to level (14 px difference).



(a) (b) (c)

Figure 2. Overhead squat. **(a)** IMG 8426 · Side, facing right. The knees travel well forward over the toes and the heels stay down. The trunk leans less than the shin, and the arms follow the line of the trunk. *Knee 66° · hip 82° · thigh 22° above parallel · trunk 31° · shin 46° · arm 37° ahead of vertical.* **(b)** IMG 8428 · Side, facing left. The same depth from the other side. The head tilts down and forward under the raised arms. *Knee 71° · hip 80° · thigh 22° above parallel · trunk 32° · shin 41° · arm 38° ahead of vertical.* **(c)** IMG 8427 · Rear. From behind, the squat is deep, the knees stay in line with the ankles, and the hips are close to level. The arms are wide with the elbows bent under the bat. *Knee : ankle width 1.05 · hip height difference 14 px.*

Summary of Observations

Pushing: 8 push-ups.

Lateral trunk endurance: 25 s on each side, with no difference between the sides.

Shoulder rotation: Full reach in both Apley positions.

Overhead squat: Even on both sides, with the thigh 22° above parallel. The knees travelled well forward with the heels down, the arms stayed in line with the trunk, and the knees tracked over the feet.

Not tested at this session: Front plank, knee-to-wall, shoulder wall test and sit-and-reach.

Limitations

This is a single-session field screen of one young athlete, with four tests. Joint angles were measured from smartphone photographs, not motion capture. The Apley keypoints were

placed by hand because the raised arm hid the head. No form notes were recorded for the push-ups or side planks beyond the counts and times. Front plank, knee-to-wall, the shoulder wall test and sit-and-reach were not done.

Tested: 25 October 2026, 10:50 IST. Report prepared: 25 October 2026.
This report records test results and the assessor's observations. It is not a medical diagnosis.