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Subject: Physical Education

Topic: Track & Field

Sub-Topic: Long Jump – Long Jump Phases

The long jump is an event in which you run very quickly, jump and try to cover maximum distance before you land in a sand-filled pit.

The long jump is a power event that comprises of the four following phases:

Approach (Run-up) – The jumper accelerates to a maximum controllable speed.

Take-off – The jumper generates vertical velocity and minimises the loss of horizontal velocity.

Flight – The jumper prepares for landing. (3 Types of flight Hang, Hitch-Kick & Stride)

Landing – The jumper maximises the potential distances of the flight patch and minimises the loss of distance at the touchdown.

Approach

The objective of the approach is for the athlete to achieve the ideal speed. Rhythm in the approach is important to ensure the ideal speed is achieved to take-off and accuracy in hitting the take-off board. The length of the run-up will depend on the athlete's age and speed. When first determining the number of strides in the approach, start by matching the number of strides with the athlete's age.

Table 1.1 Showing number of strides with athlete's age

AGE	Under 11	Under 13	Under 15	Under 17	Over 17
NO. OF STRIDES	11	13	15	17	21

Take-off

The objective of the take-off is to maximise vertical velocity and to minimise the loss in horizontal velocity. Athletes should drive the leg quickly through the horizontal position and stop. The Preparation for the long jump take-off begins in the later phases of the approach. The athlete prepares for take-off by sinking the hips and then raising the hips into the take-off phases. At take-off ensure the hips are slightly forward of the shoulders.

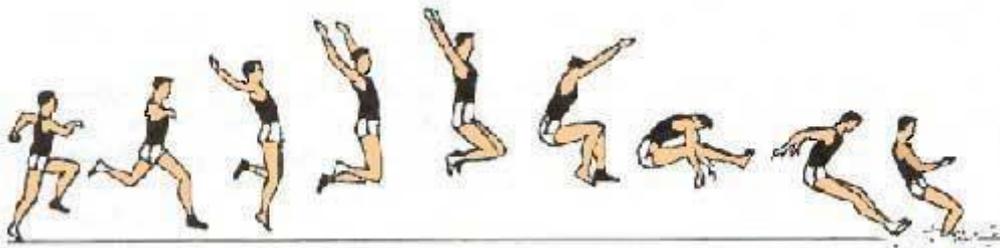
The vertical impulse is achieved by the upward acceleration of the “free” limbs, the arms and the non-take-off leg, against the braced take-off leg. These movements should be characterized by short blocked, fast explosive actions. The head should be carried in a normal position, in line with the spine and the eyes should be focused forward and slightly up.

Flight

The flight is the action through the air. Athletes can use one (1) of three (3) techniques during the flight phases. These three techniques enable athletes to get a forward for a good distance to land in the sand-pit.

The Hang Style

On take-off, the athlete drops the free leg to the vertical, which is then joined by the take-off leg. The arms go overhead to slow down the rotation about the athlete's centre of gravity. The legs are then lifted upwards and forwards whilst lower the trunk. The arms swing past the legs during the landing phase to ensure a good leg shoot.



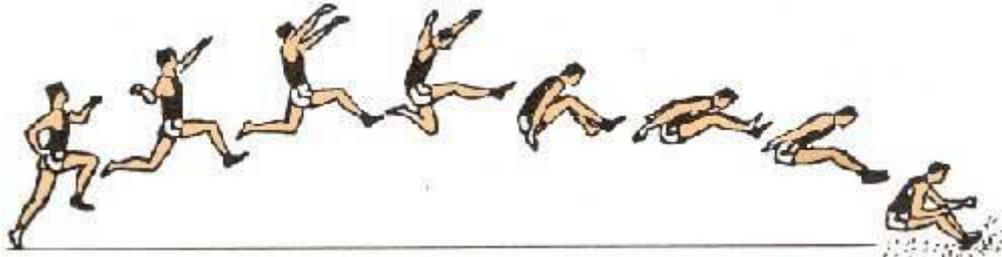
The Hitch-Kick

Following take-off, the free leg is straightened and swung back and down as the take-off leg folds up beneath the hips and comes forward bent. The take-off leg then continues forward, straightening for landing. The free leg completes its backward swing behind the hip and then folds up and moves forwards bent, to join the take-off leg ready for landing.



The Stride Jump

In the stride jump style, the athlete maintains the take-off position for as long as possible and only as the athlete comes into land does the take-off leg join the free leg for a good landing position.

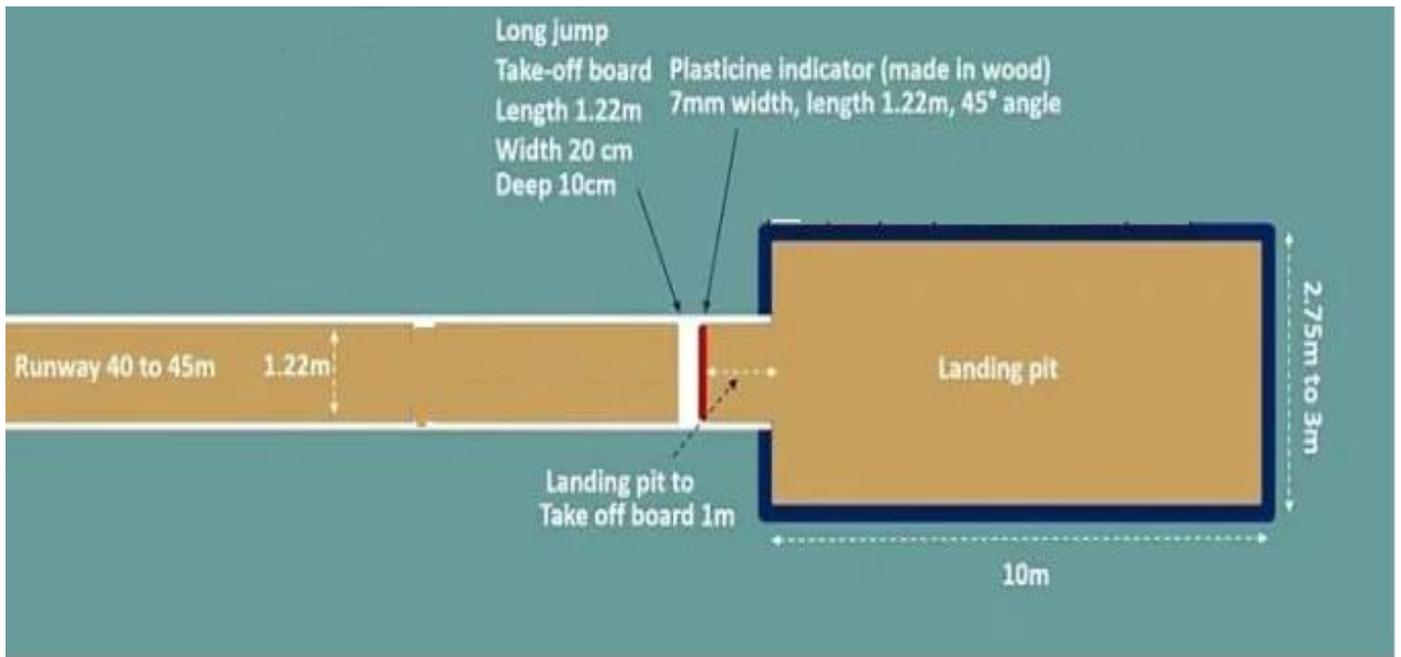


Landing

During the landing, the athlete is aiming to get the heels as far away from the take-off board as is possible. The ideal landing position is shown in the diagram opposite where the dotted line represents the projected flight path of the body's centre of gravity. The heels will need to land just before the projected flight path to ensure the athlete does not fall back into the sand. As the feet contact the sand, press the heels downwards and contract the hamstrings causing the hips to rise. As the hips rise, twist them to one side and allow the forward momentum to carry the body past the landing position.

How to Jump

1. Decide which foot you are jumping off.
2. Measure your run-up by starting on the take-off board and running up the runway, taking the number of steps you want your run to be (11 – 17 steps).
3. Place a marker at the starting point of your run-up.
4. Start running down the runway.
5. Increase your speed
6. Look Forward.
7. Hit the take-off board at full speed.
8. Raise your hands and legs forward.
9. Reach forward as far as possible
10. Land with your feet first.
11. Continue with the forward movement.



Long Jump Pit

Activity

1. Give a brief explanation about the long jump.
2. How many phases are there in the long jump?
3. List the phases of long jump.
4. Explain in your own words two of the phases of long jump.
5. An athlete under the age of 15 years old, how many strides are recommended for the approach?
6. Explain in your own words the difference between the hang style and the stride style.
7. A. State the male and female long jump world record holder.
 B. State the distance recorded and date this record was set.
8. Draw and label a diagram of the long jump pit (show all measurements).