INTRODUCTION

The following section will deal with the long jump, triple jump, high jump, and pole vault. You will find a section covering basic rules for the jumps, safety guidelines for coaching these events, sections outlining proper technique for the approach run and for each event, and a section listing developmental exercises for teaching each event.

I. RULES AND REGULATIONS

Following are brief explanations for the governing rules of the jumping events. Space prevents a detailed discussion of the rules here, but the coach should acquire a rule book, be familiar with all pertinent rules, and educate athletes in this regard. High School, Collegiate, and International rules differ somewhat, and are updated annually. Thorough knowledge and understanding of the rules is a distinct competitive advantage.

A. Basic Rules for the Horizontal Jumps

In the long jump and triple jump, each competitor gets three attempts in the preliminary rounds. A predetermined number of competitors with the best marks are taken to the finals, where they receive three more attempts. The jumper's best mark of the competition determines the place, regardless of whether it may come in the preliminary or final rounds. In the case of a tie, the second best jump decides the higher place. The jumper must take off from behind the scratch line (the edge of the board nearest the pit). Jumps are measured from the scratch line perpendicularly to the nearest break in the landing area. Check marks are not allowed on the runway or pit; however, an athlete can place a marker along side of the runway. Jumpers are allowed to pass attempts for strategic purposes.

B. Basic Rules for the Vertical Jumps

In the high jump and pole vault, a progression of heights is established. Competitors may begin at any of these heights, and receive three attempts at each height (if needed). When all competitors have either successfully cleared the bar or completed their trials, the bar is raised and the process repeats. Three consecutive failures at one or more heights eliminates the competitor from competing further. The last competitor eliminated is the winner, the second to last eliminated finishes second, and so on. The last height successfully cleared is the first criteria used to decide final placing. If a tie results, tie breaking procedures exist based on the number of failed attempts in the COMPETITION. The coach should be familiar with these procedures and other rules, as strategy often comes into play at determining starting heights, when to pass attempts, etc.

II. SAFETY IN THE JUMPS

A. Safety Concerns for the Horizontal Jumps

1. Sand pits should be free of debris, regularly spaded so that the sand is loose, and watered periodically so that they are kept somewhat moist.
2. The boards or material bounding the pit should be level with the runway, and should not protrude above the surrounding ground. The sand should be kept at the level of the boards and the runway.
3. The area around the pit and runway should be free of obstructions, including the area behind the pit so that athletes may run through safely.
4. The takeoff board should be visible and in good condition.
5. Athletes should be properly instructed, and should wear proper footwear.

B. Safety Concerns for the High Jump

1. The landing pit should be of the proper size, in good condition, and the sections of the pit should be correctly joined.
2. The takeoff area should be swept clean.
3. The standards should be properly spaced and located with respect to the pit.
4. Athletes should be properly instructed, and should wear proper footwear.

C. Safety Concerns for the Pole Vault

1. The landing pit should be of the proper size, in good condition, and the sections of the pit should be properly joined. Also, the pit should be properly aligned with respect to the box.
2. The box should be solidly set, flush with the surrounding area, and should meet all specifications.

3. No sharp edges should be exposed, the surrounding area should be free of obstacles, and the bases of the standards are preferably padded.
4. All manufacturers' recommendations regarding pole selection should be followed, and poles should be inspected regularly. Even slightly nicked poles should not be used.
5. Observe all rules regarding the placement of the standards, and resist the temptation to bring the standards excessively forward.

III. THE JUMP APPROACH

A. General Concepts

1. The approach is generally from 14-20 strides in length in the long jump, triple jump, and pole vault, and from 8-10 strides long in the high jump. The approach length depends upon the ability and maturity of the athlete.
2. All parts of the approach, including the start, should be practiced for consistency. Often, in the early stages of learning, it is helpful to develop the approach on the track rather than on the runway to eliminate the distraction of the board, box, and/or pit.
3. One or more check marks for the athlete's and/or coach's use can be helpful in diagnosing inconsistencies in the approach. The athlete usually puts a mark where the run begins, and most coaches place additional check marks at other places in the run.
4. Much attention should be paid to proper acceleration mechanics, sprint mechanics, and body posture during the approach, as the technical correctness of the run greatly determines the effectiveness of the takeoff in all jumping events.
5. Frequency should be increased throughout the approach in a uniform, unrushed manner without compromising stride length.
6. Attaining a high velocity is important to success in the horizontal jumps and pole vault, yet this speed should not be developed at the expense of faulty mechanics, nor should it be so excessive that the jumper is out of control and the effectiveness of takeoff is diminished.

B. Phases of the Approach

1. The DRIVE PHASE consists of the first 4-6 strides (2-3 in the high jump). This phase is characterized by a body lean (modified in the pole vault) and forceful strides to overcome inertia and build momentum.
2. The ACCELERATION PHASE is characterized by continued uniform acceleration and a progression to an upright body posture and efficient sprint mechanics.
3. The TRANSITION PHASE consists of the final 4 strides. Special attention should be paid to this phase because it is here that final adjustments are made to hit the board and initiate takeoff.

NOTE: Although we have divided the approach into three phases for the sake of discussion, these phases should blend into each other smoothly.

THE LONG JUMP

I. THE TAKEOFF

A. General Concepts of the Takeoff

1. The jumper's primary focus should be to conserve horizontal velocity through takeoff.
2. Throughout the final strides, proper posture should be maintained. Backward lean, forward lean, and butt-out postures in the last two strides are common errors in this event.
3. Conserving stride length throughout takeoff is important as well. The jumper should move through the board aggressively as takeoff occurs, so that the push-off from the board is in a forward and upward direction. Running off the board or running through the board are useful teaching concepts.

B. Specifics of the Takeoff

1. The Penultimate (second to last) Step:
   a. Should exhibit a dorsiflexed ankle prior to contact.
   b. Should exhibit a rolling contact of the foot.
   c. Should not occur too far in front of the body, so that braking is minimized.
   d. Should include slight lowering of the body, without postural deviation and deceleration.
2. The Takeoff (last) Step:
   a. Should exhibit a dorsiflexed ankle prior to contact.

b. Should exhibit a rolling contact of the foot.
c. Should not occur too far in front of the body, so that braking is minimized.
d. Should not be rushed, as in pecking or slapping at the board.

3. The Push-off from the board:
   a. Should be in a forward and up direction. The jumper should move past the board as takeoff occurs.
   b. Should feature a powerful, forward and upward swing of the free leg. The hip should be involved in this movement.
   c. Should be complete and unhurried.
   d. Proper blocking involves stopping the swinging of the arms and free leg at the instant the jumper leaves the ground.

II. FLIGHT AND FLIGHT STYLES

All good flight styles begin with a straightening and falling of the free leg early in flight, to control rotation.

A. The Hang Technique

1. The hang technique involves putting the body into an elongated position in order to slow rotation. This is achieved by extending the arms and legs in flight.

B. The Hitchkick Technique

1. The hitchkick technique involves circling the arms and legs in flight in order to temporarily reverse rotation.

III. LANDING

A. General Concepts

1. Preparation for landing should begin early in flight.
2. Landing preparation involves bringing the knees forward flexed in order to locate feet in front of the body, while using a downward sweep of both arms in order to control rotation.
3. The hips and shoulders should remain square until the feet have hit the sand, in order to avoid staggered marks.
4. A good landing should exhibit flexion of the knees and hips so that forward movement continues even after contact.

THE TRIPLE JUMP

I. GENERAL CONCEPTS FOR ALL PHASES

1. The jumper's primary focus should be to conserve horizontal velocity throughout takeoff and all phases.
2. Maintaining proper posture throughout the run, takeoff, and phases is important. Backward lean, forward lean, and butt-out postures at various points are common errors in this event.
3. Landings and takeoffs for each phase:
   a. Should exhibit a dorsiflexed ankle prior to contact.
   b. Should exhibit a flat, then rolling contact of the foot.
   c. The foot should be brought back under the body prior to contact, so that braking is minimized.
4. Strong, swinging movements of the free leg and arms throughout all phases contribute greatly to success in this event.

II. THE TAKEOFF FROM THE BOARD

Conserving stride length throughout takeoff is important. The jumper should move through the board aggressively as takeoff occurs, so that the push-off from the board is in a forward and upward direction. Running off the board or running through the board are useful teaching concepts.

A. The Takeoff (last) Step:

1. Should exhibit a dorsiflexed ankle prior to contact.
2. Should exhibit a rolling contact of the foot.
3. Should not occur in front of the body, so that braking is minimized.
4. Should not be rushed, as in pecking or slapping at the board.

B. The Push-off from the Board

1. Should be in a primarily forward direction. The jumper should move past the board as takeoff occurs.

2. Should feature a powerful, forward and upward swing of the free leg. The hip should be involved in this movement.
3. Should be complete and unhurried.

III. THE THREE PHASES

A. The Hop Phase
1. The hop should not be rushed. The takeoff from the board should be complete before the foot is pulled through.
2. The free leg, upon leaving the board, should straighten somewhat and fall early in flight, to control rotation and set up subsequent swinging movements in the next phase.
3. Bending at the waist in flight is to be avoided and is symptomatic of a rushed hop or poor free leg action.
4. The foot should travel in a cyclic fashion before preparing for landing.

B. The Step Phase
1. The takeoff into the step should feature strong swinging movements of the arms and free leg.
2. Short steps are generally caused by poor takeoffs from the board, or a faulty hop phase.

C. The Jump, Flight, and Landing
1. Lack of flight time generally limits the jumper to using a hang style.
2. Proper blocking involves stopping the swinging of the arms and free leg at the instant the jumper leaves the ground.
3. Refer to the long jump section for additional discussion of these elements.

THE HIGH JUMP

I. UNIQUE ELEMENTS OF THE HIGH JUMP APPROACH

1. High jumpers generally use an approach that begins as a straight run, yet finishes as a curve. The reason for the final part of the run being curved is to develop centrifugal force in order to propel the body over the bar as the vertical takeoff is executed.
2. Most jumpers employ 8-10 strides, with the last 5 strides on the curve. The approach's length depends upon the ability and maturity of the athlete.
3. Most jumpers use two check marks. One is located from 10-16 feet out on a line from the near standard. This mark establishes the straight portion of the approach. The faster the jumper, the further out this mark will be. The second check mark is located on a running perpendicular to the bar from the other check mark, and locates the start of the run.
4. The athlete should begin the run by running in a straight line perpendicular to the bar, towards the check mark. The curve is initiated by turning the outside foot inward slightly on the fifth step (of a ten stride approach).
5. In the curve, the athlete should establish a pronounced inward lean, and apply foot pressure outward against the curve. The quality of this lean and outward pressure greatly determines the effectiveness of takeoff.

II. THE TAKEOFF

A. General Concepts of the Takeoff
1. The jumper's primary focus should be to maintain an inward lean and outward pressure as long as possible through takeoff.
2. The high jumper should attempt to takeoff vertically and allow the centrifugal force developed to propel the jumper over the bar. Jumping into the bar or leaning into the bar at takeoff is a common error.
3. Throughout the final strides, proper posture should be maintained. Backward lean, forward lean, and butt-out postures in the last few strides are common errors in this event.

B. Specifics of the takeoff
1. The Penultimate (second to last) Step:
   a. Should exhibit a dorsiflexed ankle prior to contact.
   b. Should exhibit a rolling contact of the foot.
   c. Should not occur too far in front of the body, so that braking is minimized.

   d. Should include slight lowering of the body, without postural deviation and deceleration.
2. The Takeoff (last) Step:
   a. Should exhibit a dorsiflexed ankle prior to contact.
   b. Should exhibit a rolling contact of the foot.
   c. Should touchdown in front of the body, with the foot pointed somewhat toward the pit to avoid ankle injuries.
   d. Should not be rushed, as in pecking or slapping at the ground.
3. The Push-off from the ground:
   a. Should be in a vertical direction. The jumper should move over the takeoff foot as takeoff occurs.
   b. Should feature a powerful, upward swing of the free leg and arm(s). The hip should be involved in this movement.
   c. Should be complete and unhurried.
   d. Proper blocking involves stopping the swinging of the arms and free leg at the instant the jumper leaves the ground.

III. THE FLIGHT

1. The jumper, upon leaving the ground, should immediately begin to lay back, dropping the shoulders and lifting the hips, and hold this position.
2. The takeoff locations should be so that the peak of flight is located over the bar and clearance moves can occur unhurried.
3. In the final stages of flight, the jumper should lift the head and feet to clear the bar.
4. Overarching should be avoided. Overarching or achieving maximal height in front of the bar are usually caused by poor mechanics.

THE POLE VAULT

I. BASIC TECHNIQUE

A. The Pole Grip and Carry
1. The pole should be gripped with the hands in opposition, approximately an arms length apart.
2. Pole should be carried so that:
   a. The back elbow is held high.
   b. The pole tip and front hand are held high.
   c. The weight of the pole rests in the gap between the index fingers and thumbs.
   d. The pole lies slightly across the body.

B. The Pole Drop
1. Early in the run, the pole is held close to the chest, and the pole is pushed forcefully down the runway in an effort to gain momentum.
2. During the middle of the run, the pole is held with the tip high in a comfortable position.
3. Approximately six strides away from takeoff, the vaulter should start to uniformly drop the pole tip so that the pole is parallel to the ground when the plant begins.

C. The Pole Plant
1. The plant should begin as the vaulter moves onto the penultimate step.
2. Both hands should be moved aggressively forward and upward so that the hands are as high as possible at takeoff. The vaulter should not attempt to bend the pole by working the hands in opposite directions.
3. The shoulders should be parallel to the crossbar prior to takeoff.
4. Horizontal velocity must be conserved as the plant takes place. Pole speed should also be conserved, as the dropping of the pole tip should blend smoothly into the plant.

D. The Takeoff
1. At takeoff, the top hand should be held as high as possible and directly over the takeoff foot.
2. The takeoff should be forward and upward, as a long jumper takes off. Penultimate and takeoff mechanics resemble those of a long jumper.
3. Proper body posture should be maintained throughout takeoff. Forward and backward lean at takeoff are common errors in this event.

4. Pole bend should be a natural occurrence, not a goal in itself. Often excessive pole bend is not characteristic of a soft pole, but of an error at takeoff.

E. The Swing

1. Upon leaving the ground, the vaulter should allow the head and chest to move past the hands.
2. Upon leaving the ground, the vaulter should attempt to stay as long as possible by keeping the arms and takeoff leg extended. Doing so will extend the swing and delay the rockback, insuring that the pole will continue to move.
3. The vaulter should feel that the hips and stomach are leading the swing.

F. The Rockback

1. As the swing slows, the vaulter begins to break at the waist and forces the extended top arm downward, so that the top hand travels toward the hips.
2. The vaulter should remain in the rockback position as long as possible, until the pole is almost straight.

G. The Pull, Turn, and Release

1. The pull and turn begin when the pole is nearly straight.
2. The vaulter should try to stay as close to the pole as possible, and then pull along the axis of the pole. This insures that the projection gained is vertical and initiates the turn.
3. Bend at the waist to facilitate bar clearance, then lift the elbows and pronate the hands to avoid contacting the bar with the arms.

II. POLE SELECTION

Aside from proper technique, pole stiffness and the height of the hand grip control the amount of penetration toward the pit the vaulter achieves. Obviously the higher a vaulter grips, and the stiffer the pole, the higher he is capable of jumping. However, the vaulter's physical abilities will limit these factors. The vaulter should use a pole of proper length to facilitate correct grip height and should jump on a pole that has a rating equal to or exceeding the vaulter's weight. The coach should resist the temptation to raise the hand grip excessively at the expense of proper technique, or to use pole selection to compensate for poor technique.

DRILLS AND TECHNICAL EXERCISES

Below you will find a list of activities for each jump designed to enhance technical development. Although these are organized by event, it is important to realize that all of these events have common technical features, and that overlap should occur.

A. Drills for the Long Jump

1. Short sprinting and acceleration work.
2. Repetitive jumps over cones, hurdles, etc., with varying numbers of steps between obstacles.
3. Jumps from elevated surfaces (ramps, etc.) to increase flight time and improve flight mechanics.
4. Standing long jumps for improving landings.
5. Runway rehearsal.
6. Takeoffs and jumps from short approaches.

B. Drills for the Triple Jump

1. Short sprinting and acceleration work.
2. Repetitive jumps over cones, hurdles, etc., with varying numbers of steps between obstacles.
3. Various bounding exercises (triple jump, single leg hops, alternate leg bounds, etc.) from a standing start.
4. Various bounding exercises (single leg hops, alternate leg bounds, etc.) for extended distances.
5. Runway rehearsal.
6. Takeoffs and jumps from short approaches.

C. Drills for the High Jump

1. Short sprinting and acceleration work.
2. Repetitive jumps over cones, hurdles, etc., with varying numbers of steps between obstacles.
3. Running on the curve and in circles.
4. Approach rehearsal.
5. High jumping using alternate techniques (scissors jumping, straddle jumping, etc.).

6. High jumping from a standing start or from short approaches.

D. Drills for the Pole Vault

1. Short sprinting and acceleration work.
2. Repetitive jumps over cones, hurdles, etc., with varying numbers of steps between obstacles.
3. Pole runs and runway rehearsal.
4. Gymnastics work.
5. Repetitive pole plants from a walk or jog.
6. Vaulting from short approaches with low handhold and straight pole technique. These may be done with a box, in a sand pit, or on grass.