

# **Long Jumping At New Levels**

**Presentation by Jeffrey Timms, Sprint and Jump Coach at Bloom Township HS**

## **I. Event Specific Analysis of the Horizontal Jump Approach**

- A. Introduction
- B. Approach Length
  - 1. Displacement
  - 2. Number of Steps
- C. Approach Phase Distribution
  - 1. Drive Phase
  - 2. Continuation Phase
  - 3. Transition Phase
- D. Checkmark Systems and Accuracy
  - 1. Starting Marks
  - 2. Coaches Checkmarks
- E. Visual Tracking Patterns
  - 1. Drive Phase
  - 2. Continuation Phase
  - 3. Transition Phase

## **II. Event Specific Analysis of the Long Jump**

- A. General Considerations for Preparation and Takeoff
  - 1. Posture Integrity
  - 2. Maximal Velocity Mechanics
  - 3. Horizontal Velocity
  - 4. Preparation and Lowering
  - 5. Arm Actions
- B. Preparation
  - 1. The Penultimate Step
    - a. Mechanics
    - b. Lowering
  - 2. Lowering the Center of Mass
    - a. Location of Lowering
    - b. Path of the Body's Center of Mass
  - 3. Displacement
    - a. Displacement and Swing Leg Mechanics
    - b. Displacement and Foot Bridging
- C. Actions of the Takeoff Leg
  - 1. Pre-Impact Mechanics
    - a. The Third to Last Step

- b. Prerecruitment
    - c. Recovery Height
  - 2. Support
    - a. Takeoff Foot Placement
    - b. Location and the Third to Last Step
    - c. Body Alignment
    - d. Firing Patterns
- D. Other Movements of Takeoff
  - 1. Swing Leg Movements
    - a. Amplitude of Movement
    - b. Pelvic Alignment
  - 2. Displacement Characteristics
    - a. Horizontal Velocity
    - b. Trajectory of Center of Mass
  - 3. Arm Action
  - 4. Lateral Shifting
- E. Flight
  - 1. Forward Rotation
    - a. Values
    - b. Control
    - c. Posture
  - 2. Flight Styles
    - a. The Hang Technique
    - b. The Hitchkick Technique
    - c. Combination Techniques
    - d. Faulty Flight Techniques
- F. Landing
  - 1. Preparation for Landing
    - a. Timing of initiation
    - b. Posture
    - c. Arm Sweep
    - d. Leg Extension
  - 2. Impact and Post Impact Characteristics
    - a. Posture
    - b. Arm Sweep and Movements
    - c. Absorption of Forces
    - d. Post Absorption Leg Extension