Javelin Technical Model

Progression related to Multi-Events Development (aged 8/9-12 years) can be referenced to Athletics 365. Further technical information can be found HERE.
The javelin throw is divided into the following phases:

- Approach
- 5-Stride Rhythm
- Delivery - which is part of the 5-stride rhythm
- Recovery.
The Grip

Objective

• To grasp the javelin firmly and comfortably

Technical Characteristics

The grip:

• Javelin lays diagonally in a relaxed hand and palm faces upward
• Choice of two grips:
  1. Thumb and first finger grip
  2. Thumb and second finger grip.
Approach Phase

Objective
To accelerate the thrower and javelin

Technical Characteristics
• Javelin is held horizontally over the shoulder
• Top of the javelin is at head height
• Arm is held steady - no forward or backward movement
• Acceleration run is relaxed, controlled and rhythmic - 6-12 strides
• Acceleration to optimum speed - which is maintained or increased in the 5-stride rhythm.
5-Stride Rhythm Phase Withdrawal

Objective
To position the javelin correctly for the delivery

Technical Characteristics
• Withdrawal starts on landing of the left foot
• Left shoulder faces direction of the throw - left arm is held forward for balance
• Throwing arm extends backwards during first and second strides
• Throwing arm is at shoulder height or slightly higher after withdrawal
• Tip of the javelin is close to the head in line with the eye.
5-Stride Rhythm Phase
Impulse Stride

Objective
To position and prepare the body for the delivery

Technical Characteristics
• Drive-off is active and flat from whole sole of left foot - no loss of velocity
• Body leans backwards - legs and trunk ‘overtake’ the javelin
• Left shoulder and head face the direction of the throw
• Impulse stride is longer than the delivery stride.
Delivery Phase - Transition

Objective
To transfer velocity from the legs to the trunk

Technical Characteristics
• Right foot is placed flat at an acute angle to the direction of the throw
• Legs have ‘overtaken the trunk’
• Axes of the shoulder, javelin and hip are parallel
• Right knee and hip push forwards actively
• Throwing arm remains extended.
Objective
To transfer velocity from the trunk to the shoulder and arm

Technical Characteristics
• Placement of left foot is active and solid and left side is stabilised
• Muscles in the front of the body are pre-tensed in the ‘Arc’ or backward ‘C’ position
• Throwing shoulder pushes forwards
• Throwing elbow turns inwards, palm remains up.
Delivery Phase - Final Arm Movement

Objective
To transfer velocity from the shoulder and arm to the javelin

Technical Characteristics
• Right elbow draws forwards and upwards alongside the head
• Trunk moves forwards and throwing elbow straightens explosively
• Left side of the body is blocked by solid left leg and ‘fixing’ of bent left elbow close to trunk
• Right foot turns but maintains ground contact until the javelin is released.
Delivery Phase - Final Arm Movement

Objective
To transfer velocity from the shoulder and arm to the javelin

Technical Characteristics
• Right foot turns on its outside edge and is dragged behind (1)
• Trunk leans slightly to left, right shoulder is directly over left foot (2)
• Throwing arm should be as close to vertical as possible at release (3)
Recovery Phase

Objective
To stop the forward movement of the body and avoid fouling

Technical Characteristics
• Distance from foot of the brace leg to the foul line is 1.5m - 2m
• Legs are reversed quickly after the release
• Right leg is bent to control ‘stop’
• Upper body is lowered and left leg naturally swings backwards.
Foot Placement

Objective
To create velocity and transfer it to the javelin

Technical Characteristics

- 5-stride rhythm comprises:
  - withdrawal
  - impulse stride
  - delivery
- Speed increased to optimum level - based on individual capability.