Assessment of the basic motor skills

Developmental change is observed for most skills in terms of the developmental steps or levels for each body component. The ability to assess the maturity of a basic skill by observing body component development occurs through the establishment of a systematic observation plan. This lab is designed to provide you with first, knowledge about the mature and immature body components associated with each basic motor skill, secondly a observation plan of the body components associated with each basic motor skill, and lastly, an opportunity to practice assessing the body components of several basic skills.

**Walking.** View the fundamental motor patter Video B: Walking found on www.mhhe.com/payne7e website under Teaching Physical Education. While you view this video use the below observation plan for the skill of walking.

After viewing the video evaluate the older and young boys walk from the quick time movie on the class website or with the aid of professor’s own videos.


<table>
<thead>
<tr>
<th>Observation</th>
<th>Older boy</th>
<th>Younger boy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head is up &amp; looking in the direction of the walk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body and limb moving in a straight line in direction of the movement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Narrow base of support (shoulder width)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms are slightly bent at the elbow during forward and backward arm swing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm swing is close to the trunk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms drive in opposition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lands on the heel, then moves up to the toes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both feet on the ground during the gait</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.
Running. View the fundamental motor pattern Video C: Running found on the [www.mhhe.com/payne7e](http://www.mhhe.com/payne7e) website under Teaching Physical Education. While you view this video use the below observation plan for the skill of Running.

After viewing the fundamental motor pattern video C: running and using the running observation plan evaluate the older and younger boys run from the quick time movie on my the motor development website [www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm](http://www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm).

<table>
<thead>
<tr>
<th>Observation</th>
<th>Older Boy</th>
<th>Younger Boy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foot contact is with the heel or ball of the foot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight between steps</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feet are straight when in contact with the ground</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swing leg is forward – primary in sagittal plane)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flexion of thigh at the hip carries the knee higher at the end of the forward swing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbow flexion maintained through out arm swing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back &amp; Forth arm action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms do not cross body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms in opposition</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.
OBSERVATION PLAN FOR RUNNING

Leg Action
Watch from the side: Is there flight between steps?

Pre-Run

- No
- Yes

Does the knee flex to at least 90° (right angle) on the recovery swing?

Step 1
Minimal flight, flat-footed

Step 2 or 3
Watch from the front or rear: Does the swing leg remain primarily in the forward-back plane?

Step 2
Crossover swing

Step 3
Direct projection

Arm Action
Watch from the side: Are the arms active?

Step 1
High or middle guard

Step 2 to 4
Do the arms move in true opposition to the legs?

Step 2
Bilateral arm swing

Step 3
Opposition, oblique arm swing

Step 4
Opposition, sagittal plane arm swing

Legs, Step 1
Arms, Step 1

Legs, Step 3
Arms, Step 4
**Horizontal Jump**

View the fundamental motor pattern Video D: Horizontal jump found on the [www.mhhe.com/payne7e](http://www.mhhe.com/payne7e) website under Teaching Physical Education. While you view this video use the below observation plan for the skill of horizontal jump.

After viewing the fundamental motor pattern video D: Horizontal jump and using the horizontal jump observation plan evaluate the older and younger boys horizontal jump from the quicktime movie on my the motor development website [www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm](http://www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm).

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</thead>
<tbody>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Takeoff: leg action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feet leave together (symmetrically)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Knee, hips, and ankles fully extended</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Take off: Trunk Action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proper angle of takeoff (45 degree angle)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head is up and Neck aligned with trunk</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Takeoff: Arm Action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms move down &amp; back</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms full stretched forward (full extension)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flight &amp; Landing: Arms</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm are symmetrical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm overhead then reaches forward on landing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flight and Landing: Legs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landing is two footed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legs ad symmetrical in the air and on landing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hips are flexed bring the thigh forward then knees extend for two foot landing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Flight and Landing: Trunk</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trunk maintains forward lean on landing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.*
OBSERVATION PLAN FOR THE STANDING LONG JUMP

**Takeoff: Leg Action**
Watch from the side: Do the feet leave the ground together?

- **Step 1**  
  Asymmetrical takeoff
- **Step 2 or 3**  
  Are the hips and knees fully extended at takeoff?

- **Step 2**  
  Symmetrical, partial extension
- **Step 3**  
  Symmetrical, extension

**Takeoff: Trunk Action**
Is the trunk more or less than 30° from vertical at takeoff?

- **Step 1 or 2**  
  Is the neck flexed or aligned?

- **Step 1**  
  Less than 30°, head back
- **Step 2**  
  Less than 30°, head flexed or aligned

- **Step 3 or 4**  
  Is the neck aligned with the trunk or extended?

- **Step 3**  
  More than 30°, neck flexed
- **Step 4**  
  More than 30°, head aligned or extended
**Takeoff: Arm Action**
Are the arms active; if so, do they move symmetrically?

**Step 1**
Arms inactive or asymmetrical

**Steps 2 to 5**
Do the arms move down and back or do they move to the side or front?

**Step 2**
Arms wing

**Steps 3 to 5**
Do the arms move out to the side (abduct) or move forward?

**Step 3**
Arms abduct (high or middle guard)

Do the arms move forward to about shoulder level or overhead (forming straight line with trunk)?

**Step 4**
Arms forward, partial stretch

**Step 5**
Arms forward, full stretch

- Arms abducted
- Trunk lean less than 30°
- Trunk inclined more than 30°
- Neck aligned
- Arms in winging posture
- Legs flexed at takeoff
- Knees and hips still flexed at takeoff
- Feet leave ground together
- Deep preparatory crouch
- Arms come forward
- Hips and knees fully extended
- Neck is aligned

Step 1, Legs
Step 2, Trunk
Step 3, Arms
Step 2, Legs
Step 4, Trunk
Step 2, Arms
Step 3, Legs
Step 4, Trunk
Step 5, Arms
Assessing the Developmental Level of the Standing Long Jump

Flight and Landing: Legs
During flight, are the thighs carried at an angle less than 45° from horizontal? Is the landing two-footed?

- **Step 1**
  - Minimal tuck, asymmetrical, one-foot landing
  - No
  - Yes

- **Step 2**
  - Asymmetrical, two-foot landing
  - No
  - Yes
    - Do knees flex before hips flex forward to bring thigh horizontal? (Knees then extend for two-foot landing)

- **Step 3**
  - Knees and hips synchronous
  - No
  - Yes

- **Step 4**
  - Segmented leg flexion

Flight and Landing: Trunk
Does trunk maintain a lean of more than 30°?

- **Step 1**
  - Slight lean
  - No
  - Yes

- **Step 2 or 3**
  - Does trunk hyperextend in flight or maintain forward lean until flexion for landing?
  - Hyperextends
  - Maintains

- **Step 2**
  - Corrected lean

- **Step 3**
  - Maintained lean
Flight and Landing: Arms
Are the arms symmetrical?

Step 1
Asymmetrical

Steps 2 to 4
Do arms wing (move backward) in flight and parachute (move forward) for landing or do they remain forward/sideward?

Step 2
Winging

Step 3 or 4
Are the arms overhead, then reaching forward for landing?

Step 3
High or middle guard

Step 4
Arms overhead, reach forward for landing

Arms extended overhead at takeoff

Trunk flexes

Arms reach forward at landing

Arms laterally rotate

Arms parachute

Knee flexion leads hip flexion

Step 1, Legs
Step 1, Trunk
Step 3, Arms

Step 3, Legs
Step 2, Trunk
Step 2, Arms

Step 4, Legs
Step 3, Trunk
Step 4, Arms

Knees and hips flex together in flight

Knees extend Two-foot landing
**Skipping**

This video is of skipping. Evaluate the child’s immature and mature components

<table>
<thead>
<tr>
<th>Observation</th>
<th>Older Child</th>
<th>Younger Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head remains up with eye looking forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step-hop phase is evident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height and distance of the steps and hop are consistent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forward body lean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Land from the hop is on the ball of the foot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heel does not touch down before the weight is transferred to the other foot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms opposite the step leg swing is upward and forward in synchrony with the leg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The arm on the same side as the stepping leg moves backward and downward</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Throwing**

View the fundamental motor pattern Video E: Throwing found on the [www.mhhe.com/payne7e](http://www.mhhe.com/payne7e) website under Teaching Physical Education. While you view this video use the below observation plan for the skill of throwing.

After viewing the fundamental motor pattern video E: Throwing and using the throwing observation plan evaluate the older and younger boys throw from the quicktime movie on my the motor development website [www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm](http://www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm).

<table>
<thead>
<tr>
<th>Observation</th>
<th>Older Boy</th>
<th>Younger Boy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Foot Action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a step taken?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the step contralateral?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is the step over half the thrower's height?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Trunk Action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are their rotary movements of trunk?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the hips rotate?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the hip start before the trunk?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arms full stretched forward</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Backswing</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the arm move backward before moving forward?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the hand drop below the waist?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circular, downward backswing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circular, upward backswing</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Hummers action</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elbow and upper arm move forward of shoulder level forming a right angle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>At front facing, elbow pointed to the side of the body</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper arm lags</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Forearm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fore arm drops down backwards and stays stationary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Forearm lag at front facing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.*
OBSERVATION PLAN FOR THROWING

Foot Action
Watch the feet from the side: Is a step taken?

No

Yes

Step 1
No step

Step 2, 3, or 4
Is the step homolateral or contralateral?

Step 2
Homolateral step

Step 3 or 4
Is the step over half the thrower's height?

No

Yes

Step 3
Contralateral, short step

Step 4
Contralateral, long step

Step 1

Step 3

Step 4
Trunk Action
Move to watch the trunk from the side and the rear. Are there rotary movements?

No

Step 1
No trunk action or flexion-extension

Yes

Step 2 or 3
Does the lower trunk (hips) rotate?

No

Step 2
Block or upper trunk rotation

Yes

Watch from the rear: Do the hips start forward before the trunk?

No

Yes

Step 3
Differentiated rotation
**Backswing**
Watch from the front and side:
Does the arm move backward before moving forward?

**Step 1**
No backswing

**Step 2 or 3**
Does the ball swing outward, up and around?

**Step 2**
Elbow and humeral flexion

**Step 3**
Circular upward backswing

**Step 4**
Circular, downward backswing

Does the hand drop below the waist?

No

Yes

No

Yes
**Humerus Action**
Watch from the side: Do the elbow and upper arm move forward at shoulder level (humerus forms a right angle with the trunk)?

- **Step 1**
  - Humerus oblique

- **Step 2 or 3**
  - At the moment of front-facing, is the elbow pointed toward you at the side, or is it seen outside the outline of the body?

- **Step 2**
  - Humerus aligned but independent

- **Step 3**
  - Humerus lags

**Forearm**
Watch the ball in the thrower’s hand: Does it move forward steadily or drop downward or stay stationary as the thrower rotates forward?

- **Step 1**
  - No forearm lag

- **Step 2**
  - Is the deepest lag reached before or at front-facing? (May be difficult to see without slow-motion film or videotape)

- **Step 2**
  - Forearm lag

- **Step 3**
  - Delayed forearm lag
Catching

View the fundamental motor pattern Video F: Catching found on the www.mhhe.com/payne7e website under Teaching Physical Education. While you view this video use the below observation plan for the skill of catching.

After viewing the fundamental motor pattern video F: Catching and using the catching observation plan evaluate the older and younger boys catch from the quicktime movie on my the motor development website www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm.

You will need to download the quicktime movie onto your computer. Once downloaded you can manipulate the speed and stop/go features in your movie player to evaluate the catch using the catch observation plan.

<table>
<thead>
<tr>
<th>Observation</th>
<th>Older Boy</th>
<th>Younger Boy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Components</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the arms move to adapt to ball arrival?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ball is caught in the hands</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are the arms extended forward to scoop the ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Palms face inward</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hands adjust to flight and size of the ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body moves to adjust to the flight of the ball</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body adjustment is delayed</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summary Profile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.
OBSERVATION PLAN FOR CATCHING

**Arm Action**
Do the arms move to adapt to ball arrival?

- **Step 1**
  - Little response

- **Step 2 or 3**
  - Are the arms extended sideways to encircle ball or forward to scoop ball?

- **Step 4**
  - Arms give

**Hand Action**
Do the palms face inward?

- **Step 1**
  - Palms up/down

- **Step 2**
  - Palms inward

- **Step 3**
  - Hands adjustable

Arms, Step 3
Hands, Step 1
Body, Step 1
**Body Action**
Does body move to adjust to flight of the ball?

**Step 1**
No adjustment

**Yes**
Is body adjustment delayed to make an accurate movement?

**No**

**Step 2**
Premature adjustment

**Step 3**
Delayed adjustment
Basic Motor Skill Assignment

After viewing the fundamental motor pattern video G: Striking, develop a striking observation plan and then evaluate the older and younger boys strike from the quicktime movie on my the motor development website www.d.umn.edu/~dmillsla/courses/motorlearning/PowerPointPresentations.htm.

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<td><strong>Components</strong></td>
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<td></td>
</tr>
<tr>
<td>Racquet/Bat Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humerus Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trunk Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot Action</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Summary Profile</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bat action</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humerus</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trunk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foot</td>
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<td></td>
</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.*
Observation Plan for Sidearm Striking

*Racquet/Bat action*

*Hummers Action*
Trunk Action

Foot Action
After viewing the fundamental motor pattern video H: Kicking, develop a kicking observation plan and then evaluate the older and younger boys kick from the quicktime movie on my the motor development website [www.d.umn.edu/~dmillsa/courses/motorlearning/PowerPointPresentations.htm](http://www.d.umn.edu/~dmillsa/courses/motorlearning/PowerPointPresentations.htm).

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<td></td>
<td></td>
</tr>
<tr>
<td>Step:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Step:</td>
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<td>Step:</td>
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<tr>
<td>Step:</td>
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<td></td>
</tr>
<tr>
<td>Summary Profile</td>
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</tr>
</tbody>
</table>

* Place a check next to the body component that is demonstrated by the subject. Under summary profile add the number of checks for each phase.
Observation Plan for Kicking

Component:______________________________

Component:______________________________

Component:______________________________