Developmental Background
Basic locomotor skills include walking, running, jumping, ascending and descending stairs, hopping, galloping, sliding, leaping, and skipping. Locomotor skills are not only important for participation in many games, sports, fitness, and rhythmic activities, they also contribute to a person’s access to home, school, and community environments. Typically, basic walking and running develop before a child enters elementary school, and the more complex locomotor skills develop during the primary grades. The efficiency of performing locomotor skills develops over time as well, and is often dependent on direct instruction in physical education.

Students with a disability often have not had the opportunity to develop these skills, or the limits of the disability prevent them from performing at age level. Some may use adaptive devices to assist with locomotor skills such as a wheelchair, walker, cane, crutches, prosthetic limb, or braces. These items can be incorporated in locomotor activities in physical education. For example, elementary school students using crutches can often play a fullback position in soccer, with rules adapted to allow them to propel the ball with the crutch. Students who have even a mild physical disability may use muscle substitutions or alternate movements to perform a locomotor pattern. For example, when running, a student who wears a brace that immobilizes the left ankle may go up on her right toe so the left leg has a little more room to swing through. Students with low muscle tone and hyperflexible joints, as is common in Down’s syndrome, may run with a wider base of support in order to compensate and maintain balance.

Many students with a disability are highly motivated to participate in physical education in the elementary grades. Even a simple goal, such as improving a person’s ability to step up, down, and over small obstacles, can make a big difference in the life of a child with a disability. Achieving such a goal can open opportunities to play with friends on the playground, walk around in a multilevel home or yard, and go up and down curbs while shopping or walking to a neighbor’s house.

Indicators of Success
1. Demonstrate and refine the performance of basic locomotor skills and perform simple locomotor sequences.
2. Incorporate the use of different locations, levels, directions, pathways, and extensions in movement sequences and game play.
3. Apply the basic principles of relationships while moving in space with and without a partner and/or manipulatives.

Learn to modify your teaching (how you teach), the environment where you teach) or what you teach (adapt the activity itself)!²

How Do You Teach?
• Use simpler language—use language that meets the cognitive understanding and ability of the students.
• Give clear examples of things they already know—use concrete visual examples and demonstrations.
• Keep activities short and simple to hold the interest of younger students.
• Take the time to teach class organization and safety skills, then provide for frequent review, practice, reminders, and cues.
• Consider the sequence of tasks—if the student doesn’t have prerequisite skills, back up and teach them.
• Allow time for mastery—once a new skill is learned, give ALL students the opportunity to use it in a variety of ways before moving on to the next.
• Use multiple senses—many students, not just ones with disabilities, can benefit from a variety of sounds, textures, weights, and “feel” of the activity and the equipment used. (see the FlagHouse line of SNOEZELEN® equipment).
• Allow for adaptations in performance that enable the student to participate in the activity.

Where Do You Teach?
• Adjust courts, fields, goals, equipment, and boundaries of play to make the activity easier and ensure more success. For example, for some classes you may want to use a smaller soccer field, arrange obstacle courses in a circle or semi-circle to decrease the running distance, or have students run around a kickball.


FlagHouse Activity Guides - http://www.FlagHouse.com/ActivityGuides
What Do You Teach—Adapt The Activity Itself!

- Assess the student’s ability to determine activities in which they have the highest level of success. If the student uses a wheelchair or has limited mobility, plan to incorporate mobility equipment within the locomotor activities.

- Limit the time of participation—students with organic or health impairments such as sickle cell anemia, heart conditions, or asthma may need to rest more frequently than other students. Work out a system where they can perform a more sedentary task or participate in a less strenuous helper or observer role for part of the time.

- Adapt the skills according to the students’ abilities. Work from activities/tasks in which the student is successful toward more challenging tasks and activities. For instance, students with limited mobility may need to walk while other students run; students with a physical disability may need to hold on to a stable object especially when jumping or hopping; students with visual impairments may need to use a guide rope when walking, running, galloping etc.; or, students with a hearing impairment, language disability, or auditory perception difficulties may require the teacher to use visual cues more frequently.

- Carefully select student partners in accordance with each particular activity. For some activities such as learning a developmental pattern, it will be helpful to pair students by ability. For other activities such as improving the efficiency of a locomotor pattern, it may be helpful to pair a more highly skilled student with a less skilled student.

- Design activities so students of various levels of skill can participate. This is often accomplished by using various sizes of equipment and space, as well as methods that allow for various levels of assistance. Within this variety, allow students to select their own level of challenge.

- Keep in mind the nine basic areas in which an activity can be adapted:
  1. Quantity
  2. Time
  3. Input
  4. Output
  5. Participation
  6. Level of Support
  7. Alternate Goals
  8. Difficulty
  9. Substitute Curriculum

- Use these nine areas to adapt the level of challenge within the activity. For example:
  1. Some students may learn better by performing three jumps with good form than ten jumps with poor form (quantity).
  2. Allow a student to begin an endurance jog early (i.e., while others are finishing roll call) to provide extra time and enable him to finish the jog with the class group (time).
  3. Providing visual, as well as verbal, instruction may be a critical adaptation for some students (input).
  4. Allow each student to choose the type of locomotor skill to use (run, walk, skip, bike, propel a wheelchair, skate, etc.) to move between stations on a fitness or obstacle course (output).
  5. Participating in short bursts with rest in between may be important for students with some conditions such as asthma or obesity (participation).
  6. A student with a brain injury and memory difficulties may benefit from a peer partner to remind him of a sequence or special instructions (level of support).
  7. Some students work on stepping over a line while others work on jumping over a slanted rope on the ground (alternate goals).
  8. A preschool-aged student with blindness uses a guide rope to walk 50’ while other preschoolers use a guide rope to walk together in a line of three students for 50 yards (difficulty).
  9. While the class is working on jumping skills, a student who uses a wheelchair works with an adult helper to practice assisting with transfers in and out of the chair (substitute curriculum).
Developing Outdoor Activity Skill

Advanced - More Skills

• Make parallel lines with Ropes (G8239, G77, & G208) or Colored Tape (G582) to indicate a distance to jump, hop or leap.

• Use a Broad-Jump Mat (G405) or Long-Jump Test Mat (G11223) at a jumping station.

• Use a Jump and Reach Board (G167) at a jumping station.

• Ask students to leap from one Hoop (G1124 to G11118) or Spot Marker (G743, G1027) to another as part of an obstacle course or when moving between stations.

• Perform a locomotor pattern to move in various configurations or directions (e.g., clockwise, counterclockwise, toward center of circle, away from center of circle, from one landmark to another). Use Colored Tape (G582), Spot Markers (G743, G1027), Cones (G228, G5480), or other visual cues.

• Perform a locomotor pattern to move in relation to multiple people and objects (e.g., scatter formation, Obstacle Courses (G800, G11155, G5740), or sequence of Bases (G11163, G2902) on a diamond.

• Perform a locomotor pattern to move in relation to another moving object (e.g., rolling a ball, bouncing a ball, approaching a ball, retreating from a ball or person, and chasing a ball).

• Move in various directions: forward, sideways (right and left), backward, or in a path that defines a geometric shape. Use Colored Tape (G582), Spot Markers (G743, G1027), Cones (G228, G5480), or other visual cues.

• Combine locomotor patterns while continuing to move forward. Walk on Tape (G582) or painted lines in various patterns.

Easier

• Use Activity Walk-Ons (G8007) to help direct students to walk forward, backward, and sideways, on cue. They can also be used to direct students to a sequence of landmarks or simple task stations (e.g., pick up a beanbag, walk to a bucket and put a ball in, walk to a mini-trampoline and jump three times, return to line).

• Use footprint patterns such as Footprint Activity Walk-Ons (G1167) or Spot Markers (G743, G1027) to indicate a walking, jumping, or hopping path.

• Use footprint patterns such as Footprint Activity Walk-Ons (G1167) or Spot Markers (G743, G1027) to indicate right and left foot patterns for galloping, skipping, or leaping.

• Use large Bolsters, large Foam Module Blocks (G10327 to G10335), Foam Trapezoids (G4559), and other large shapes for stability when students are beginning to learn jumping and hopping.

• Provide a slanted rope or slanted Flexi-Weight Cross Bar (G1078) as a stationary jumping hurdle and allow students to select their own height challenge.

• Use Potato Sacks (G5742, G9467) in activities to facilitate repeated jumping to move from one place to another.

• Provide a mini trampoline such as a Gym Tramp (G3777), Big Bounce (G568), Vault Board (G3625) or Jogging Trampoline with stabilizer bar (G4540, G4541) for physical assistance with jumping.

• Perform straddle jumps and scissors jumps.

More Difficult

• Walk on Foam Balance Beams (G10011), Vari-Balance Beam (G6524), Walking Boards (G6863, G30480), Balance Planks (G11166), or Poly Beams (G5063) of different heights and widths.

• Use various locomotor patterns in a shuttle run (e.g., run, skip, gallop, slide).

• Use an Agility Ladder (G10752) in warm up, run an obstacle course, or use with racing activities.

• Teach students to roller skate with Chicago Roller Rink Skates (G2328, G2293), In-Line Skates (G7678), and/or ride a scooter.

• Use a Pogo Stick (G1043) or stilts of various heights: Foam Bucket Stilts (G1462), Crazy Leg Stilts (G1064).

• Provide equipment for cooperative activities such as Roaring Rapids & River Stones (G11279), Dual Walkers (G1228), and Group Walkers (G7724).

• Teach a progression of jump rope activities from jumping a slightly moving rope to Chinese jump rope: Jump Bands (G9871) and Double-Dutch (G8973 to G8975).

• Jump to get on top of a high obstacle such as a wall or Vaulting Box (G11083), or to grab an overhead bar such as an Adjustable Chinning Bar (G3102).

• Introduce long jump and high jump as field sports. (G9764, G11223)

• Leap over larger objects and across longer distances. Use Ropes (G77, G208), blocks, Walking Board pieces (G6863, G30480), or Small Cone Hurdles (G10162) to step over objects of various heights (1" to 12").

Novice - Less Skilled

• Use locomotor skills in games of low organization (e.g., hopscotch, follow-the-leader, cut-the-cake, tag, Rimball (G5624), as sports lead-up games. Also, T-Ball with numbered bases (G11163, G2902), Hand Tennis (G11719), Puff Polo (G674), Pickle Ball (G3890), or Floor Hockey (G11695).

• Walk, run, slide and gallop with increased speed (in one direction).

• Use running, galloping, and sliding in agility activities (e.g., shuttle run, tag, lead-up games).

• Use drawings, photos, videotapes, and/or demonstration for instruction in efficient body mechanics while performing a locomotor pattern. Provide individual feedback from the teacher, adult helpers, or student partners.

• Practice skating motions with a piece of fingerpaint paper (slid side down) under each foot on a carpeted surface.

• Increase the level of difficulty of Obstacle Courses and sequenced locomotor activities. (G800, G11155, G5740)

• Time student’s running speed and compare to their personal best.

• Time each student’s running speed on various surfaces and provide individual feedback. Discuss the reasons that speed may vary on different surfaces.

• Hop or jump into coded spaces (e.g., all blue circles or all even numbers). Spaces can be identified using Hoops (G1124, G1126, G1118), Spot Markers of different shapes, colors, etc., such as (e.g., Giant USA Foam Puzzle pieces (G10834), Numbered Spot Markers (G11252), Throw Down Base Set (G143), or Poly Skeleton Puzzle pieces (G1116).

• Provide a High-Jump Bar or Strap (G9764) or Flexi-Weight Cross Bar (G10788) for vertical jumping practice.
The Solutions You Need

The matrix can be used to identify where, on a two-dimensional continuum, students in your class fit so you can provide the most suitable equipment and supports for their success. The matrix is arranged so that the easier, novice-level activities/skills are identified in the lower left-hand quadrant of the matrix. There you can see, to some extent, a developmental sequence of locomotor skills with recommended equipment appropriate at each level. You can see in the upper, right-hand quadrant, implications for the most difficult and advanced skills featuring the standard equipment used in any physical education class. You would be surprised that, if given an option, many students will choose to use equipment that gives them a greater chance for success. If the environment in the class is such that these choices are “okay,” ALL students will learn, find success, and perhaps learn to enjoy an activity they can incorporate into an active lifestyle throughout their life span.

References

American Association for Active Lifestyles and Fitness (AAALF/AHPERD)
Adapted Physical Activity Council
1900 Association Drive
Reston, VA 20191
800-213-7193 X430
http://www.aahperd.org/aaalf/


Kimble Morton works at the Diagnostic Center, Southern California, where she provides motor assessment and consultation as part of a transdisciplinary team. In addition, she provides training on a variety of topics such as adapted physical education, motor assessment, motor development, behavior intervention, crisis intervention, collaboration, and inclusion. She is co-author of Making Connections: From Theory to Practice in Adapted Physical Education and the assessment instrument, Analysis of Sensory Behavior Inventory-R. Ms. Morton is a contributing author to the Adapted Physical Education Guidelines for California Schools, and the manual, Positive Intervention for Serious Behavior Problems: Best Practices in Implementing the Positive Behavioral Intervention Regulations.

Copyright © 2003 by FlagHouse, Inc.

All activities comply with the NASPE National Standards and Appropriate Practices Document.