DEVELOPING

FUNDAMENTAL MOTOR SKILLS

Randy Foederer
Adapted Physical Education Consultant
400 E. Spring Valley
Richardson, TX 75083
Cell 214-478-0185
Email: rfoederer@sbcglobal.net

Amy Talbert
Region 10 Education Service Center
400 E. Spring Valley
Richardson, TX 75083
Cell-972-978-9478
E-mail- Amy.Talbert@Region10.org

Kim Kantor
Adapted Physical Education Consultant
400 E. Spring Valley
Richardson, TX 75083
Cell 469-231-7007
Email: Kim.Kantor@region10.org

VISUAL TRACKING / CATCHING

Description:
Catching is an important skill in many physical education activities and sports related skills. While proficiency in catching can enhance participation in PE and/or sports, it is not a precursor for the development of many Lifetime Leisure skills.

Developmental Information:
30% proficient at visual tracking, ball contact mostly arm and hand, at age 4 over 55% proficiency, visually track ball all the time, catches mainly with hands at age 5, begins to absorb force at age 6

Points of Emphasis:
Use non-threatening and easy to grasp objects
Use hand over hand assistance if needed

Components of Catching:
Ability to focus on an object
Ability to visually track a moving object
Ability to coordinate movement of arms and hands to the flight of an object
Ability to secure an object with hands only by "giving" with the object
Ability to move body while visually tracking object and secure object with hands only while body is moving

Activities for Visual Tracking
From a sitting or prone position, have student visually track an object of bright color and interest moved in different direction 10-12 inches from the eye.
Using soap bubbles, have the student visually track bubbles and pop them with their hand or fingers.
Using a scarf, throw scarf up above eye level in front of student and have student visually track scarf as it falls and grab it before it touches the floor.
Play simple balloon volleyball activities.
Place student in a dark room and have student follow a flashlight beam as it travels across a wall on front of him/her.

Beginning Catching Activities
Have student sit on the floor with legs straight out in a "V" position. Roll a large ball beginning with short distances (2-3 feet) and encourage the student to visually track and secure the ball with both hands.

Move student to a sitting position and suspend a non-threatening object (beanbag, yarnball, successball). Allow student to push object outward encouraging student to visually track the object and secure it with both hands as it returns. Begin tossing suspended object forward for further distances and/or different directions from student.

With student standing, bounce as soft a ball as possible directly to the student with the ball arriving between the waist and the chest. Encourage student to secure the ball in any fashion and gradually encourage the student to grasp and secure the ball with their hands only. Increase distance of bounce and begin to bounce ball just outside of the body frame.

Move to tossing objects that are non-threatening and easy to grasp (slightly deflated beachball, successball, balloon with a plastic sack over it). Increase distances of toss as student demonstrates success.

Move to tossing smaller objects that are non-threatening and easy to grasp (smaller deflated beachballs, smaller successballs, and light weight bean bags). Increase distance of toss as student demonstrates success.

Begin simple self bounce or self toss activities. Playground ball may be bounced off of a wall and caught or bounced off of the floor and caught.

Advanced Catching Activities

Introduce catching objects of different sizes and shapes. Encourage student to throw a ball or a beanbag up in the air, clap hands, turn around, or touch a designated body part, before catching the object.

Encourage partner toss games from one end of the gym to the other.

Begin utilizing an extension (gloves, scoop) to catch smaller objects tossed or thrown from over 20 feet.

Incorporate much more movement into the activity such as running a pass route and catching a football, catching a fly ball not tossed directly to the student, and/or catching a Frisbee where movement is required.

OVERHAND THROW

Description:
The overhand throw is widely use in a variety of PE activities and sports (softball, baseball, football and other sporting events (Special Olympics and Sports Extravaganza).

Developmental Information:
Steps with same foot, some body rotation, throws ball 12 feet at age 5
Maximum trunk rotation and proper weight transfer at age 6-7

Points of Emphasis:
Start perpendicular to the target in order to force proper weight transfer and body rotation
Always throw with the greatest amount of force possible to force weight transfer, body rotation, arm extension, and follow through.
Use various equipment and games to motivate student to practice the over hand throwing pattern

Components of Throwing:
Bring ball back well behind throwing shoulder.
Step forward to transfer weight by stepping forward with foot opposite throwing hand.
Rotate upper torso forward as throwing arm and hand moves forward toward the target with good speed
Release ball at proper point and continue forward with throwing arm and hand for proper follow through.

Throwing Activities
When indoors and with limited space, have student throw scrap paper rolled into balls or foam balls.

Use rubber feet, polyspots, or a line on the floor to help with proper weight transfer. Encourage student to step over the line while throwing or moving proper foot from one polyspot to another in order to provide concrete or visual information to the student.

Practice trunk rotation exercises by placing an object (balloon) out in front of the student to twist or rotate and slap the object (balloon) with the throwing hand.

Utilize some type of barrier (standing a mat up on its end) or rope to throw over. This will help student release the ball at a better release point as students tend to hold on to the ball long which produces a downward trajectory.

Use motivational targets such as hoops, bulls-eye targets, the teacher ☺, bowling pins, or 2-liter bottles placed on a table top or modified cone and have student throw objects with good force to strike the targets.
In large spaces, (gyms, outside) allow student to throw beanbags, tennis balls, and/or softballs using the same types of activities mentioned above.

THE UNDERHAND THROW

Description:
The underhand pattern is often overlooked but can be a much more functional skill for students with disabilities. Many lifetime leisure skills such as bocce, bowling, and horseshoes utilize the underhand pattern.

Developmental Information:
Tosses ball underhand 5 feet and hits target on wall at age 4

Points of Emphasis:
Whether it is a toss or a roll, proper knee bend, pendulum arm swing, and accurate release point are critical.

Components of the underhand throw or underhand roll:
Start with feet shoulder length apart.
Swing object slightly forward and then backward with most of the body weight on the same foot as the throwing hand.
Swing the object slowly forward while stepping forward with the foot opposite the throwing hand while flexing the knees as the object is released toward the target.

Underhand Toss Activities
Begin with simple toss activities such as tossing a beanbag into a hula-hoop placed 2-3 feet away.

Utilize toss activities such as tossing objects into larger containers or on to carpet squares.

Utilize commercial games such as modified horseshoes, toss across, clown face, or lightweight nylon target games to have student toss object to or into.

Placing targets (bowling pins or 2-liter bottles) in front of the room, encourage student to toss object and knock down the targets.

Suspend hula-hoops from ceiling or a basketball goal and encourage student to toss objects through the hoops.

Advanced Activities
Use the underhand toss to play tic-tac-toe by setting down 9 hoops or carpet squares and encouraging student to toss objects (beanbags) into 3 hoops in a row – down, across, or diagonally.

KICKING

Description:
Kicking is a common skill utilized in physical education and in sports such as kickball and soccer. While it may not be one of the more critical skills to master, it can be one of the easier skills to master and utilize in PE.

Developmental Information:
Walk up and kick ball 8-12 feet at age 4
Kicks moving ball 10-18 feet at age 5

Points of Emphasis:
Encourage student to kick the ball as hard as possible to create necessary leg speed and follow through.

Components of Kicking:
Ability to stand on one foot for 2-3 seconds
Ability to plant nonkicking foot in close proximity of the ball
Ability to display flexion of the kicking leg in preparation of kicking
Ability to extend lower kicking leg at impact with the ball and display follow through after impact

Activities for Kicking Stationary Ball
Begin in a standing position near a wall or other form of assistance if balance is an issue and kick a stationary ball forward with as much force as possible.

Begin with large ball (beachball) and suspend object at or just below waist height out in front of the student and have student kick the stationary ball and continue to follow through and kick the suspended balloon.

Place a balloon on or ball on a string and encourage student to hold on to the string or velcro the around the students wrist. Allow the balloon or ball to hang down on the floor and encourage the student to kick the suspended object as forcefully as possible.

Utilize more motivational games such as kicking objects into targets, kicking objects so they knock down targets, or playing kickball.

Activities for Kicking a Moving Ball
Begin with a large ball rolled from a short distance and encourage student to take one step forward and display proper leg speed and follow through.

Gradually increase the distance the ball is rolled from and increase the number of steps and the speed of those steps as the student approaches the ball prior to impact.

Begin playing higher level games such as kickball and soccer.

STRIKING (Baseball)

Description:
There are various forms of striking with the most common being the baseball strike. With the proliferation of modified baseball leagues such as the Miracle League, Buddy League, Angel T Ball, and participation of softball in Special Olympics and the Sports Extravaganza, the skill of striking can have a positive impact on a students' participation in one or more of these opportunities.

Developmental Information:
Trunk and hip rotation, weight to forward foot, hit ball of tee 5 of 5 trials at age 5
Hit softly tossed ball 6 of 7 trials at age 6 ½

Points of Emphasis:
Good bat speed and a horizontal swing pattern will create a very functional striking pattern.

Components of Striking:
Stand with feet shoulder with apart facing the object to be struck.
Secure proper grip on the bat with dominant hand on top and hands touching each other.
While griping the bat, place hands back behind dominant shoulder with bat pointing toward the sky.
Begin to turn or twist trunk forward bringing hands across the abdomen, creating a level (horizontal) swing pattern with as much bat speed a the student will generate while at the same time stepping and transferring weight to the non-dominant foot.
Continue swing pattern after impact to create proper follow through.

Beginning Striking Activities
Begin by striking a suspended balloon or beachball with the dominant hand, with emphasis on a level horizontal swing pattern.

Add short, lightweight implement which student can hold in the dominant hand and encourage this same horizontal swinging pattern with good arm speed and proper weight transfer.

Lengthen the bat to where the student must grip the bat with both hands (dominant hand on top) and have student continue to strike a larger suspended object (balloon or beachball).

Begin to use smaller (softball size) balls by placing them on a tee and encourage student to display proper bat preparation, sufficient bat speed, horizontal swing pattern, and weight transfer and proper follow through.

Advanced Activities for Striking

Begin to play some modified T-ball games where student can strike ball off of the tee and run to first base.

Beginning tossing a larger type of nerf ball or beachball from short distances and have student attempt to strike balls that are moving toward them.

Gradually decrease the size of the ball and increase the distance that the ball is tossed from.

Finally, allow student to play in a regular softball game with whatever modifications are needed.

STATIC BALANCE

Description:
While static balance in and out of itself is not so critical, the fact that weight transfer and consequently static balance is an important prerequisite of such object control skills of kicking, throwing, and striking, it becomes a necessary skill to develop. Better balance is attained by placing student in an unbalanced situation which requires the student to find and shift their center of gravity in order to maintain an upright position.

Developmental Information:
Stands on one foot for 4-8 seconds at age 4
Stands on one foot for 10 seconds at age 5

Activities for Static Balance
Have student sit on a therapy ball and move the ball side to side or front to back while the student shifts their center of gravity to maintain an upright sitting position.

Begin with a four point stance (hands and knees or hands and feet) and move to a three point stance by lifting a hand, knee, or foot. This forces the student to shift the center of gravity in order to maintain an upright position.

From the three point stance, the student can move to a two point stance by lifting a hand and the opposite knee or foot.

From a standing position, encourage student to stand on either foot with arms out to the side. Student may use furniture or a wall to help regain balance if needed.

You may use commercial equipment such as stability trainers, balance boards, balance hemispheres, and/or a balance maze.

Encourage student to balance on uneven surfaces such as a beanbag chair, a mattress, sand, grassy hill, or a crazy sidewalk.

Introduce student to the game of Twister, which forces all types of static balance challenges.

DYNAMIC BALANCE

Description:
Dynamic balance is the ability of the body to maintain equilibrium while the body is in motion. Because most all physical education activities and sports related skills involve movement, dynamic balance is an important competency for students to obtain.

Developmental Information:
Walks forward on a 4-inch beam no less than 11 inches at age 4
Walks forward on a 2-inch line 10-15 feet at age 6 ½

Points of Emphasis:
Always place students in a position that forces them into an unbalanced situation in order for them to find their center of gravity and maintain equilibrium.

Activities for Dynamic Balance
Place 2 lines on the floor 6-8 inches apart and have student narrow their base of support in order to walk between the lines.

Place 2 lines on the floor wider apart at one end and becoming closer together 3-4 inches apart) at the other end. Students will start with a wider base of support and be forced to narrow that base to a foot over foot pattern near the end of the lines.

A crazy sidewalk can be set up to put the student in an unbalanced position, forcing the student to shift the center of gravity in order to maintain an upright position. A crazy sidewalk can be made of a large gymnastic mat with pillows or soft materials underneath to create an uneven surface.

Use a 2x6 or 2x4 to move student up off the floor. For outside activities, a curb or playground apparatus can be used to replace the wood planks. Have student walk along the wood planks trying not to step off of the board. The student may first travel down the board sideways, then foot over foot, and finally heel to toe.

Use balance beam the placed so the student is up off the floor. Encourage student to first walk sideways on the beam, then foot over foot on the beam, and finally heel to toe down the entire length of the beam.

Use commercial equipment such as a balance rope, foam bucket stilts, and or crazy leg stilts for higher level balance activities.

Higher levels of dynamic balance can be obtained through higher level activities such as roller skating and riding a 2 wheel bicycle.

JUMPING (Standing Long Jump)

Description:
The standing long jump or horizontal jump is not only a prerequisite skill to jumping rope, it is also an event in and of itself in Special Olympics, the Sports Extravaganza, and many Field Days.

Developmental Information:
Jump a distance of 8-10 inches at age 4
Jump a distance of 36 inches and over a 10-inch obstacle at age 6
Jump a distance of 48 inches at age 7

Points of Emphasis:
Encourage flexion of the lower extremities in preparation and arm swing upon take-off.

Components of the Standing Long Jump:
With feet shoulder width apart, the student will display flexion at the ankles, knees, and hips.
Swinging arms backward and forward, student will roll up to the balls of the feet and as arm thrusts forward, the student will push off of the balls of both feet and simultaneously jump forward at an angle of 45 degrees with body fully extended during flight. Upon landing of both feet simultaneously, the student will bend knees slightly and lean body forward.

Jumping Activities
Sitting on a hippity hop or smaller therapy ball, the student will practice flexion and extension of the lower extremities in preparation of jumping.

Using a mini-trampoline, the student will get a kinesthetic sense of the jumping motion by jumping up and down with or without assistance.

Standing on a short platform (4-6 inches), encourage student to jump down from the platform, leaving the platform with both feet simultaneously and landing with both feet at the same time with some forward body lean.
If student has a tendency to lead with one foot with the other foot following, try wrapping headbands or a scarf around the lower legs to encourage both feet leaving together.

Using 2 sets of footprints, place student on 1 set of the footprints and place the other set 4-6 inches in front of the student and encourage the student to jump onto the second set of footprints

Once a student is able to propel their own weight off of the floor, encourage the student to jump over a simple line on the floor or jump over a jump rope lying on the floor.

Using 2 pieces of rope 5-8 feet long or 2 jump ropes, lay the ropes out parallel to each other creating small distances between parts of the ropes and longer distances between other parts of the ropes and encourage student to “jump the brook” at a space that motivates the student (one that isn’t too easy or too hard).

Using hula-hoop and carpet squares that are secured to the floor encourage student to jump from one to another while varying the distances between each one.

Introduce jumping for distance in an actual long jump pit and other fun activities such as the potato sack race and jumping over small hurdles.

RUNNING

Description:
Running is a prerequisite for most all regular PE activities ad sports related skills. The ability to run independently can provide competitive opportunities in Special Olympics and the Sports Extravaganza.

Developmental Information:
Run 25 yards in 20-29 seconds at age 4
Run with few falls and lengthening stride by age 6-7
Run 50 meters under 10 seconds for ages 6-7

Points of Emphasis
While the presence of a flight stage creates the running pattern, the ability to run independently and in a straight line will dictate the level of participation in any sporting event.
Use motivational sources (music while running or rewards for running).

Components of Running
Support foot directly under the center of gravity with body leaning at 1 o'clock and arms bent at 90 degrees. Toes point straight ahead with high rear heel kick of non-support leg while pushing off the ball of the foot of the support leg. Back leg straight with front thigh horizontal to the ground. Long flight stage with alternate arm action.

Activities for Running
Students who lack the concept of running can be placed on a downhill situation where the pace will automatically quicken.

Begin with physical assistance if needed and encourage student to run a short distance with a very concrete finish (run to the wall, run to the cone).

Use cones to establish a lane (3-5 feet in width) for running and have student run the length of the cones always staying between the cones and running a straight line.

On a track, have student run within a lane beginning with short distance (25 meters) and lengthening the races to 100 meters. Provide assistance if necessary and gradually decrease the amount of assistance from running with to running beside to waiting at the finish line.

To assist with proper knee lift, encourage student to run in place exaggerating knee lift by tagging the teachers hands placed in front of the student at waist high

To assist with running on the balls of the feet, have student run uphill or up a flight of stairs with minimal height for each step.

Use more motivational games such as relay races, running the bases, running through obstacle courses and/or playing tag games.

GALLOPING

Description:
Galloping is the first asymmetrical gait learned by young students. It is a combination of a step and slide pattern with the same foot always leading.

Developmental Information:
Student demonstrate primitive forms of galloping at age 3
Under 50% learn to gallop during the 4th year
Nearly 80% of the students can gallop by the end of age 5

Components of Galloping:
Galloping combines a step with the lead foot and a slide of the back foot up near the back of the front foot. This pattern continues with the same lead foot.

Activities for Galloping
Begin by practicing the step/slide pattern moving sideways. An easy way to practice is to have the teacher stand directly in front of the student and reaching out holding both hands of the student. Student will then mirror the step/slide pattern produced by the teacher.

The step slide pattern can also be taught in a circle formation either in a circle holding the hands of the person on each side or holding on to a parachute. The entire circle will utilize a step/slide pattern as the circle moves both in a clockwise and counter clockwise direction.

Eventually the student will need to turn forward and move forward with the step/slide pattern.

SKIPPING

Description:
Skipping is an advanced skill with little functionality involving a step/hop rhythmical pattern.

Developmental Information:
Just 70% of students are proficient at age 5.
Most students can skip 8-10 steps by age 6.

Components of Skipping:
A rhythmical repetition of the step/hop on alternate feet
Foot of nonsupport leg carried near floor during hop phase
Alternate arm opposition

Activities for Skipping
Have student grasp a playground ball with both hands and hold the ball at waist level. Encourage student to walk through the stop/hop pattern but instead of hopping, raise the nonsupport leg up to touch the bottom of the ball. Continue this pattern across the width of length of the gym picking up the pace as the student moves across the space. As the pace quickens, the step/hop pattern will emerge

HOPPING ON ONE FOOT

Description:
Taking off and landing on the same foot requires both static and dynamic balance. Hopping in one foot is utilized in a handful of PE activities, including hop scotch and jumping rope.

Developmental Information:
33% are proficient at hopping 7-9 times at age 4.
Almost 20% can hop 10 consecutive times on either foot at age 5

Components of Hopping:
Foot of nonsupport leg bent and carried behind the body
Non support leg swinging in perpendicular fashion to produce force
Arms bent at elbows and swing forward on take off

Activities for Hopping
Utilize a mini trampoline for the student to kinesthetically feel what it is to hop on one foot.

Use a hippity hop ball and use only one foot to push self up and down.

Allow student to stand near a wall or provide assistance from an adult in order for the student to hop forward without fear of losing balance.

Use an adult to hold the hands of the student to provide impetus to move the student off of the floor.