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Gross Motor Skill Development

Gross motor skills refer to using the large muscles of the legs and arms for movement. Children develop these in a step by step progression.

5 year olds...

- **Stand** on one foot for 5 seconds
- Have an efficient and coordinated **run**
- **Jump** forward 3 feet using 2 footed takeoff and landing
- **Hop** on one foot 8-10 times
- **Gallop** smoothly
- **Throw** a ball, often stepping forward with the leg on the same side as the throwing arm



- **Catch** a large ball using hands only
- **Kick** a ball by bringing leg back first and then following through

6 year olds...

- **Stand** on one foot for 10 seconds
- **Hop** on one foot skillfully with rhythmic pattern
- **Skip** smoothly
- **Catch** a small ball using hands only
- **Throw** a ball accurately stepping forward with leg opposite to throwing arm
- **Kick** a ball with arm opposite the kicking leg swinging forward
- **Bounce** and **catch** a ball



Kicking Step by Step



Throwing Step by Step

Shoes

Supportive footwear is important when looking at mobility.

Shoes can affect the quality of walking and running. Things to consider include:

- Size
 - Are the shoes too big (heel slides out) or too small (foot cramped causing pain)?
 - Are the shoes too wide (foot slides within the shoe)?
- Support
 - Can the heel cup be pushed into the shoe (not enough support)?
 - Can the sole of the shoe be twisted easily (not enough support)?
 - Is there an arch support within the shoe?
 - Are the shoes done up snugly?

For more information, click on the icon:



Choosing Shoes



Strength

- Strong muscles are needed to move safely and efficiently.
- Core strength is the key to coordinated movements.
- Core stability involves control of hips, stomach, back and shoulders.
- A strong core will provide a stable base to allow for coordinated arm and leg movements.



For more information, click on icons:



Core Strengthening



Animal Walks



Leg Strength

Functional Classroom Activities May Include:

- Kneeling and ½ kneeling within the classroom – at a sand table, while doing puzzles, during instructions in gym class, while moving a parachute, etc.
- Complete animal walks from one area to another, as a class or as individuals
- Use strength activities as movement breaks to move around classroom or between classroom – jump, hop, skip, walk backwards/sideways/tiptoes, etc.
- Do chair push-ups – sit on chair and hold onto each side of the seat of the chair; lean forward and push down with the arms, lifting the buttocks off the chair and legs off the floor; balance for a few seconds; do as many in a row as you can or do fewer but try to hold each one for as long as possible



Coordination

- ❖ Whether playing games, doing schoolwork, or taking part in sport activities, coordination skills are important in your students' daily life.
- ❖ Coordination usually refers to whether a student can get their arms and legs to work together in a coordinated, effective way.
- ❖ Many tasks that require coordinated movements also require good motor planning to time the movements accurately.

How to Improve Coordination:

- ❖ Practice, practice, practice!
- ❖ Break down and practice each step involved in the activity
- ❖ Aim to improve core strength



Core Strengthening

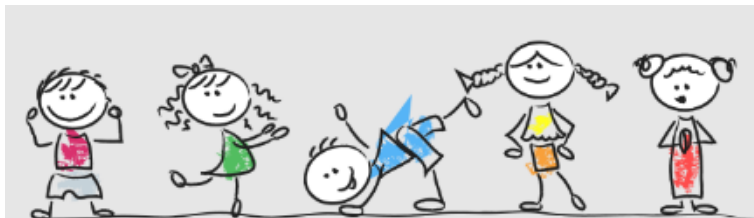


Animal Walks



Choosing Shoes

- ❖ Make sure that shoes are on properly and done up snugly – a stable base allows for easier movement
- ❖ Give lots of encouragement and praise good attempts, even if they are not perfect (“That was a good try!” or “You almost did it, well done!”)
- ❖ Keep activities fun!



Developmental Coordination Disorder (DCD)

DCD is a motor skills disorder that occurs when a delay in the development of motor skills, or difficulty coordinating movements, results in a child being unable to perform common, everyday tasks

CanChild website:

“Frequently described as “clumsy” or “awkward” by their parents and teachers, children with DCD have difficulty mastering simple motor activities, such as tying shoes or going down stairs, and are unable to perform age appropriate academic and self-care tasks. Some children may experience difficulties in a variety of areas while other may have problems only with specific activities. Children with DCD usually have normal or above average intellectual abilities. However, their motor coordination difficulties may impact their academic progress, social integration and emotional development.”

“Developmental Coordination Disorder.” Diagnoses.

McMaster University, 2017

- The [CanChild Website](#) is a great resource for teachers with students with coordination difficulties; even if there is no diagnosis of DCD, the website provides valuable resources to support skill break down, task modifications, and task matching

M.A.T.C.H. the Activity to the Child

- **M**odify the Task
- **A**lter your Expectations
- **T**eaching Strategies
- **C**hange the Environment
- **H**elp by Understanding

- M.A.T.C.H. flyers are available to download for each age group, giving many ideas of how to adapt activities for students

Body Awareness

Proprioception:

- Knowing where your body is in space is called proprioception
- There are special “proprioceptive” receptors in our muscles and joints
- Input to these receptors helps the brain organize and plan movement
- Your sense of proprioception is what allows you to perform activities without watching what your body parts are doing

Strategies and Ideas to help proprioception:

- Incorporate deep pressure/heavy work activities throughout the day
- Incorporate massage or deep pressure on shoulders
- Wrap therapy band around legs of chair to be kicked against, quietly
- Provide opportunities for gross motor play – obstacle courses, tag, follow-the leader, animal walks
- Provide an area to complete desk work while standing
- “Heavy work”/proprioceptive activities have a very powerful self-regulatory influence; think about how relaxed you feel after a massage
- If you are unsure of what strategies to start with, try heavy work

For more information click on the icons:



Coordination
Warm-ups



Crossing Midline



Spatial Awareness



Heavy Work



Deep Pressure
Activities

Classroom Environments

- Ensure suitable space in the classroom to accommodate equipment – wheelchairs, walkers, crutches
- Allow a path for students to get to areas they need to access – teacher’s desk, carpet, cubby holes, etc.
- Watch for things that will affect safety – carpets to trip over, wet floors to slip on
- Students with equipment may need to transition between activities or classrooms during less congested times
- When more time is needed – they may leave earlier than other students or later to avoid being bumped or injured
- Give cues to students to watch where they are going



Participation and Modifying Activities

If a student is having a hard time doing an activity, try to make it easier for them by:

- Breaking the activity down into several smaller parts
- Slow down the activity and avoid time related outcomes
- Keep instructions brief, precise and specific
- Give lots of practice time
- Pre-teach activities

Modify the equipment used:

- Use a larger or lighter ball/balloon
- Use a colorful ball/target
- Add sound - Use balls with bells in them for visually impaired students
- Use a wider balance beam
- Use a shorter racquet/paddle
- Use a hockey stick for a child in a wheelchair to “kick” the ball
- Walking with walker/crutches/wheelchair for running activities
- Modify the rules of the game (allow additional strikes, throws, change scoring system, classmate runs for the student, number on a team, etc.)

Maximize the senses giving instructions (**AUDITORY**, **VISUAL** and **KINESTHETIC** methods).
TELL the student what to do.
SHOW the student what to do using demonstration and physical targets.
HELP support the student in attempting/completing the activity.

Change distances involved for the student

- Run/wheel ½ distance, modify boundary lines with orange pylons for increased visibility, lower nets, move closer to target, etc.

Simplify the objective in the game or activity

- Focus on specific skill such as choice making or switch use, etc.

Participate by providing a service of some sort to the class

- Scorekeeping, cheers recorded on switch, switch access to start a race

For more information click on the icons:



Modifying Activities



Adapted PE Resources



PE Modifications

General Tips for Using Equipment

General Safety Rules:

- Look in the direction of travel
- Stay on the right side of the hallways
- Stop to look before changing directions
- Understand “stop” and “go”
- Stop and go on verbal request
- Stop at the top of ramps/inclines and stairs
- Be aware of others students in hallway/classroom to avoid bumping into them

Walker

Feet need to remain within the space of the walker

- If feet step outside of the walker, there is a greater chance of falling

Only sit if there is a seat attached to the walker

- The seat would be used for resting, not for sitting and pushing along with the feet

Crutches

Crutches should be placed slightly wider than the hips when walking to allow for the body to move between them

- If crutches are too wide, they may slip out, causing a fall

Watch for wet floors where crutches may slip

Wheelchair

- Brakes need to be used for transfers in/out or when sitting at a desk in the classroom
- Seatbelt to be used when sitting in wheelchair
- Feet to be on the footplates

Equipment should be maintained on a regular basis. If there are concerns with the equipment, talk to the parent first – they are responsible for getting repairs done.

If safety concerns arise with the use of the equipment, talk to the specialty teacher to determine who can help with this (occupational therapist, physical therapist, and/or parent).

Transfers

General tips

- Communicate!!!
 - With both the student and other staff involved
 - Overall plan and each step of the transfer
 - Count so that movement occurs together
 - Ensure student understands his/her role
- Environment
 - Wear shoes with non-slip surface
 - Safe area
 - Equipment is in working order
- Back care
 - Bend knees, not back
 - Tighten abdominal muscles
 - Feet shoulder width apart
 - Keep distance between transfer surfaces as close as possible
- Transfer
 - Wheelchair brakes on or power wheelchair turned off
 - Seatbelt – remove as last step of transfer from first surface and put on as first step once transferred to second surface
 - Close supervision of student
 - Student to participate to their maximal ability
 - Steady, controlled transfer
 - Be familiar with any equipment used for transfer (mechanical lift, transfer belt)

Click on icon:



Transfer Tips

Mechanical Lifts

- ❖ Users should be familiar with the lift and trained in the use of it with each student
- ❖ Each student should have their own sling
- ❖ Slings need to be inspected monthly to ensure safety
 - If there are any concerns (fraying, loose stitching, damage to body of sling, etc.), call vendor immediately
- ❖ Slings should be cleaned at least twice a year or as needed when soiled
 - Follow cleaning instructions on label

Training of new staff

- ❖ Staff members new to the mechanical lift transfer of a student should:
 - Become familiar with outlined transfer procedure for each student
 - Observe transfers done by trained individuals
 - Assist with transfer with trained individual
 - Take lead on transfer with trained individual
 - Have physical therapist observe and monitor for any changes required