

Children with Motor Difficulties in Grade 3/4: A Resource for Educators



Michael seems like an absent-minded professor. He looks a bit disheveled; his shirt is untucked, zippers are often undone, he has food on his face, his shoelaces are untied. He is clumsy in his movements and looks very awkward when he runs. He is interested in science and science fiction and enjoys reading. He is always the last child out for recess and wanders the perimeter fence for most of the time. The other children tease him, but he doesn't seem to really take much notice. He enjoys talking to the teachers, but doesn't seem to interact with his classmates. His teacher frequently has to re-direct him to the task at hand. He works very slowly and often has to finish his work at home. He is progressing academically, but seems to lack motivation or enthusiasm for learning.

RECOGNIZING MOTOR DIFFICULTIES

What is DCD?

Developmental Coordination Disorder (DCD) is a medical condition in which there is marked impairment in the development of motor coordination, and the impairment significantly interferes with academic achievement or activities of daily living (DSM IV, 2000). DCD may exist in isolation OR may co-occur with other conditions such as language-based or non-verbal learning disabilities or attention deficit hyperactivity disorder. Children with DCD usually have average or above average intellectual abilities.

What will a teacher see if a child has DCD?

- The child may appear to be clumsy or awkward in his/her movements. He/She may bump into, spill or knock things over frequently.
- The child may experience difficulty with gross motor skills (e.g., running, hopping, climbing), fine motor skills (e.g., pre-printing tasks, cutting with scissors, doing up buttons or zippers), or both.
- The child's motor skills might not match his/her abilities in other areas. For example, intellectual and language skills may be quite strong while motor skills are delayed.
- The child may have difficulty learning new motor skills. Once learned, however, certain motor skills may be performed quite well while others may be performed poorly.

- The child may avoid or appear to be uninterested in particular activities, especially those that require physical activity.
- The child may experience secondary emotional problems, such as low frustration tolerance, decreased self-esteem, and lack of motivation.
- The child may have difficulty with activities of daily living. For example, dressing independently, feeding himself/herself, and tying up shoes. S/he may have bathroom accidents at school.

WHAT CAN A TEACHER DO TO HELP A CHILD PERFORM AT SCHOOL?

The most important thing a teacher can do to help a child reach his/her full potential is to make sure the task and the learning environment are right for the child. The following “M.A.T.C.H.” strategy will help the teacher *match* the activity to the child.

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

Modify the task

This involves changing aspects of an activity that are too difficult for the child to perform. The important thing about modifying a task is that the child can still experience success if they make a genuine effort to participate in the activity.

Alter your Expectations

Consider what the ultimate goal of an activity is and then think about where you can be flexible. Allowing extra time or alternate methods of completing a task can make the difference between a lesson learned and an experience of failure for a child with DCD.

Teaching Strategies

Children with DCD have full capacity to learn with their peers, but may require a slightly different teaching approach. Investigate alternate teaching strategies designed for children with special needs.

Change the Environment

Pay attention to what is going on around a child when he/she is experiencing success or difficulty (i.e. noise, level of activity, visual distractions). Minimize the environmental factors that make performance difficult for the child.

Help by Understanding

Understanding the nature of DCD will help you to problem solve and provide all of your students with rich learning experiences. If children feel supported and understood, they are more likely to attempt new activities and to persevere until they achieve success.

Grade 3/4

MATCH the Activity to the Child!

Modify the activity
Alter your expectations
Teach strategies
Change the environment
Help by understanding

What you might see...	How can <u>you</u> MATCH?
<p>Performs poorly on academic tests (e.g., spelling – can't finish writing a word before next word given in a dictation; math – can't line up math columns correctly)</p>	Photocopy math questions, use oral spelling dictations (instead of written), only write the spelling word, not the whole sentence.
	Use prepared sheets when possible (e.g., spelling tests with the rest of the sentence written).
	Allow more time to complete the task.
	Use fill-in-the-blank sheets.
	Evaluate what you actually need to 'see' to know child has met curriculum expectations.
<p>Difficulty learning cursive writing and/or written work is illegible</p>	Find a balance between oral, written and demonstrative tests.
	Allow oral stories to be dictated to a scribe.
	Introduce keyboarding and allow dedicated time for practice. Allow the child to use the computer for draft copies, not just for final copies.
	Reduce the amount of written work required (especially when handwriting is not the focus).
	Photocopy math questions so the child only has to write the answer.
	Utilize a cursive writing program that teaches the letters with a multisensory approach.
<p>Breaks pencil leads frequently when printing or fatigues easily</p>	<p>Allow students to express themselves using oral, pictorial, diagrammatic and written means.</p> <p>Encourage use of thicker pencils, pencil grips, markers, roller-pens. Angle the writing surface to promote better hand position.</p>
<p>Slow to finish written work, often incomplete</p>	Allow more time to complete work.
	If speed is the objective, accept a less accurate end product (and vice versa).
	Consider using graphic organizers that will show the child's organizational skills and conceptual understanding of materials.
	Minimize time spent copying 'non-essentials' (i.e., date, title of story).
	Evaluate amount of output you actually require to assess student's understanding.

(continued) What you might see...	(continued) How can <u>you</u> MATCH?
Messy / disorganized desk	Provide visual cues or labeling to assist with effective use of space (e.g., for pencils and notebooks).
	Use colour-coded workbooks.
	Schedule a weekly 'desk cleaning' period.
	Teach child how to organize his/her desk with their input.
	Use a separate space with a bin for child's belongings.
Last to get ready for recess and home, or has messy/untidy appearance	Complete agenda prior to going home time to avoid 'panic'.
	Allow more time to dress for gym class, outdoor time & home (send child out earlier than classmates, don't comment if child comes in late after changing).
	Suggest Velcro or clothes without fasteners, such as T-shirts and sweat pants. Label or provide visual cues for front/back/right/left.
	Ensure enough space to dress/undress at locker (end locker).
Takes a long time to eat lunch	Suggest easy containers (Ziploc bags instead of rigid plastic, plastic juice container with pull up straw instead of juice boxes).
Clumsy and hesitant in gym class (e.g., poor throwing, catching, kicking, hitting of balls); poor performance in playground games such as dodgeball or baseball; often the last chosen for team sports	Use large balls, under-inflated balls, balloons, beanbags or Nerf balls to reduce injury.
	Keep the environment consistent whenever possible.
	When a new skill can be taught using hand-over-hand instruction, consider teaching the new skills to the class by demonstrating first with the child with DCD. This allows the child to "feel" the movement and receive one on one practice.
	Put children who have similar abilities in small groups to work on skills.
	Emphasize fun, activity, and participation rather than proficiency.
	Be aware of safety risks to a child with poor coordination.
	Encourage self and peer evaluation regarding participation and effort.
	Provide parents with gym curriculum so they can practice skills at home prior to class.

(continued) What you might see...	(continued) How can <u>you</u> MATCH?
Trips and stumbles frequently; has difficulty with uneven surfaces	Remove any unnecessary items from floor.
	Use gym floor rather than outside field for learning new tasks.
	Observe traffic patterns and clear wider spaces in these areas.
	Have child's desk on the outside row and near materials that they will need.
	Mark the stair edges, doorsills, and changes of level with yellow tape.
Bumps into people, objects	Ensure unobstructed pathways to frequently used areas of classroom (e.g., pencil sharpener, teacher's desk, exit doorways).
	Seat child in edge desk.
	Allow child to be first in line.
Poor posture (slumps forward on desk); leans on people or objects; falls off chair in classroom	Ensure well-supported desk position (chair is close to writing surface, chair seat is flat, feet can touch the floor).
	Allow frequent altering of positioning (e.g., sit instead of stand, use of the floor, bean bag chairs). Allow child to lean on furniture or wall during times when children are sitting on the floor.
Difficulty following through with instructions, needs frequent reminders to stay on task; may need assistance to complete tasks	Use verbal and/or visual reminders to stay on task.
	Keep activities as routine as possible.
	Use consistent instructions for similar tasks.
	Use heterogeneous mixed-ability groups to allow you to circulate to all groups, while ensuring some group members will help keep students on track.
	Teach children to monitor and evaluate time on task.
	Prepare children for transitions.
Easily frustrated/low tolerance for motor tasks; resists new activities; decreased self-esteem & motivation to perform	Think about and reduce the amount of movement that is required to perform the activity.
	Break the activity into small parts.
	Be available to assist/intervene when the child has difficulty.
	Allow extra time for teaching and practice.
	Provide lots of praise for child's attempts to try new activities.
	Reassure the child when he or she has difficulty.

(continued) What you might see...	(continued) How can <u>you</u> MATCH?
Rushes through tasks or is unusually slow; gives up easily	Ensure child has enough time to finish task – may need to decrease amount of work required.
	Allow more time to complete an activity.
	If the goal is to promote speed, accept less accurate product (and vice versa).
	Encourage students to self-evaluate both product and process.

If a child is still experiencing difficulty performing motor tasks despite your best efforts, consider speaking with his/her parents about making a referral to a health professional.

WHO ELSE SHOULD THIS CHILD SEE?

Encourage the family to see their family physician. It is important that a medical practitioner rule out other conditions that might explain the child's motor coordination difficulties.

A physician, teacher or parent can refer the child to an occupational therapist. Occupational therapists (OT) are educated and trained in analyzing motor skill development and also in determining the ability of a child to cope with the demands and activities of everyday life. The OT will observe and assess the child and may then make recommendations including: specific strategies for handwriting and classroom tasks; tips to make self-care tasks easier; activities to improve the child's motor coordination; ideas for community leisure and sports activities; and techniques to ensure that the child experiences success.

A referral to a physiotherapist may also be appropriate if the child has gross motor difficulties (balance, running, stair climbing and other forms of physical activity).

REFERENCES AND FURTHER INFORMATION

The term “Developmental Coordination Disorder” (DCD) has only recently received the attention and acceptance of practitioners and researchers in health care and educational fields. Other terms that you may find helpful to search under include “clumsy” and “physically awkward” children. Very little has been published about children with DCD in professional journals and even less has been written in the popular press or parenting magazines. For further reading on DCD, please refer to the booklet “Children with Developmental Coordination Disorder: At home and in the classroom” located on the *CanChild* web site.

Acknowledgements

The authors are grateful to Lisa Rivard, Brianna McGuire and Michele Leslie for their contributions to the content and to Nina Cavey for graphic design. This project was funded, in part, by the Canadian Institutes of Health Research.

For more information about children with DCD, visit the *CanChild* Centre for Childhood Disability Research website:

www.fhs.mcmaster.ca/canchild

Cheryl Missiuna, Ph.D., OT Reg. (Ont.)
Assistant Professor and Investigator
School of Rehabilitation Science and *CanChild*
McMaster University, Hamilton, Ontario
missiuna@mcmaster.ca

Nancy Pollock, M.Sc., OT Reg. (Ont.)
Associate Clinical Professor and Co-Investigator
School of Rehabilitation Science and *CanChild*
McMaster University, Hamilton, Ontario
pollock@mcmaster.ca



McMaster University
Institute for Applied Health Sciences
1400 Main St. West, Rm. 408
Hamilton, ON
L8S 1C7
Phone: 905-525-9140 ext. 27850
Website: www.fhs.mcmaster.ca/canchild/