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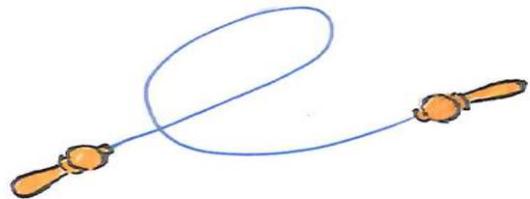
# Motor planning

Motor planning is our ability to have an idea of how we want to move, to plan how we are going to achieve that movement and then execute that movement. Every activity undertaken, however simple, needs motor planning; we need to have an idea of the task, what it involves and then how to achieve it.

For good motor planning to be achieved, the brain needs essential information from all the sensory systems as well as integrating body awareness and perception of movement. See 'Sensory processing' for more information about this.

## A child who has poor motor planning may be having difficulties with:

- Poor grading of movements
- Poor timing and sequencing
- Poor anticipation eg catching a ball
- Often trips, falls or bumps into things
- Difficulty copying motor movements.
- Poor at construction activities, including writing and scissor skills
- Difficulties with carrying out every day, self-care tasks such as dressing
- Difficulties learning new skills or carrying out an already mastered skill in a slightly different way, needs more practice than peers



## Strategies to help

- Identify what the specific goal / task is and how realistic this is
- Help the child to break down the task and help them to identify the steps needed to begin and finish the task (*ask what, when, where, why, how questions to help think about the task*)
- Set small achievable targets/steps and plan a method for recording when completed
- Give one instruction at a time and after one action is successfully completed, add another action (see Forward and backward chaining below)
- Provide visual schedules e.g. photos of items to put in school bag at start of day
- Help the child physically move through the action so they can experience the correct movement eg hand-over-hand
- Encourage the child to verbalise what they are doing while they are carrying out the activity.
- Use visual cues e.g. tape, carpet square, labels/shapes on a class table
- Practise skills to reinforce success.



- Review how to play the game before actually playing it - demonstrate verbally, as well as visually.
- Mark the boundaries of the game/task. For example, rope, yarn, masking tape or chalk can be used to mark a game circle or start and finish lines.
- Use signals for control e.g. two blows of a whistle to signal “freeze”.
- Rehearse what the child has learned on a regular basis.
- Start with basic two step activities, building up to three to five steps. Use number and temporal concepts to reinforce sequencing eg “first” and “last”, 1 – 2 –3.
- Encourage checking off steps as they are accomplished eg placing a symbol card in a “done box”.
- Always sequence left – right and up – down and encourage order e.g. line up objects to be counted.

### **Forward and backward chaining**

Backward and forward chaining techniques are used to teach the child a task and to actively involve the child in the task. It involves breaking complicated activities into smaller steps. Visual prompts such as photographs and symbols can be used to help prompt the child at each step.

#### Forward Chaining

The child begins with the first step of the task sequence, then the second step and continues learning steps of the task in a sequential order until he or she can perform all steps in the task.

Forward chaining can be helpful for children who have difficulties with sequencing and generalising skills.

#### Backward Chaining

The adult performs most of the task and the child performs the last step of the sequence to receive positive reinforcement for completing the task. Practice continues with the adult completing fewer steps and the child completing additional steps until the child is able to complete the whole task.

Backward chaining is particularly helpful for children with a low frustration tolerance or poor self-esteem because it gives immediate success.

### **Activities to help develop motor planning**

- Art projects that require cutting, sticking and assembling parts to create something – this will challenge the child’s ability to develop strategies for organising parts as they relate to the whole. Creative activities can also build on a child’s self- esteem. Make sure they receive lots of praise for any creation.
- Obstacle courses using different positions (over, under, through), different directions (forwards, backwards, left, right), different textures (hard, soft, uneven, wobbly), different postures (crawling, commando crawling, high kneeling, tip toe, lying on scooter board)
- Twister game / Simon Says; imitating postures and sequencing movements
- Playground games; hop scotch, ball games, space hoppers

- Maze's
- Cutting play dough with knife and fork
- Construction task; e.g. lego model making from instructions



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ID: CH119

Version: 1

Issue date: April 2017

Review date: April 2019

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