

# What Time is It?

## DYSPRAXIA SPECIAL

Dyspraxia, or as it is increasingly described, developmental co-ordination disorder (DCD), is often accompanied by problems with language, perception and thought. Telling the time and the concept of the passage of time are areas where children with dyspraxia can have particular difficulty.



Activities that involve tracking movements across the mid-line help dyspraxic children develop a point of spatial reference, which is their own body mid-line.

Consequently, there will often be problems with ordering thinking, problem solving, time management and organisational skills. Wendy Fidler explains why children in a Montessori learning environment are at an advantage when it comes to developing time skills.

Dyspraxia is an impairment or immaturity of the organisation of

*Reading very simple musical notation and playing simple tunes assists with sequencing, sentence and phrase development.*



movement; the 'automatic muscle memory' which children normally develop through everyday physical interactions within their living and learning environments does not mature to the level of their peers.

Children with dyspraxia have difficulty getting their bodies and thoughts to do what they want, when they want. Most children think in words, but dyspraxic children think in pictures. As a result, they are very reliant on their eyes to check what they think they are hearing and what they think is happening. They cannot rely on their 'automatic muscle memory'; this is due to an immaturity of neural pathways.

### **This impacts on dyspraxic children's daily living in the following areas:**

- Body awareness – informs child where body is in space (position of limbs and head) – basis for developing spatial awareness;
- Auditory processing – basis for meaning of language, perception and comprehension of time;
- Visual perception – necessary for concepts of time, speed and orientation;
- Motor planning - coordinated movement requires split-second timing and precision;
- Organisation skills – necessary for time and project management

Not surprisingly, the dyspraxic child's continually shifting frame of reference, which is due to the mixed and immature

messages received by his brain, impacts on his ability to grasp the concepts of telling the time and the passage of time.

### **Can Montessori learning environments help children with dyspraxia?**

Montessori learning environments can assist with the development of children with a range of learning differences, including dyspraxia. Montessori education is primarily a structured programme of clearly articulated movements, so we should not be surprised when children with immaturities with the organisation of movement respond well.

Dr. Maria Montessori designed the original didactic materials with poorly coordinated children in mind. Montessori left us a huge legacy of teaching methodology and philosophy, and we are now able to build on this and make the links between progress in neurological understanding and the dyspraxic child.

### **Which Montessori activities best help dyspraxic children with concepts of time?**

Dyspraxic children cannot discriminate between the myriad sensory perceptions that bombard their brains second by second. It is the interference of incomplete and mixed messages to the brain that prevent organised movement and thought.

In order to get a fix on their bodies in time and space, children need to develop a point of reference, which is their own body mid-line. Activities that involve tracking movements across the mid-line include:

- Practical life mid-line transferring activities – bearing in mind the dyspraxic child's lesser ability to manipulate fiddly objects and apparatus;
- Insets for design – tracking repeated parallel pencil lines from left to right;
- Long and number rods – repeated tracking along the graduated lengths of the rods.

### Other activities help children gain an understanding of symmetry, line and form.

- Geometric solids and cards assist with concrete to abstract perception;
- Geometric form cards and leaf cards assist with the development of first-next-last sequencing skills, which are essential for time and project management and symmetry;
- Musical bells assist with predicting, ordering and sequencing.

Children in Montessori settings get so much practice with mid-line activities and concrete-abstract grading activities that dyspraxic-type problems often seem to magically disappear as the brain develops stronger neural pathways in response to the repeated actions. This is what the Montessori materials were designed to do.

## Specific Time-Related Activities

### TELLING THE TIME

**Analogue Clocks** – The Montessori fraction skittles assist with the concepts of halves and quarters. Children need to be able to read and order the numbers to twelve and understand the direction of clockwise.

Number and directional work, e.g. travelling clockwise round an object and 'making' twelve o'clock by stretching both arms both straight up, can be incorporated in dance and other whole body activities. Activities involving counting in fives can be made using the small coloured bead bars for five. Remember that dyspraxic children need frequent visual clues and do not always fully understand what they hear.

**Digital Clocks** - Children need to be able to read and order numbers to sixty before they can read time on the digital clock.



Above: Rich visual images and physical experiences at places such the Jorvik Viking Centre, York help children root their understanding of history in reality. Below: Geometric form cards and leaf cards assist with the development of first-next-last sequencing skills, which are essential for time and project management and symmetry.

**Natural clocks** - the position of the sun in the sky, the length of shadows, the activities people are doing.

**Time Games** – Dominoes are commercially available which assist with matching 12 hour, 24 hour and analogue times; they are not difficult to make with a rubber stamp clock face.

### CONCEPT OF PASSAGE OF TIME

**Hour glasses, egg timers and electric timers** can be added to the Montessori shelf so children can experience specific lengths of time as often as they like. What do children think they can do in one hour? Can they guess when one minute has passed and stand still and silent?

**Life cycle, family tree and seasonal activities**, e.g. metamorphosis of the butterfly, help children to understand about cycles of life and death.

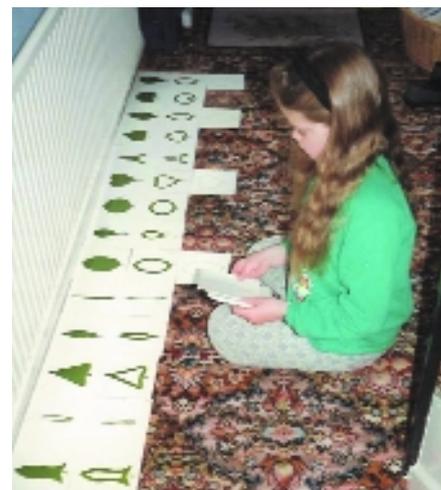
Visits to places such as the Natural History Museum, Jorvik Viking Centre have rich visual images which help children root in reality their understanding of longer periods of time.

### TIME MANAGEMENT

Visual schedules or timetables – dyspraxic children do not get full access to their curriculum if they lack understanding about how the day is organised. They don't understand what they cannot visualise. Picture charts of timetables and daily routines and project schedules, e.g. showing first picture 'music' and next picture 'art' can reduce anxiety, increase independence, help them make choices and decisions and manage their behaviour better.

Sequential stories and rhymes such as the Gingerbread Man, Going on a Bear Hunt and Ten Green Bottles assist with the development of sequencing, organising and planning skills.

**Music** – reading very simple musical



notation and playing simple tunes assists with sequencing, sentence and phrase development. ■



### Hands-on Resources, Visits and Websites

**EAI Education** – lots of clock faces, including write on – wipe off  
<http://www.eaieducation.com/time.html>

**Jorvik Viking Centre, York** <http://www.jorvik-viking-centre.co.uk/trialsplash2.htm>

**Just in Time** – Downloadable and on-line time, seasonal and cosmic activities for the primary classroom  
<http://fi.edu/time/Journey/JustInTime/>

**Natural History Museum** Cromwell Road, London SW7 5BD Tel: 020 7942 5555

**Nasco Special Education Catalogue** – plenty of time-related products for early learning  
<http://www.enasco.com/specialeducation/>

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