Spatial Reasoning Toolkit

Movement and navigation

This keyring includes typical spatial reasoning development and how adults can support this.

Please note:

- Ages are approximate
- Each child develops differently and at their own rate
- Ages are a guide and not expectations
- The stages build so earlier spatial learning continues to develop alongside new learning.

Children are learning to:

Explore space by moving, rolling, and stretching.

0-6 months

Adults could:

Provide stretches of uninterrupted time for babies to explore the spaces around them. Challenge babies to move or stretch towards objects that are just out of reach.

Spatial Language:

'too far', 'nearly'

0-6 months

Children are learning to:

Develop an awareness of their own bodies, where distinct parts are and their relation to each other.

0-6 months

Adults could:

Let babies play freely with their hands and feet, supporting developing body awareness through baby massage and songs like "*This Little Piggy Went to Market.*"

Spatial Language:

'where is it?', 'round' 'up' and 'down'

0-6 months

Children are learning to:

Engage with spatial relationships, positions and directions, using gestures and concepts like 'in', 'on', 'under', 'up', 'down'

6-12 months

Adults could:

Provide bags and boxes for items to be stored, hidden, and moved. Talk about what is *in* the bucket or taking it *over there*.

Spatial Language:
'into', 'up high', and 'over there'

6-12 months

Children are learning to:

Explore space by crawling and walking.

6-12 months

Adults could:

Play games that involve curling and stretching, popping *up* and bobbing *down*.

Provide opportunities to explore large spaces and large objects, e.g. play tunnels.

Spatial Language:

'inside', 'on top'
and 'jump up/down'

6-12 months

Children are learning to:

Investigate fitting themselves inside and moving through spaces.

1 to 2 years

Adults could:

Provide access to tunnels, boxes and spaces where children like to hide, squeeze into and move through. Support with commentary and gestures.

Spatial Language:

'inside', 'through', 'under,' 'over' and 'fit into'

1 to 2 years

Children are learning to:

Explore familiar environments, moving freely around and enjoying finding out about the world from new viewpoints.

Adults could:

Provide large spaces with a variety of levels and support discovery of a range of viewpoints e.g. looking at things from above or below.

Spatial Language:

'up higher', 'over', 'on top of' and 'upside down'

1 to 2 years

Children are learning to:

Manoeuvre toys and themselves around objects and the environment.

2-year-olds

Adults could:

Provide opportunities for children to push/pull toys around, travelling through, over, down, and around. Model making simple obstacle courses.

Spatial Language:
'Upside down', 'over the top', 'through', 'lower down'

2-year-olds

Children are learning to:

Find their way around familiar environments, e.g. where they wash their hands.

Adults could:

Narrate different routes around their environment, emphasising position and direction, e.g. to find a hidden toy.

Provide outdoor toys for transporting objects, e.g. wheelbarrow.

Spatial Language:

'next to', 'behind' and 'all the way over there'

2-year-olds

Children are learning to:

Recognise and predict familiar routes e.g., says *garage* before they see it.

3-year-olds

Adults could:

Talk about familiar routes, referring to landmarks and decision points. Demonstrate position and direction language.

Create walkways with children using stepping stones, planks or chalk lines.

Spatial Language:

'next', 'look under', 'after' 'before'

3-year-olds

Children are learning to:

Follow and give directions, including *left* and *right* turns when accompanied by gestures.

4- and 5-year-olds

Adults could:

Encourage children to describe position, give directions and refer to landmarks, e.g. in small world play, or when following pathways or creating obstacle courses and treasure hunts.

Spatial Language:

'forwards', 'backwards', 'sideways' and 'turn'

4- and 5-year-olds

Children are learning to:

Notice landmarks and use these to find their way around familiar places.

4- and 5-year-olds

Adults could:

Work with children to make linear route maps using wallpaper rolls and small world toys for landmarks. Ask children to think about walking a route '*in your head*' to recall the order of landmarks.

Spatial Language:

'first', 'then', 'next', 'alongside' and 'after'

4- and 5-year-olds

Children are learning to:

Predict the path of travelling objects, using the language of position, direction, and orientation.

6- and 7-year-olds

Adults could:

Encourage children to:

• play ball games and experiment with vehicles and ramps

• direct the movement of programmable toys or each other

• create maps to follow routes with landmarks.

Spatial Language:

'over there', 'further/nearer', 'close to', 'along', 'around', 'between', 'left/right'

6- and 7-year-olds

Children are learning to:

Place things at approximately correct relative distances when creating maps or 3D models and identify representations of real-world features.

6- and 7-year-olds

Adults could:

Create a school map and discuss distances and relationships between landmarks from different viewpoints.

Use aerial photographs, identify familiar locations, e.g. the school their home.

Spatial Language:

'nearby', 'further away' and 'distance'

6- and 7-year-olds

Children are learning to:

Navigate simple routes. Plan a simple route in a familiar environment using landmarks.

6- and 7-year-olds

Adults could:

Ask children to visualise a route in their mind, including decision points.

Create journeys in small world play, ask what can a character see? What will they see next?

Spatial Language:

'route', 'left/right' and 'opposite'

6- and 7-year-olds

For children's book ideas related to movement and navigation visit

www.earlymaths.org/ spatial-books

Birth to 7 years

For more ideas and information please scan the QR code below to visit the Spatial Reasoning Toolkit

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