

4-5 years

Spatial Reasoning Toolkit

At this age children are learning to solve problems involving predictions and are beginning to use visualisation to imagine spatial information in the mind's eye (e.g. turning and flipping objects to see what will fit, mentally planning what to build). Compositions become more complex (e.g. combining shapes to make other shapes, reflections with four lines of symmetry). Children are developing their ability to follow and give directions and to use landmarks to find their way.



same/different,
beside, in front,
cylinder

Hiding or barrier games

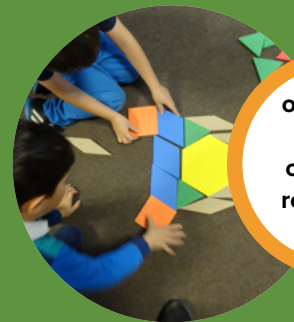
Developing visualisation,
prediction and spatial language



upside down,
forwards,
next to
around

Small world play

Exploring relative position,
distances and transformation
(turning and flipping objects)



other way
round,
opposite,
reflection,
match

Pattern making

Exploring symmetry (reflection)



before
straight on,
between,
behind

Maps and models

Developing navigation and
understanding of scale by using and
creating simple maps and models



fit, turn,
twist,
corner

Puzzles

Understanding fit, composition
and decomposition, through
visualisation and discussion



between,
in front,
behind,
underneath,
same

Construction

Building constructions with
arches and enclosures
(perhaps linked to a story)



small, under,
turn, same,
different

Books

Exploring shapes and sizes.
Interpreting what book
characters may see

EARLY
CHILDHOOD
MATHS GROUP

<https://doi.org/10.31234/osf.io/jnwpu>
<https://earlymaths.org/spatial-reasoning/>
@EChildhoodMaths

