



3D Wooden Shapes

Use 3D Wooden Shapes to develop children's learning linked with spatial reasoning and geometry.

Skills and learning:

- Develop experiences of seeing objects from different perspective
- Compose 3D shapes from smaller shapes
- Compare 3D shapes by reasoning by reasoning about similarities and differences in properties
- Describe, explain and generalise properties of 3D shapes
- Using spatial language

Resources:

- 3D Wooden shapes
- Selection of small world characters
- Paper
- Pens

Activities:

Activity 1 – Experiencing different viewpoints and using spatial language...

Children need to experience and engage with learning about perspective, which is about how things appear to them from where they are positioned.

Start by asking children to create a building structure using wooden shapes on top of a large piece of paper, then position a small quantity of small world characters around the outside.



Engage in discussions with children about which characters are or are not able to see each other from different positions. Note children are more likely to be able to imagine an alternative perspective if there is another person or character that they can consider – on the basis of them forming a sort of relationship with the character to try and see things from their perspective or through their eyes.

After drawing a possible route that can be taken, extend a conversation by talking about how a character can navigate from one position to another using spatial language.

Activity 2 – Composing 3D shapes from smaller shapes...

Children need to learn to compose and decompose shapes, as well as see shapes within a shape.

Begin by inviting children to make their own shape from a given number of wooden shapes (limit or extend the number of shapes accordingly) and then compare the different shapes that have been made.

Children can be asked to identify combinations of shapes that are the same, which may require them to rotate or flip their combinations in different directions. This will provide an opportunity for children to use spatial language whilst verbalising their mathematical reasoning.

Reflection:

Note that amongst other things, spatial reasoning involves noticing how positions of objects relate to each other and how parts of an object fit together. This can extend into geometrical talk about particular shapes and their properties. Children playfully engaging with the wooden shapes and adults in turn engaging them with spatial talk can support the development of spatial reasoning.

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