

## Children exploring and manipulating 2D shapes and 3D objects



**Sorting shapes.** Sorting shapes into categories requires the ability to recognise and describe the properties of the shape. This resource brings some cognitive learning into the outdoor space, and has the potential for many sorting games and activities.



**Tessellating shapes.** Puzzles and activities featuring tessellations are widely available. They use 2D shapes in a pattern, to form a picture.



**Shape craft.** Collage activities provide opportunities to build children's understanding of two-dimensional shapes. Mixing some regular shapes in with the usual array of collage bits and pieces can encourage children to use and build on their everyday mathematical language.

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**Shape pictures.** Young children enjoy using materials to create pictures. Ryan has used a range of shapes to represent 'A person is on a boat on a sunny day'.



**Shape match up.** Commercially available shape games provide children with an opportunity to develop familiarity with regular shapes through matching. By prompting and joining the play at appropriate times, the responsive adult builds on children's existing understandings, considering such things as properties and names of shapes. Variations of this game are very simple to make.

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**Three-dimensional to two-dimensional.** With a particular interest in making vehicles using all sorts of construction materials, Bailey was particularly pleased with this construction. He drew a picture of it. His drawing represents an emerging capacity to see the parts of a whole, and an ability to represent the various three-dimensional shapes in a two-dimensional media. He recognises the flat sides of the three-dimensional shapes making up the vehicle, and represents them by drawing two-dimensional shapes.



**Inside and outside.** The learning opportunities with block play are endless. Here, Bailey and Nathan create a farm. They line the blocks up in neat rectangles, making sure the shapes are closed. Nathan sees that some of the blocks don't quite meet, and adds an additional smaller block. 'It's a gate', he says, 'so the animals can't get out'. Bailey crouches down in one of the pens and says, 'The animals sleep inside the fence, like this'. The boys are developing their understanding of the concept of closed and open shapes.