

Looking at perspective and scale

Pupils learn about scale and perspective in the classroom and local area

Geographical enquiry and skills

- enquiry – ask and answer geographical questions
- use correct geographical vocabulary
- make models and plans
- relate large scale plans to the environment
- use satellite images and atlases

Geographical knowledge and understanding

- develop place knowledge including the school grounds, local area and the wider world
- understand what is meant by oblique and direct aerial views
- understand what is meant by a 'bird's eye view'
- recognise which features can be seen on small- and large-scale map.
- identify the purpose of a range of different maps

OS Mapzone:
Understanding scale

To access extra resources from the Everyday Guides web page, see page 2.



Photo © Flamstead End Primary School

In map work 'perspective' describes the (imagined) point of view from which maps are commonly drawn. A globe shows the Earth as it looks from space, whereas a large-scale OS map depicts the layout of streets, buildings and land as if viewed directly from above. To help pupils' understand the idea of perspective explain that maps often show a 'bird's eye view', or are drawn as if looking directly down from an aeroplane.

As you show pupils a range of maps at different scales explain that large-scale maps depict places in detail, while small-scale maps show less detail, but larger areas. The scale of a map, indicated in the representative fraction, simply shows the amount the map has 'shrunk' reality to fit onto a piece of paper. Thus, a map at a scale of 1:10 will have shrunk reality ten-fold, and one drawn at 1:1,000,000 by a million-fold. In reverse, scale indicates how much you would have to enlarge a map to show the feature or thing at its original size. Ask pupils to identify the smallest scale map in the classroom (most likely to be a map of the world in an atlas) and the largest scale one (probably a plan of the classroom or school).

Teaching ideas

A 'bird's eye view'

As pupils use bird finger puppets to 'fly' over a play mat or model they have made, ask 'What can the bird see?' Encourage the pupils to add model cars, buildings and so on, and take photos of the miniature worlds from oblique and vertical viewpoints. Display the images alongside the mini-worlds and encourage discussion and exploration of the relationship between the different views.



Top view



Side view

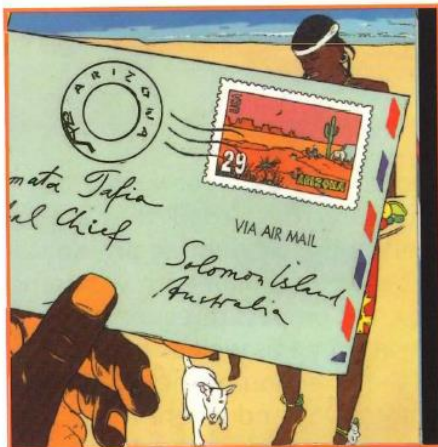
Photos © Anthony Barlow

Zoom in or out

Access one of the Zoom videos from YouTube (see web page). Pause at different frames to discuss what is on screen and reiterate the perspective things are being viewed from and their scale relative to the next screen. Use Google Earth to zoom in on your area, again, pause at different points to discuss what can be seen. Draw pupils' attention to the scale bar.

Grappling with scale

Show pupils a model car and a photograph of a real car. Discuss what is the same and what is different. Look at a real car in the car park and draw pupils' attention to the fact that the image has the same detail as the real car, but on a smaller scale. Provide large- and small-scale maps of the same area and ask pupils 'which map provides more detail?' and 'which allow us to see a bigger area?'



Perspective and mapping

Take the pupils to somewhere that gives them the opportunity to look down safely on the surrounding area (e.g. a block of flats or offices, a multi-storey car park, or an area of high ground). (If this is not possible, use the tilt facility on Google Maps.) Talk about perspective and encourage them to take photos (capture images in Google Maps using PrtScr). Visit different places so that they can take photos of specific features at ground level. Look at the photos alongside a map of the local area to reinforce the concept that the real world can be mapped in two dimensions.

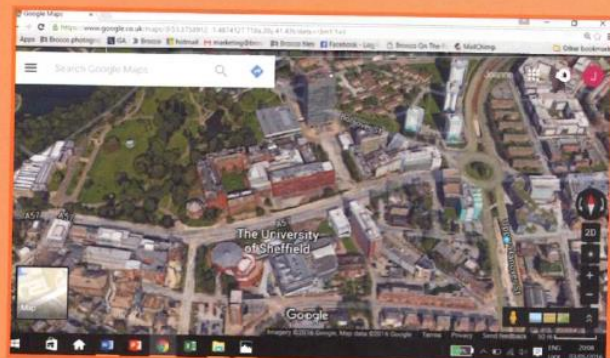


Photo © Anthony Barlow

Making scale models

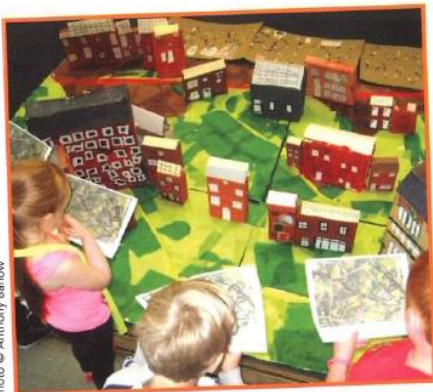


Photo © Anthony Barlow

Challenge pupils to create scale models of the school grounds or local park. First allow them to investigate the area. They can take photos to help them remember what specific buildings and feature look like. As they will need to plan their model, either provide maps without a scale or ask them to sketch their own. Provide tape measures, measuring wheels or encourage pupils to use their own foot steps to take measurements and annotate their maps. Discuss how they will transfer their measurements to the model to ensure that it is accurate. Provide suitable materials and display the finished models. Ask for feedback from parents and other pupils.

Learning about signs and symbols

Pupils learn to recognise the role of signs and symbols on maps

Geographical enquiry and skills

- enquiry – ask and answer geographical questions
- collect and record geographical information
- recognise that symbols represent features/places in the real world

Geographical knowledge and understanding

- carry out fieldwork in the local area
- describe where and how signs and symbols represent features or places
- know why symbols are used on maps and in other places
- interpret information provided by signs and symbols

OS Mapzone:
Map symbols

To access extra resources from the Everyday Guides web page, see page 2.



key

- | | |
|----------------|------------------|
| B road | Shropshire Canal |
| Motorway M54 | Church |
| A41 Main Road | Houses |
| Traffic lights | Trees |
| Lake | Large building |
| River Penk | |

Signs and symbols (a form of shorthand that we find around us every day) are used to represent places, features, objects or even words. Logos are used for products that your pupils will recognise easily. Signs and symbols may be on walls, the floor, on signposts, on hoardings and so on. Their everyday use makes it easy for pupils to discover, for instance, which are the boys' and which are the girls' toilets, the location of a car park and where cycle lanes start and end. Once pupils recognise that a building, service or feature can be represented by a symbol or sign and that the same idea applies to maps, they often become excited about reading maps and creating their own symbols.

The school setting is a good place for pupils to identify how symbols represent features. Walk around the school with the pupils looking at symbols and signs. Discuss why using symbols is a good idea, for example, they save space and allow everyone to easily recognise where and what a particular feature is. Can they think of symbols for features that don't have one (e.g. flower bed, playground bench)? Ensure that your pupils understand the difference between a sign (one that includes words) and a symbol (one that doesn't). For example, STOP painted on the road may be accompanied by a round symbol with a horizontal line across on a signpost which means the same thing.

Teaching ideas

OS map symbols games

Download, print out and laminate sets of the OS map symbol and description cards (or buy sets of the cards – see web page). Allow the pupils to familiarise themselves with the symbols and descriptions. Play either memory games – matching the symbol with its description, or ‘snap’, but shout the description instead.

Traffic signs and symbols

Present images of traffic signs (e.g. on signposts, or painted on the road) and ask pupils which ones they encounter on their way to school. Discuss the purpose of each one, for example, ‘what does a green/red man on a crossing mean?’, ‘how do we know this is a cycle lane?’ and ‘why are there zig-zag lines on the road outside school?’. Mark the location of signs and symbols on a large-scale plan of the local area. Explain how, when you draw a map you have to label each thing so that other people know what it is, and about how people who draw maps use symbols instead. Challenge them to create signs and symbols for every day features, objects, and so on.



Photos © Diane Rolfe

Categorising symbols

Discuss how the symbols/labels on OS maps fall into categories based on: (a) lines (roads), (b) colour (blue denotes water features), (c) pictorial symbols (a duck for a bird reserve), (d) shapes (rectangular buildings), (e) letters (PO for Post office), and (f) words (often in different type, for instance, old script for historical features). Hand out copies of different types of OS Explorer and Landranger maps and the ‘OS map symbols’ recording sheet and ask pairs of pupils to identify symbols on a map under these headings. Discuss how some may fall under more than one category (e.g. a river is coloured blue, shown as a line and may also be labelled). Which category contained the most symbols/labels?

Picture, symbol, description

Divide the class into groups of three, and hand out cut up copies of the ‘Picture, symbol, description cards’ sheet (see download) (one child should have the pictures, one the symbols and the third, the descriptions). The group that correctly matches all pictures, symbols and descriptions the fastest is the winner (they can stick the cards to a sheet of paper). Next, challenge the pupils to match the symbols to an OS map, and ask them to create their own ‘Pictures, symbols, descriptions’ on the recording sheet (see webpage) from the OS map.

A Symbols postcard

Hand out envelopes containing ten or so different OS map symbols to individuals and ask them to write a postcard home using all of their symbols. They must insert the symbols in place of words. Pupils can also draw a picture of the scene on the front of the postcard. In pairs pupils swap postcards and read each other’s messages, correctly translating the symbols into words.

Hi Mum,

I am having a great time. The  is really good.

Today we went to the  first. They told us to visit the .

and a , where a big  took place in the 16th century.

We had lunch at a . There was a lovely , we could even see the seal! Tomorrow we are visiting a , then going

on a  through some , to get to the .

Lots of love – Ami xx

