



# TEACHING MAPPING SKILLS

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Children enjoy working with maps and there are many opportunities in the early years for practising mapping skills and exposing children to the world of maps. Simple maps of your country and of the world can be displayed and referred to whenever a place is mentioned in the news or a story. Students can be encouraged to describe journeys they make with reference to the four points of the compass and features they pass along the way. They will learn that each feature on the landscape has a position that remains constant while their position may change.

A map is a representation on paper (or other medium) of a given area of land. We teach mapping skills to develop concepts required to read and make maps.

These include:

- **Location** – Every feature has a location which is relative to the locations of surrounding features
- **Direction** – The terms *north*, *south*, *east* and *west* are used to describe the relative locations of features
- **Aerial view** – Maps are plans of features from a bird's-eye-view
- **Symbols** – Features are represented on a map by standardised symbols which are defined in a legend
- **Plotting** – Coordinates describe the location of features on a map
- **Scale** – Size and distance on a map is an accurate representation of that which exists on the ground
- **Relief** – Colour is used to show the relative heights of features.

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## To develop and understanding of place

(Why things are where they are)

Discuss the location of furniture in the classroom: Where are the different items and why are they there? Through discussion, students will realise that there are reasons why some things are placed in special locations that cannot be altered while others are placed for convenience or personal preference. For example, a desktop computer is usually close to a wall where there is an electric socket. If it is moved to the centre of the room away from the socket, an extension cable trailing across the floor would be required. This would be inconvenient and could cause an accident. Desks, however, can be easily moved to different locations without creating a problem.

### Activity

To develop this understanding, divide the class into small groups. Give each group an empty shoebox, pictures of a door and

windows, and furniture from a doll's house. Ask each group to discuss the best location for the furniture, door and windows in their shoebox rooms. They can then rearrange the furniture and glue in place the windows and door before explaining their room layout to the rest of the class.

## Which way is north?

Maps always indicate which way is north. This standardisation helps us to orientate things relative to each other and to describe their location with reference to the four points of the compass, rather than using *to the left/right, in front of and behind*.

### Activity one

Arrange students in an array with everyone facing one wall and ask them, 'Who is standing in front of you? Who is standing behind you? Who is standing to your right? Who is standing to your left?' Keeping their location, all students turn 90° in the same direction to face another wall. Repeat the questions. Repeat for the two remaining walls. The answers for each wall will be different. Now label the walls *north, south, east* and *west* and repeat the activity asking the questions, 'Who is standing to the north, east, south and west of you?' The answers are always the same.

### Activity two

In an open area where students can move freely, label the boundaries *north, south, east* and *west*. Divide the class into groups of four with each child in the group choosing one of the four directions. (Younger children could wear a card around the neck labelled *N, S, E* or *W*.) Allow the children to run around within the area and then, on a given signal, the group come together standing back-to-back with each child facing his/her chosen direction. The last group to stand in the correct positions is eliminated.

### Activity three

In the same open area, place a mat against each direction's boundary. Allow the children to run around within the area and then, on a signal, call one of the four directions. The children run to the correct direction and stand on the mat. Any child who runs in the wrong direction or who cannot fit onto his/her mat is eliminated.

### Activity four

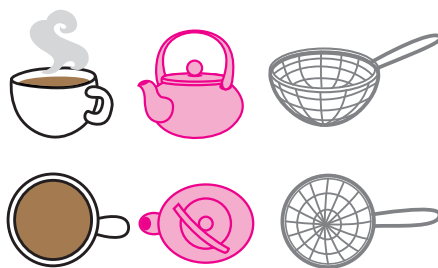
In a room, label only one of the walls 'North'. Tell students to face a wall and then command them to face a different wall; for example, 'Face south'. Continue the game, decreasing the time between each command so that students have less time to work out which way to face.

## The aerial perspective

Maps show us things and places as seen from above.

### Activity

Make a collection of familiar objects with different shaped and sized bases. The bases must be easy to draw around and the shape as viewed from above must match that of the base outline; for example: cereal box, deck of cards, drink can, tub of fish food. Draw around each object on a piece of paper, then remove the objects from their outlines and place them together in a group. Students then have to match the outlines to the objects they represent. By matching the outlines to the objects, the students will see that one represents the other. To increase the challenge, draw the plans of objects whose aerial views are not regular; for example, a teapot or kitchen sieve.

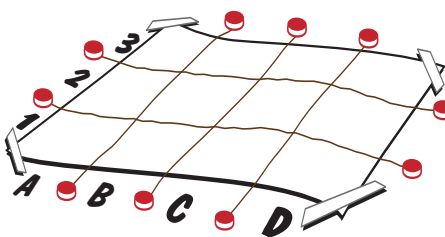


## Plotting

Coordinates are used to define a location on a map. In the early years, they are used to describe an area rather than an exact point. Following convention, the X-axis is labelled from the left with letters (A, B, C etc.) and the Y-axis is labelled from the bottom with numbers.

### Activity one

Determine which way is north and orientate the map correctly before taping it to a table (or the floor) where all students have a clear view of it. Create a grid over the map, using lengths of string spaced to make squares of appropriate size. Label the axes with letters and numbers. Discuss the location of each student's desk and other features, using coordinates.



### Activity two

Give each child two sheets of paper, one marked with a labelled blank grid, the other divided into squares containing pictures of features that might be found in a town; for example: a school, supermarket, church, post office, hospital. Students cut out the pictures and glue them into the correct square on the grid as directed by the teacher.

## Scale

### (A sense of proportion)

In the early years, students will not understand the concept of scale but they will be able to recognise what does or does not look right. At this stage, this is sufficient.

### Activity

When making the classroom map, explain that the base sheet represents the classroom floor and the edges of the sheet are the walls. To give perspective, use a marker to draw a thick line on the edge of the paper to represent the location of the door and, in a different colour, lines to show the windows. When preparing the card symbols, make two extra sets: one that is too large and the other too small. Place each set, in turn, on the base sheet. Discuss which set would be the best to use. Just like Goldilocks in the story of the three bears, the students will be able to tell which set of symbols is 'just right'.

## Relief

### (Adding another dimension)

Usually maps only show distance from one object to another along a level surface, but rarely is it the case that any area of reasonable size is perfectly flat. As such, the different heights of features can be represented on a map using varying shades of colour. Following convention, yellow to brown is used to indicate increasing height.

### Activity

Discuss the heights of the features represented on the classroom map (from the previous activity) and colour the symbols accordingly; for example: the floor – yellow, a chair – light brown, a desk – light/mid brown, a low cupboard or teacher's desk – mid/dark brown, a tall cupboard – dark brown. Prepare a legend showing the levels represented by each colour; for example: floor, very low, low, medium height, high.

## Additional mapping activities

- Create 'story maps', tracking journeys made in familiar stories; for example: *The three little pigs*, *Snow White*, *Little Red Riding Hood*.
- Create 'mud maps', explaining how to get from A to B.
- Follow directions to locate features on a map.
- Use coordinates to locate and place features on a grid.