

Plan to scale



SmartSteps[®]

FOR PRIMARY SCHOOLS

AusVELS: Level 5

Factors that shape the human and environmental characteristics of places – Geography
concepts: Place, Scale

Measurement and Geometry – Using units of measurement (ACMMG108, ACMMG110)
– Location and transformation (ACMMG113)



Key learning outcomes

Students will be able to:

- use a grid reference system to describe locations
- describe routes using landmarks and directional language
- create a grid reference system
- choose appropriate units of measurement for length
- use the units of hours, minutes and seconds



Suggested time

Before we go: 60 minutes

Walk: 60 minutes

When we get back: 60 minutes

Lesson

Before we go

- Show students a street directory map and ask them to identify the aspects of the map that help a user locate features or special locations.
- Ask students to locate certain features on the map using the grid reference system.
- As a class, create a grid reference system for the classroom. Ask students to decide on an appropriate unit of measurement, and how the grid will be drawn and presented most effectively (e.g. paper, whiteboard).
- Students measure the classroom and develop an appropriate scale (e.g. 10 cm : 1 m). Students draw the grid as planned (or use grid paper) and label the gridlines.
- Students identify objects for inclusion on the map, measuring them, scaling to size and drawing on the grid map.
- Explain to students that they will be going for a walk to a local park, where they will be creating a grid map.
- **Teacher note:** Take a camera to photograph the park, to assist students to recall the locations of features.

Out and about

- Before the walk, ask students to estimate how long the walk to and from the park will take. When you begin walking, set a timing device, and record the total time when you return.
- At the park, remind students how they created a grid map of the classroom and explain that they will use this process to create the park grid map.
- Students use trundle wheels to measure the park's perimeter or boundary, and record. Using a trundle wheel or tape measure, students locate and measure features of the park (e.g. toilet block), and record measurements accurately. Students sketch a basic grid map of the park..

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When we get back

- Compare the estimated walking time with the actual time in hours, minutes and seconds. Discuss the importance of accurate timing when creating information documents.
- Students refer to their sketch of the park and contribute to a class list of measurements and features of the park.
- Using features from the class list, students use or create grid paper to create an accurate grid map of the park. In pairs, students compare their grid maps and check for accuracy. Using their grid maps, students write a short 'walking story' about the walk to the park, citing interesting observations and the park's features.
- **Teacher note:** Consider using the grid maps and photographs to create a walking map of the park online to share with the school or community. Create the map using [Walking Maps](#). For guidance, refer to the [Teacher's guide to Walking Maps](#).

Resources

- street directory
- measuring equipment (e.g. measuring tape, trundle wheels)
- timing device (e.g. stopwatch, smart phone)
- digital camera or smart phone (optional)
- drawing paper
- coloured pencils
- grid paper (optional)

Useful links

Walking Maps
www.walkingmaps.com.au

Suggested assessment

Assess student's ability to:

- use and create a grid reference system
- describe routes using landmarks and directional language
- choose appropriate units of measurement for length
- use the units of hours, minutes and seconds

Further connections

Students and their families could:

- create a grid map and locate features of another site (e.g. backyard)
- use the grid system of a street directory when going on an outing or locating a place being visited
- complete a [Smart Steps: for Families – Activity Sheet](#) at home

AusVELS Level 5

Strand	Sub-strand	Elaboration
Geography	Geography inquiry and skills Record and represent data in different forms, for example, maps, plans, graphs, tables, sketches and diagrams (ACHGS035)	<ul style="list-style-type: none"> • interpreting and creating maps such as flow and choropleth maps, or plans for specific purposes
	Represent the location and features of places and different types of geographical information by constructing large scale and small scale maps that conform to cartographic conventions, including border, source, scale, legend, title and north point, using spatial technologies as appropriate (ACHGS036)	<ul style="list-style-type: none"> • annotating a map to show places and their features.
Measurement and Geometry	Using units of measurement Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108)	<ul style="list-style-type: none"> • recognising that some units of measurement are better suited for some tasks than others, for example kilometres rather than metres to measure the distance between two towns • using units hours, minutes and seconds
	Compare 12 and 24 hour time systems and convert between them (ACMMG110)	
	Location and transformation Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113)	<ul style="list-style-type: none"> • creating a grid reference system for the classroom and using it to locate objects and describe routes from one object to another

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