Lesson Plan: SWAQ Maps

Level: Stage 3

Syllabus link: MA3-17MG "locates and describes position on maps using a grid-reference system"

LESSON OUTLINE

Students will use satellite images to create simple grid maps of their school. They will then practice locating different landmarks (including the SWAQ station) using a grid-reference system.

Resources/Materials:

- Worksheet (included)
- Ruler
- Pencil

Description of activity:

In this lesson, students will use a satellite image of their school as a guide, and they will follow the steps on the worksheet to create a grid map of their school. An example map has been included on the first page of the worksheet.

The easiest method to create the map is to place the blank grid directly over the satellite grid, hold it up to the light coming from a window and trace the outlines of the roads and buildings. However, it is also possible to create the map by using a ruler to measure the appropriate lengths and positions of key objects and using the grid lines as a reference point.

Encourage your students to be as neat as possible. They should use a ruler whenever drawing a straight line and they should try to be as accurate as possible.

Upon completion of their maps, students should label their grids. The horizontal squares should be labelled with consecutive letters of the alphabet and the vertical squares with consecutive numbers, both starting from the bottom left-hand corner of the map. This will create the grid system that they will use to answer the worksheet questions. For example, if the SWAQ station is in the third square from the left, and second square from the bottom, it would be called C2. Make sure your students are familiar with this type of grid-reference system before answering the questions.

Things to note:

Make sure that you print the appropriate satellite image and grid for your students. As each school is different, there is a separate document for each school. However, all schools will use the same instruction worksheet.

Additional Resources:

- A pirate introduces the concept of a grid map to help him find his treasure.
  https://education.abc.net.au/home#!/media/2971399/on-the-grid

- A video showing a worked example for writing and using grid locations.
  https://www.youtube.com/watch?v=1vfHkq-dVpI

- A short interactive animation allowing students to practice locating objects using a grid system.
  https://www.scootle.edu.au/ec/viewing/L350/index.html#

Key Questions to Ask

Why do we use maps?

Why is a map sometimes more useful than a satellite image?

How does a grid-reference system work?

Why is it useful for a map to have a grid-reference system?

When using grid coordinates, do we write the letter or the number first?

Does the letter coordinate represent the horizontal or vertical direction?

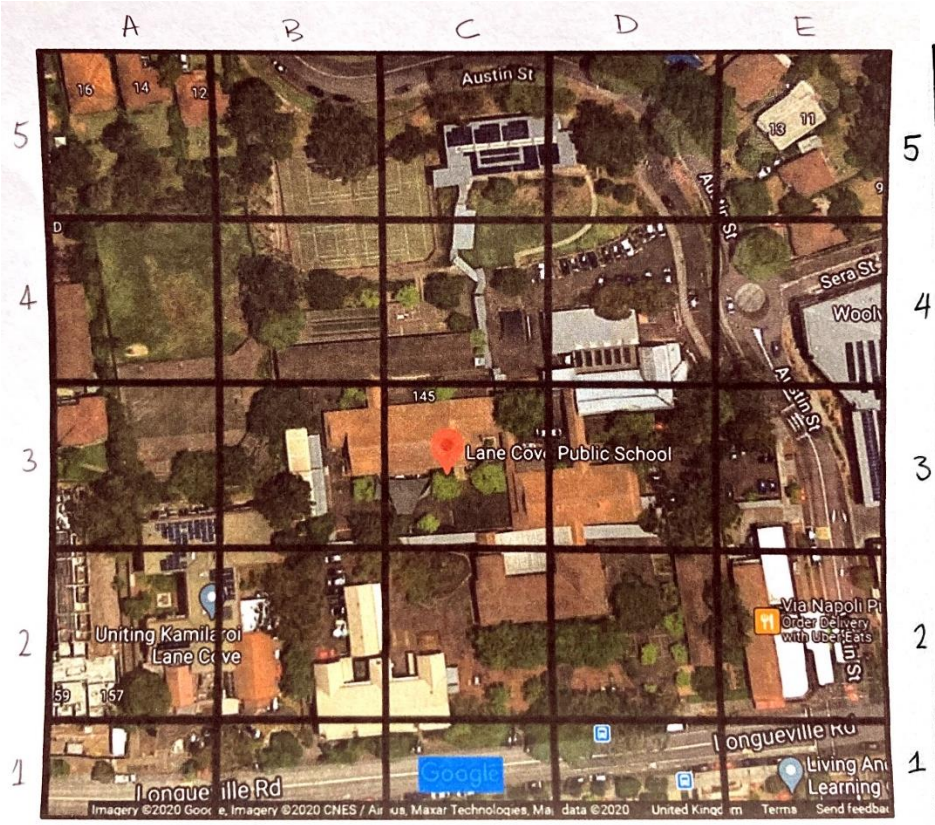
Does the number coordinate represent the horizontal or vertical direction?

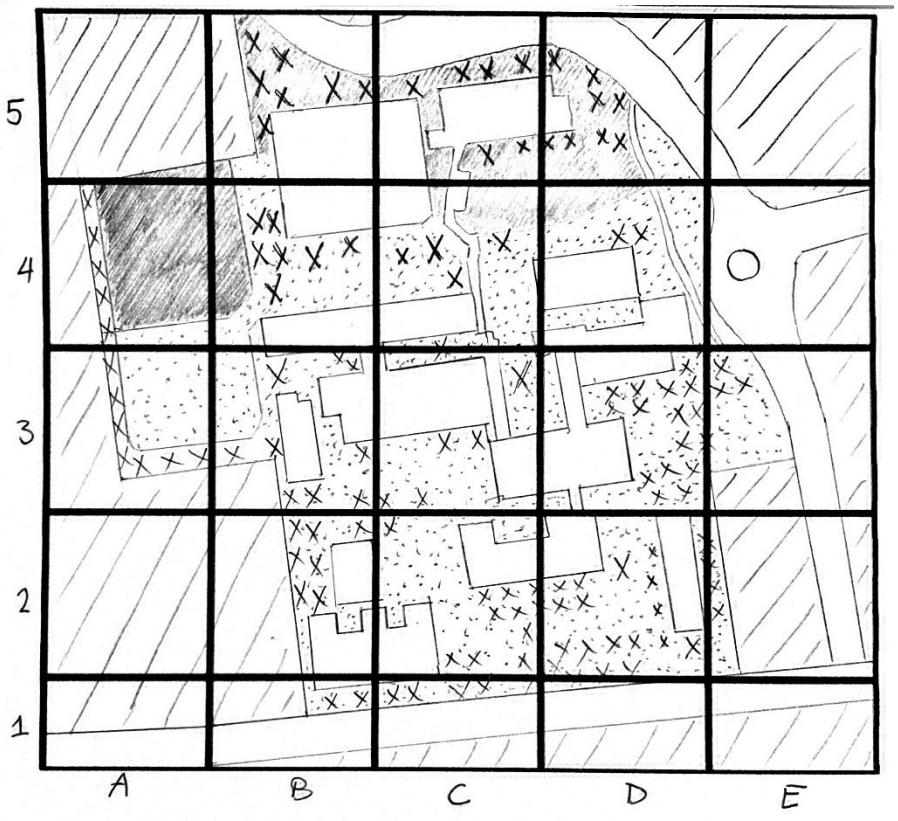
Create your own grid map

Instructions:

You have been given a satellite image of your school. Your task will be to create a map based on this satellite image. Use a ruler to help you measure the correct lengths and to draw straight lines. Use the gridlines to help you place the objects in the correct positions.

An example map has been created for Lane Cove Public School. Follow the steps on the next page to create a similar map for your own school. Once you have finished making your map, label the squares using letters and numbers starting from the bottom left-hand corner (as shown in the map below). Then, answer the questions on the right-hand side of the next page.





STEPS FOR MAKING YOUR GRID MAP

1. Draw the roads that mark the boundary of the school.

2. Draw diagonal lines to mark any areas that do not belong to the school.

3. Draw rectangles to represent the buildings.

4. Use shading to represent any grassy areas.

5. Use dots to represent any paved areas.

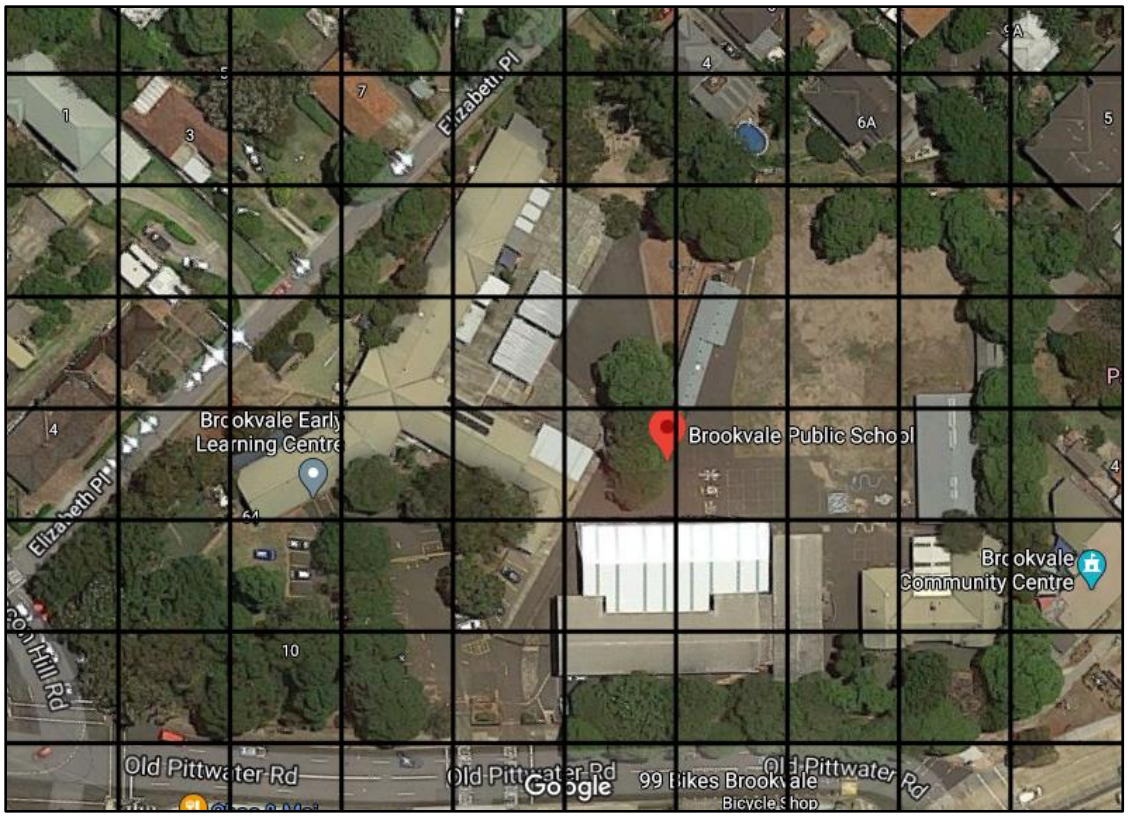
6. Draw crosses to represent any trees.

7. Mark the position of the SWAQ station with a triangle.

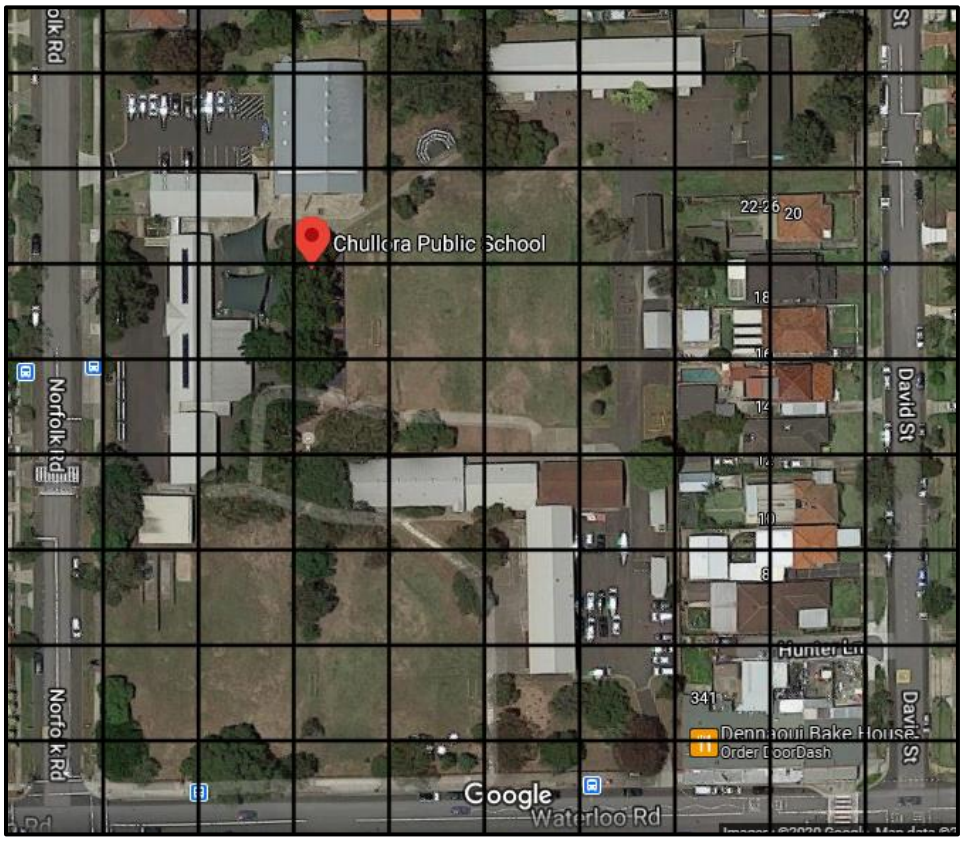
QUESTIONS

1. What are the grid coordinates of the SWAQ station?
2. What are the grid coordinates of your classroom?
3. What are the grid coordinates of the main entrance to the school?
4. What are the grid coordinates of the area with the most trees?
5. What are the grid coordinates of the area you normally go to at lunch time?
6. What is located at the grid coordinates B2?
7. What is located at the grid coordinates D4?
8. What is located at the grid coordinates C1?

Map for Brookvale Public School

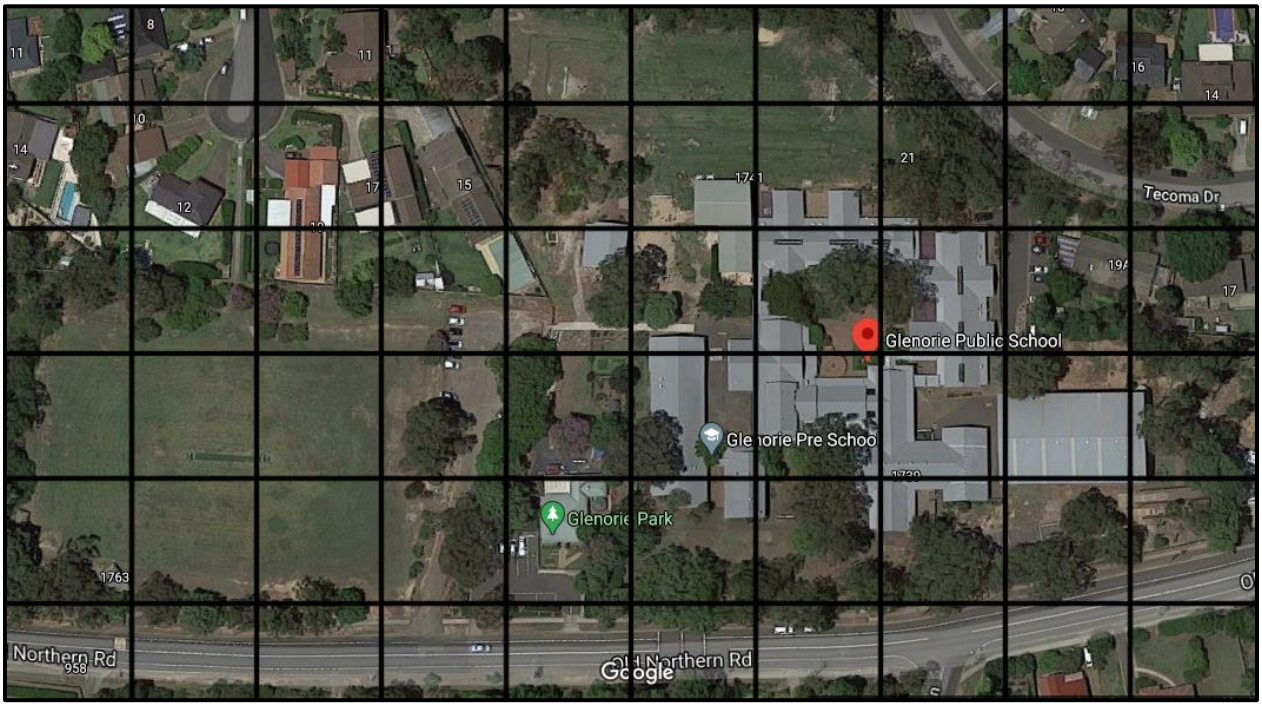


Map for Chullora Public School

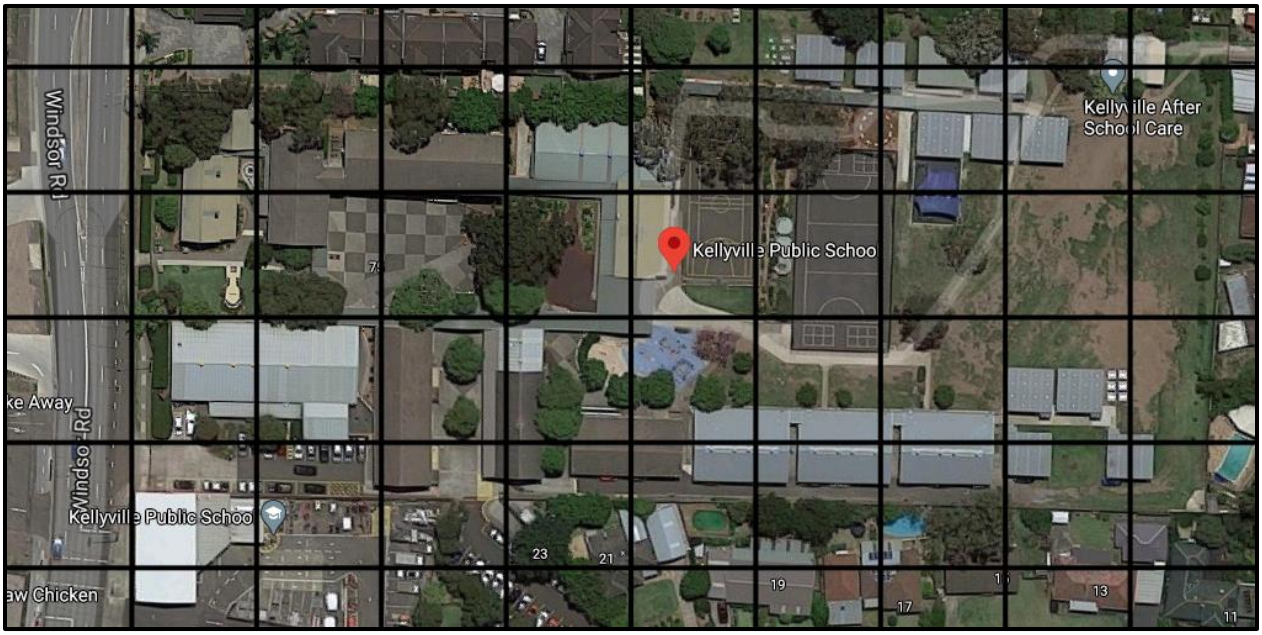


Map for Dulwich Hill Public School

Map for Glenorie Public School



Map for Kellyville Public School

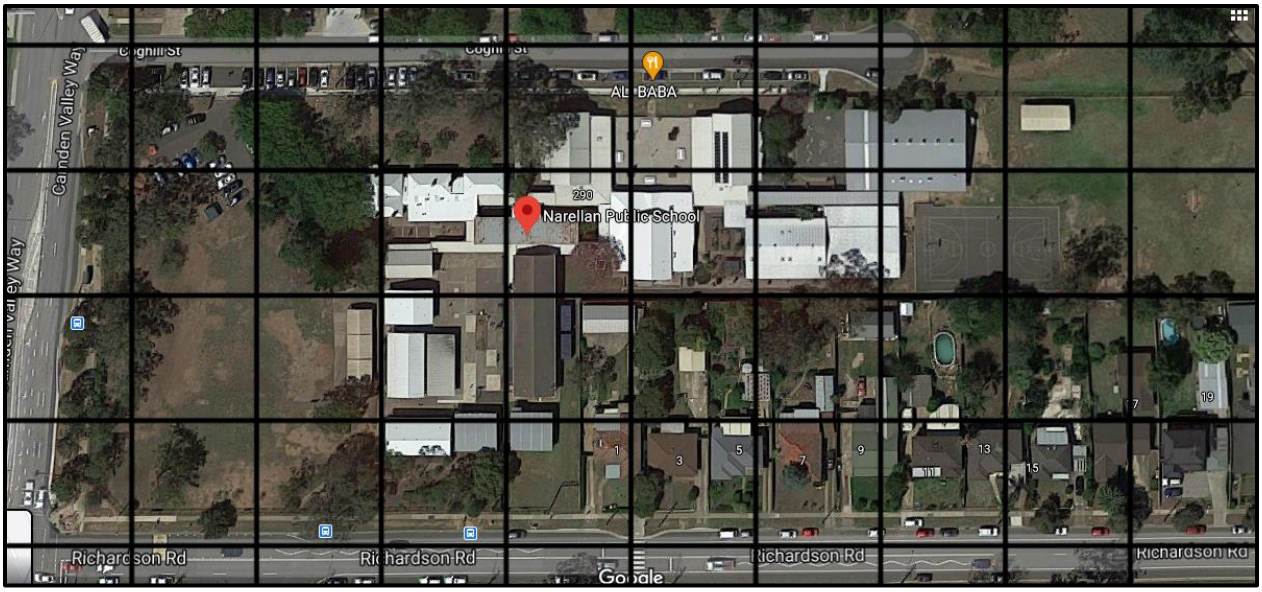


Map for Kurnell Public School

Map for Leppington Public School

Map for Luddenham Public School

Map for Narellan Public School



Map for Newtown Public School

Map for Taren Point Public School