

Lesson Six: Six-figure grid references (Year six)

The final lesson, lesson six, is aimed at Year six pupils. Through this lesson's teaching and activity, pupils develop their ability to use Ordnance Survey maps. They find locations using six-figure grid references and practice locating the school, their house and significant buildings on a map of the local area. They will then use these skills to interpret a Treasure Map and find the lost treasure.

Note: this lesson can take place in the computing suite. Pupils develop their digital mapping skills through answering the treasure hunt questions using the Digimap for Schools software. If you choose for the pupils to use hard-copy OS maps, please source the following maps of central London and photocopy for pupils TQ2978/ 2983/ 3678/ 3682 for the end of unit assessment and main activity.

Key Questions

- How can we locate places on Ordnance Survey maps?
- What is a six-figure grid reference?
- How can we read them?
- How is distance represented on a map?

Key ideas

- Landscape features and places (both human and physical) can be located on an Ordnance Survey map through the use of grid references and grid squares.
- The 'Eastings' and 'Northings' are the numbers around the edge of an OS map. To pinpoint a place you take the Eastings number first, then the Northing (along the corridor and up the stairs).
- You also need an the two letter code (e.g. **SK** 2607)
- Six-figure grid references enable more accurate readings, as two more figures give the exact location within the grid square identified through the four-figure grid reference.

Subject Content Areas

- Locational knowledge: Name and locate counties and cities of the United Kingdom and discover how to locate specific landmarks and places through the use of grid references.
- Place knowledge: Learn about how features of places can be represented through symbols on maps in 2-dimensions.
- Human and physical geography: use OS map symbols and the map key to name physical and human features.
- Geographical skills and fieldwork: interpret a range of sources of geographical information, including maps and aerial photographs. Communicate geographical information through maps. Use the eight points of a compass and six-figure grid references, symbols and key to build their knowledge of the United Kingdom.

Downloads

Lesson plan PDF | MS WORD

Six-Figure Grid References (PPT)

Treasure Hunt resources sheet PDF | MSWORD [© Ordnance Survey - for teaching only]

Answers to Treasure Hunt PDF| MSWORD

Digimap for Schools Treasure Hunt example answers (PDF)

Measuring Distance Factsheet PDF | MSWORD

End of Unit Assessment PDF| MSWORD

End of Unit Assessment Answers PDF| MSWORD

Additional resources:

Photocopied OS map extracts TQ2978/ 2983/ 3678/ 3682 for end of unit assessment.

Web links

To access the *Measuring distance factsheet* online go to

<http://www.ordnancesurvey.co.uk/mapzone/assets/doc/map-skills/Measuring-Distance-en.pdf>

To watch the Map Skills subject knowledge animation from the RGS-IBG go to

<http://www.rgs.org/OurWork/Schools/Teaching+resources/Key+Stage+1-2+resources/Subject+knowledge+animation+Map+skills.htm>

To download *Digimap for Schools* go to <http://digimapforschools.edina.ac.uk/>

Learning Objective

To use map skills to locate a range of places on an OS map.

Starter

Open *Digimap for Schools* (see web links) and locate the school and local area as a whole class. Pose the questions:

- How can we pinpoint places on an Ordnance Survey map?
- How could you describe to a friend where to find the school on an Ordnance Survey map? (Through giving them the grid reference).

Main teaching

Explain how six-figure grid references work using the PowerPoint presentation (see downloadable resources) and also the RGS-IBG subject knowledge animation on *Map Skills* (see web links), the grid references section is from 5:10 minutes.

Explain that grid references have a two letter code, as well as four figures to define the grid square, and two more to show the exact location within that grid square. Practise finding places on an OS map using six-figure grid references. Use *Digimap for Schools* (see downloadable resources) to click on places to reveal the six-figure grid reference.

Ask the pupils what they know about scale. They may have covered this topic in maths. If the scale on an OS map is 1:25,000, how can we work out the actual distance from the distance on the map? Explain to the pupils that 1:25,000 means for every 1cm on the map 25,000cm are covered on the ground. This can be expressed as 1 cm for every $\frac{1}{4}$ km or more usually 4 cm to 1km (also 2 $\frac{1}{2}$ inches to 1 mile). Explain how distance on a map can be measured using the *Measuring Distance factsheet* (see downloadable resources) and practically on *Digimap for Schools*.

Main Activity

Tell the class they are going to put the map skills they have learned in this lesson to find lost treasure on a map.

Use OS map extracts TQ2978/ 2983/ 3678/ 3682 or *Digimap for Schools* (see web links). Provide pupils with a copy of instructions *Treasure Hunt resources sheet* (see downloadable resources). If you have subscribed to *Digimap for Schools* you could use this to help or to show the answers at the end. Put in London and then City of London to find the right location.

Pupils share their answers, and the teacher can check using the answer sheet provided (see downloadable resources).

Plenary

Recap on what they have learned about maps. Ask them to write down on Post-its any handy hints that they have picked up that would help others. This could then be compiled into a leaflet for future years. Alternatively, this time could be used to complete the assessment.

As a summative assessment, pupils complete the *End of Unit Assessment* (see downloadable resources) they can mark their work using the *End of Unit Assessment* answer sheet (see downloadable resources).

Further study

This could be developed to increase pupils' knowledge of the United Kingdom and wider world. As the Treasure Hunt is set in Central London, it would be a good starting point for learning more about the functions of the city. Pupils could also design their own treasure hunt, using six-figure grid references and scale, which other members of the class could try out.