Geography
Year 9 Home Learning Booklet

Map Skills Foundation

Name

Tutor Group

Teacher

Given out: Monday 19 October    Hand in: Monday 2 November

Parent/Carer Comment

Staff Comment

Target
The Importance of Map Skills

This booklet is aimed at helping you improve your map skills. These are very important skills that you need to know, especially if you plan to take Geography at GCSE as they count towards 25% of your final mark.

I have included some help pages within the booklet for things you may not have seen before so read the coloured help sheets carefully before you begin the tasks.

In addition to this I will be available after school at Homework Club Tuesday, Wednesday and Thursday to support you, so if you are finding this difficult please make sure you are there.

If you require further help with your map skills but cannot attend Homework Club go to the internet and type in this link for further help:

http://mapzone.ordnancesurvey.co.uk/mapzone/PagesHomeworkHelp/mapability/

or Google: “Mapzones, Mapability” and click on the first link that comes up.

Good Luck with your map skills!
Task 1: Using Symbols (15 mins)

A symbol is a picture used on a map to show something that is there in real life.

1. Complete the key for map A. Each of the symbols may be found on the map.

<table>
<thead>
<tr>
<th>Key</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minor road</td>
</tr>
<tr>
<td>Footpath</td>
</tr>
<tr>
<td>Railway</td>
</tr>
<tr>
<td>Public house</td>
</tr>
<tr>
<td>Post office</td>
</tr>
<tr>
<td>Farm</td>
</tr>
<tr>
<td>Viaduct</td>
</tr>
<tr>
<td>Bridge</td>
</tr>
<tr>
<td>Marsh</td>
</tr>
<tr>
<td>Quarry</td>
</tr>
<tr>
<td>Viewpoint</td>
</tr>
<tr>
<td>Golf course</td>
</tr>
<tr>
<td>Woodland</td>
</tr>
<tr>
<td>Caravan site</td>
</tr>
<tr>
<td>Church with spire</td>
</tr>
<tr>
<td>Church with tower</td>
</tr>
<tr>
<td>Car park</td>
</tr>
<tr>
<td>Reservoir</td>
</tr>
</tbody>
</table>

2. Follow the walk shown by arrows on the map. Complete the description of the walk given in description B below.

   We left the car in the ____________ at Aveton and, after a short walk along the road, turned down a ____________ just before Ribble Beck. On the other side of the beck was a _____________. The railway crossed the valley on a huge ____________, with eight arches. We then walked up the hill and stopped for a rest at the ____________, where we could see the Ribble ____________. After about ten minutes we joined the road and walked through Exley. There was a ____________ on the left and a fine old ____________ on the right. We then passed a ____________ and crossed a ____________ over the ____________. At Dipton ____________, we left the road and followed a footpath through some ____________ and past two ____________ to ____________ Farm. Ahead of us was Woodford Village where we could see a church with a ____________. At the ____________, we turned right and followed the footpath back to Aveton where we had a meal at the ____________.
Task 2: Scale (20 mins)

We use a scale on maps so that when we look at a map we know how big the things on the map are in real life.

1. Draw the clown on Grid B.
2. Add to both clowns
   a) buttons b) belt c) funny face
3. Colour both clowns with patterns. Make sure the patterns are in the right square on each clown.
4. Complete the chart.

<table>
<thead>
<tr>
<th></th>
<th>Clown A</th>
<th>Clown B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height of clown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length of foot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height of hat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Width of shoulders</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. What do you notice about the measurements in A and B?
Task 3: Measuring Scale

Maps show places smaller than they are in real life.
The scale on a map lets us measure real distances.

Activity

Here is a map of a desert island where you want to bury some treasure. Start at the ship and follow the instructions below, using the scale to help you.
Each square is one square kilometre.
Mark your path on the map as you go.

1. Go north for 2 km.
2. Go east for 4 km.
3. Go north for 3 km.
4. Go west for 1 km.
5. Go south for 1 km.
6. Go west for 4 km.
7. Go south for 3 km.
8. Go east for 2 km.
9. Go north for 2 km.
10. Go east for 1 km.
11. Go south for 3 km.
12. Put X and bury the treasure.

To get straight back to the ship you have to go ______ for _______ km.

Recap We measure distances on a map using the s_______.
Here is a help sheet for how to measure distances on a map. Read through it carefully and look at the pictures to help you understand before you attempt Task 4.

**How can distance be measured?**

One of the most important uses for a map is to show how far one place is from another. This is best measured using the **scale line**.

### Straight line distances

Straight line distance is easy to work out using a piece of paper with a straight edge.

1. Lay the strip of paper on the map between the points to be measured (A and F).
2. Mark and label points A and F with a pencil.
3. Lay the paper along the scale line to find the distance from A to F. **It is 9 km.**

### Curved distances

The distance along a road or river with many bends on it is longer than the straight line distance. This is how to measure it.

1. Look at the length to be measured and break it into straight sections.
2. Lay the strip of paper along the first section A to B. Mark and label points A and B.
3. Pivot the paper at B so that it lies along the next straight section, B to C. Mark and label point C.
4. Now pivot the paper at C until it lies along the next straight section C to D. Mark and label point D.
5. Move along the road in this way, section by section, until you reach F.
6. Lay the paper along the scale line to find the distance A to F. **It is 11.5 km.**
**Task 4: Measuring Distance**
This continues on from the task looking at scale. We need to know what the distances are in real life so we know how far we are travelling and how long it is going to take us.

1. Use the scale line on map A to measure the length of these lines.
   a) _______ = __________
   b) _______ = __________

2. Complete matrix B by measuring the straight line distance between each town. For example, London to Birmingham = 170 km.

3. Measure the length of the rivers Trent, Severn, Thames and Clyde. List them in order of length.
Here is a help sheet for how to tell if the land is high or low, flat or steep on maps. This is called the relief of the land. Read through this carefully and look at the pictures to help you understand before you complete tasks 5 and 6.

**How can we show height and relief on a map?**

The land around us is seldom flat like a piece of paper. There are nearly always differences in height and differences in slope. Sometimes slopes may be gentle and at other times they are steep. There may be hills, mountains and valleys, or areas that are quite level. The word relief is used by geographers to describe the shape of the land.

Map makers have to find ways of showing height and relief on a flat piece of paper. Look at drawing A which shows a hilly island. The land near the sea is flat or gently sloping but becomes quite steep towards the top of the hill. On a map this can be shown in three ways.

First, a surveyor must find the height of a number of places on the island. These are shown in drawing B.

The heights can then be plotted on a map. They are usually shown as a black dot with a number giving the exact height above sea level in metres. They are called spot heights.

The map maker can then draw lines to join up the places that have the same height. These are called contour lines. They are usually coloured brown and have their height marked on them.

Colours may be used to show areas of land that are at different heights. Brown is usually used for high ground and green for low ground. There must always be a key.

- **Spot heights**
- **Contours**
- **Layer shading**

---

Height in metres (m) above sea level
- More than 300
- 100–200
- 200–300
- Less than 100
Task 5: Height on maps – colour and spot heights (20 mins)

Height can be shown on a map by using:

- **spot heights**. These show the exact height of a place.
- **layer colouring**. Here different heights are shown in different colours.

**Activities**

Study the map of the island below.

1. Boxes A, B, C and D point to **spot heights**. Fill in the height in each box.

2. Fill the heights in the Word box into the correct boxes E, F, G and H below.

3. Mark with a \( \times \) the highest point on the map.

4. Colour in the island with the colours shown on the map. Colour in the key with the same colours.

5. Go over the 0 metres line in **blue**. This is the **coastline** because 0 metres is sea level.

**Word box**

- Between 10 and 20
- Between 20 and 30
- Over 30
- Under 10

---

**Recap**

Height can be shown on maps by **s** __________ **h** __________, or by **l** __________ **c** __________.
Task 6: Height on maps – contours (20 mins)

This task is a cut and stick exercise. You will need to carefully cut-off the bottom of the page along the dotted line before cutting out the squares and then stick them into the right places on the top half of the page.

a) Match the landscape features in drawing A with the contour patterns in drawing B. Cut out each contour pattern and stick it below the correct drawing.

b) Add a title for each of the eight features. Choose from the list given in drawing C.

C Landscape features
- Flat-topped hill
- Steep slope
- Steepening slope
- Ridge
- Round hill
- Gentle slope
- Valley
- Cliff
Task 7: Four Figure Grid References (40 mins)

In this task you will learn how to use the letters along the bottom of the map and the numbers up the side of the map to find where things are. Like coordinates in Maths always go along the corridor and up the stairs to find the correct box.

Complete the map using the symbols in the key and the following information.

1. a) The coastline follows the dotted line.
   b) There are sandy beaches in C5, C6, C7, E8, F3, I2, I3, I5 and I6.
   c) There are mud flats in C3, D3, H6 and H7.
   d) There are mountains stretching from B2 to H1, D5 to H6, D6 to I7.
   e) There are hills in H2, I2, G3, and E7.
   f) There are cliffs from F1 to I1 and in J1, J2, J4, I6, F8 and G8.
   g) There are flat rocks in A8, B8 and C8.

2. Use your own symbols to add the following features to the map. Add your symbols to the key.
   a) A river winds from D3 to G4 and from H6 to E6.
   b) There are waterfalls in G4 and E6.
   c) There are lighthouses in J1 and J7.
   d) There is a wreck in A6.
   e) There is a village in C3, D3 and E3 and another one in E8 and F8.
   f) A coastal road joins the two villages.

3. Colour your map lightly in pencil.
Task 8: Six Figure Grid References (30 mins)

We can find exact points on a map by using six numbers or figures.

- The first three numbers tell us how far to go along the bottom or top of the map. The third number tells us the number of tenths of a grid square.
- The last three numbers tell us how far to go up the side of the map. The sixth number tells us the number of tenths of a grid square.

The * in this diagram is at 115 258

**Activities**

1. Look at the map below. It shows Danger Island

Using the map and the key, underline the correct answer for each of the following statements.

- There is a lighthouse at 255 145, 145 255, 140 155.
- There is a cave at 135 265, 135 275, 265 145.
- There is treasure at 125 265, 265 130, 120 260.
- There is a palm tree at 145 272, 142 275, 273 145.
- At 113 276 there is a whirlpool
- At 124 270 there is a wreck
- At 140 270 there is a swamp

2. Now mark ⚫ at 135 255, * at 130 270 and ✗ at 111 259.

**Recap**

s______ figure grid references help us to find exact
p__________ on maps.
I am a R____________________ learner.

I know this because:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

I believe that my **effort and attitude to learning** for this booklet is a:

1  2  3  4

I know this because:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________