Getting Around
School Activities
### GETTING AROUND - Summary

Using nature and nature’s signs to find your way around. Animal navigation and movement.

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Activity - Mad about maps

In these activities you will use an existing Wyre map to find a selection of trees. Also you will make your own pictorial map with grid references and points of interest. You can also set orienteering challenges using the maps provided.

Each group will need:
Printed copy of Wyre Tree map
Paper
Pen
String or pegs to mark out grid
Ruler and tape measure
Wyre Tree ID guide

Divide the class into small groups. Give each group a copy of the Wyre tree map. (Follow this link: http://www.forestry.gov.uk/wyreforest) and an envelope containing the name of a specific tree to find using the map. They can take photos of the trees once they have found them or collect a leaf/flower/fruit from the tree as proof.

Next mark out another area of the woods on an OS map, approximately 50m x 50m in size. Each group is asked to use pegs to mark out a 10m x 10m grid across the area either using a tape measure or by simply pacing it out. (1m = 1 adult pace ie: single large step with one leg). Then ask them to mark a scale grid to fit on the paper. (eg: 2cm = 10m)

They need to work out what this scale is and mark it on the paper. They can use this scale and grid to pace out where trees are. Ask them to mark down any other obvious features that would help them to find their way around (eg: paths, seats, buildings)

Each group could set another group a challenge of finding something hidden using their map.

These maps can be as decorative as time allows. Consider taking photographs, collecting objects and making sketches to illustrate the map at a later date.

Orienteering - use the orienteering maps of Callow Hill or Hawkbach provided to set out an orienteering challenge.
ORIENTEERING AT CALLOW HILL

Control descriptions

1. E path junction
2. SW road / path junction
3. Path junction
4. Vegetation boundary
5. Road / path junction
6. Path junction
7. Road / path crossing
8. Road / path junction
9. Small depression
10. Marsh, S edge
11. Spur
12. Small re-entrant
13. Re-entrant, lower part
14. Pit
15. Small gully
16. Pit, S edge
17. Small re-entrant
18. Small gully, SW end
19. Re-entrant
20. Earth wall, top
21. Spur
22. Spur
23. Marsh, E edge
24. NW most ditch junction
25. Small gully, NE end

Location
The start and finish are at the visitors centre and marked by a red triangle on the map.

The map
The map is at the scale of 1:7500. This means 1 cm on the map represents 75m on the ground. It is a specially surveyed map with some unusual symbols. For instance yellow represents open land and white represents woodland. Black vertical lines show magnetic north. The legend gives you all the symbols used.

You may choose your own course or try the suggestions below.

A short easy course 1.9km
Visit the controls 1 to 8 in that order. All the controls are on or near paths. Each is marked by a post with its own number and letter. Copy the letter into the box for that control to show you have been there.

A medium course 3.1km
A slightly more difficult course which has controls both on paths and away from paths. Visit controls 8, 19, 20, 25, 15, 10, 14, 13, 6, 5, 23, 22, 9 in that order. You will have to decide on the best route from one control to the next.

A difficult course 4.7km
This is technically the most difficult course for navigation. No controls are on paths. Visit controls 21, 23, 24, 19, 18, 25, 17, 16, 15, 10, 13, 12, 11, 22, 9 in that order. You need to choose your route taking paths and contours into account.

Further information
This map has been produced by Harlequins Orienteering Club for the Forestry Commission England.

If you have enjoyed this permanent orienteering course you may be interested to know there are several other permanent courses in the area and that local clubs organise events on many Sunday mornings.

The local club is HARLEQUINS ORIENTEERING CLUB WEB PAGE www.harlequins.org.uk

Here you will find information about events, the club and links to other clubs and British Orienteering.
ORIENTEERING AT HAWKBATCH

Location; The Start and finish are in the public car park at Hawkbatch. The start is marked by a red triangle on the map and the finish by two concentric red circles. Controls are marked by numbered circles.

The Map; The map is at the scale of 1:7500. This means that 1 cm on the map is equal to 75 m on the ground. It is a specially drawn map with some unusual symbols. For instance yellow represents open land with short vegetation and white represents woodland that is easy to run through. The darker the green the thicker the vegetation. A 'knoll' is a small hillock, a 're-entrant' is a small valley and a 'platform' is a flat piece of ground cut into a slope.

You may choose your own course or try the suggestions below. Each control is marked by a numbered post. This number corresponds to the number on the map. There is also a letter (or letters) on the post. Copy this letter(s) into the box with that number on the right side of the map to show you have been there.

A short easy course 1.8km
Visit the controls 1 to 9 in order. All these controls are on or near paths. Copy the letter into the box to show you have been there.

A medium course 2.9km
A slightly more difficult course navigationally which has controls both on paths and away from paths. Visit controls 2, 11, 12, 27, 14, 30, 24, 25, 18, 9 in that order. You have the choice of going round by paths or cutting through the wood in places.

A difficult course 4.5km
This is a navigationally technical course. No controls are on paths. Visit controls 10, 16, 15, 23, 28, 19, 14, 20, 21, 13, 22, 24, 18, 26 in that order.

Control descriptions

1. Path junction 16. Wet pit
2. Path junction 17. West path junction
3. Path junction 18. Thicket, west side
4. Path junction 19. Pit
5. Building, south side 20. Gully, east end
6. Track, west side 21. Wet pit
7. Path junction 22. Yew tree
8. South most path junction 23. Re-entrant
9. Path junction 24. Yew tree
10. Small depression 25. Path junction
11. Middle gully 26. Clearing
12. Knoll 27. Middle gully, south east end
13. South gully, west end 28. Yew tree
14. Ditch 29. Path junction
15. Re-entrant 30. Path crossing

Further information
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If you have enjoyed this permanent orienteering course you may be interested to know there are several other courses in the area and that local clubs organise events, many on Sunday mornings.
You will find more information about events at www.harlequins.org.uk.
What are the lines and colours on the map?

As with any other map, symbols and colours represent different features in the landscape.

The Colours:

BLACK  Often represents ‘man made’ features such as buildings, walls, bins and fences. Paths and tracks are in black, but not roads, which are shown in brown.

WHITE  Wooded areas where fast progress can be made

GREEN  Wooded areas and other areas where progress can be slow due to vegetation. The darker the green the more difficult the progress.

YELLOW  Indicates open areas such as grassland and fields.

BLUE   Indicates water e.g. ponds, streams, rivers

BROWN  Solid brown usually indicates a hard surface e.g. road, car park. Brown lines and symbols represent contour features such as contour intervals, depressions, knolls (very small hills).

……….. and the lines?

All orienteering maps have parallel lines drawn vertically on the map. The tops of these lines have an arrow indicating magnetic north. These lines will only be relevant if using a compass.
Activity - Orienteering

In these activities you will use an OS map of Wyre to find specific grid references. You will also use the orienteering maps to answer questions.

Each group will need:
OS map - Explorer sheet 128 or Landranger sheet 138
Printed copy of the orienteering map for Callow Hill or Hawkbath
Compass

Activity - British Orienteering

For pre-visits we suggest that you register with the British Orienteering schools database. It gives access to some brilliant free resources useful for younger children such as an interactive matchup game, activity challenges and activity resources called Tri orienteering. Once registered follow the link they send to access all the resources. Incidentally, you don’t need to be a teacher to register.

http://www.britishorienteering.org.uk/page/school_registration_form

Follow the link that they will send after registration which will take you to schools information PDF. If you want to find activities swiftly check out page 12 showing Other Resources which has an interactive symbols game, Activity Challenges and page 13 has Activity Resource - Tri Orienteering with lots of pre-visit activities to have a go at.
Guidance Notes for Pre-visit Activities

Simple exercises to introduce setting a map and information about map colours and symbols.

1. Table Top Plans: A desk with 2 or 3 objects on it. Draw a plan with the objects in their correct position. See folder Table Top for more detailed instructions.

If you stand at a different side of the desk how will you hold your map so it accurately reflects the layout on the desk? (This involves orientating/setting the map)

2. Hall or Gym: Lay out equipment in a similar way to the table-top but on the floor. Follow a route round the course making sure that you keep the map turned so you are facing the direction of travel. See folder Gym maps for more details.

- Map with the route marked
- Start at the triangle
- Several maps, with different routes can be produced
- You can also lay out more equipment to produce a more complicated map

3. Playground: Using a simple map (for example a map of the lines of a netball court.) Put out cones at the junctions of the lines, which are the locations of the centre of the control circles. This is again to reinforce the fact that your grip on the map must change whenever you change direction on the route. See folder on Netball numbers for more details.

Finish

Start
Table Top Maps

Resources:

- Table or desk
- Several simple objects
- Paper, pencils, crayons

The Session:

1. Layout some simple objects on the desk, make sure they are different shapes and sizes.

2. Ask the children to imagine they are a bird flying above the desk looking down; show them what it would look like on a map. This maybe a map of pictures of the object or specific symbols to represent the different objects. (samples on page 2) Discuss what sizes the individual shapes are and how they relate in spatial positioning to each other.

3. Teach them to set the map so that what is on the right on the desk is to the right on the map.

4. Place the objects in a different position. Can the children draw the map of the new shapes?

5. Move to a different side of the table; is the map correct now? Practice moving around the map to keep the map correctly set to match the objects.

You can also do the same exercise using a mat in the gym instead of the desk top.

TO 1: Guidance Notes for Pre-Festival Activities © British Orienteering
Gym Maps

The following set of maps can be used for orienteering sessions in a hall/gym.

Gym Map – No controls printed on the map

You will need:
- One map from page 2 per group.
- Cones or markers to divide the hall into sections. One section per group.
- Selection of gym equipment e.g. gym mats, hoops, cones, ropes

The Session:

Give each group one map and allocate a section of the hall for them to work in. Ask each group to select and lay out equipment as shown on the map. Discuss and demonstrate map orientation. Pupils practice moving round the map keeping the map orientated as they progress.

Gym Map - With controls printed for gym orienteering

You will need:
- Teacher maps for equipment and control placement from page 3.
- Answer sheet from page 5.
- Maps numbered 1 to 8. For a class of 30 you will need to print off 2 sets.
- Selection of gym equipment. e.g. gym mats, hoops, cones, benches.

Setting Up:
Put out gym equipment and control placement using the teacher map.

The Session:
Issue one map per pair. Discuss map orientation and where the start is. Pupils must visit controls in order given on the map. They record answers, if correct try a different map.

Gym Score Event

You will need:
- Same as for gym orienteering except prepare copies of the score event map on page 5 instead of the numbered map.
- Pencil and paper for each pair.

The Session:
Issue one map, pencil and paper per pair. Discuss map orientation and where the start is. Allow one minute to locate as many controls as possible and record the answers. Option to change the control letters so that when re-arranged the pupils work out an anagram.
Gym Maps - No controls Printed
Gym Map with Controls for Gym Orienteering

Teacher's map

Finish

Centre of the control circle denotes position of marker

Start

Map 1

Map 2

TO 1: Guidance Notes for Pre-Festival Activities
© British Orienteering
TO 1: Guidance Notes for Pre-Festival Activities
© British Orienteering

Answers for Gym Orienteering

Map 1  E C B
Map 2  A K B
Map 3  T E C
Map 4  E T B
Map 5  A C K
Map 6  T A C
Map 7  R T K
Map 8  R K B

Score Event Map

Start

Finish

3

1

5

4

6

7

2
Copy first 7 letters (control) for use with maps above. Additional markers may be used as alternatives.

C
B
K
T
R
E
A
G
I
N
P
Q
R
V
X
Activity - Nature’s signs

This worksheet gives a series of clues and signs found in nature that can help you to navigate around without the aid of a map.

Golden rule: it is always best to try to use a number of clues together to confirm a direction.

**NATURE’S SIGNS:**

**Wind** - find out what the prevailing wind direction is (usually south west in Wyre area) and then feel the wind on your face and try to work out which way you are facing.

**Lichens** - look at the tree trunks and on benches/signs etc - lichens which are yellowish or orange tend to grow on the sunny side (ie: south).

**Mosses and algae** - look at the tree trunks and on benches/signs etc - mosses which are usually greenish tend to grow in damp shady positions (ie: north)

**Varnished wood** - if you find a seat or sign that has been varnished and the varnish is faded or peeling on one side this is probably the sunniest side (ie: south) Any print facing south will also be more faded.

**Churches** - if you happen to come across a church then remember that they were always aligned east to west as were the graves, with the heads lying to the west and the feet to the east so that when they arise they will face the sun rise in the east. Priests were generally buried the opposite way round so that when they rise they will face their congregation.

**Tree strength** - look at the trees - do they look heavier on one side? Trees tend to grow more vigourously on their south side as they grow towards the sun. This can also be seen if you find an old tree stump. The heart of the rings will be slightly closer to the south side as the tree trunk would have to be stronger on the north side to support the extra weight of branches on the south.
Sun - if it is a sunny day you can use the sun to give you an approximate direction. In the northern hemisphere the sun rises in the east and sets in the west so at midday it is due south. If you have an idea what time the sun rises and sets you can work out what direction it is at different times of the day.

Sounds - you can use your sense of hearing to listen out for clues such as traffic on a busy road

Rocks - are very slightly warmer on their south side, as they maintain heat from the sun for several hours.

Look for wind-pruned branches of lone trees such as hawthorn - It’s not that the tree has been pushed over by the wind, but the buds on the side facing into the wind are prevented from growing by the constant buffeting of the wind.

Woodants – build their nests so they have a south facing aspect.

It should also be pointed out that woodlands are not easy places to do natural navigation accurately!
Activity - Leave it to chance

This fun game allows you to use some of the skills from worksheet 2 but then uses a dice to leave the navigation totally to chance.

You will need:
2 dice printed and made up:
Dice 1 has numbers 1 to 6 as usual
Dice 2 has NORTH, SOUTH, EAST and WEST marked on it and then BACKWARDS and STAND STILL on the last two faces.
String to mark the boundary

Cordon off an area of woodland using the ball of string. Mark the approximate centre. Ask the group to work out which way is South using the natural navigation techniques. Everyone starts in the centre and takes it in turns to throw both dice. They then have to follow the instructions (ie travel south 5 paces, stand still and ignore paces, travel back the way you have just come by 3 paces etc.) If you hit the boundary then you are out and have to sit down. The last player standing wins.

Suggestions: the assistant can deliver the dice to each player in turn and adjudicate.