

Primary School Introduction to Orienteering

What is Orienteering?:

Orienteering is a sport that combines map reading and running. An orienteering course is marked on a special map depicting detailed information about the terrain, such as boulders, ditches, buildings or play areas. No route is shown and the competitor must decide how to navigate between checkpoints on the course as quickly as possible. The fastest person to visit all the checkpoints in the right order is the winner. Orienteering can take place in many different types of area ranging from remote forests and moorlands to community woods, parkland and urban areas.

Orienteering is suitable for introducing to children from the age of around 9-10 and the fundamentals of the sport can be learned in a safe school / playground environment. The sport is excellent activity to include in the school curriculum as it can hit many objectives of the Curriculum for Excellence.

Aim:

This set of resources is aimed at providing plans for 5 introductory lessons in orienteering and is targeted at year groups P5-7. The knowledge from these lessons should equip children with enough understanding to participate successfully in a schools orienteering festival.

These resources should be adequately self-explanatory to enable teachers to deliver the lessons without outside assistance. However, it is highly recommended that teachers should attend a "Introducing Orienteering" course. Teachers would also be very welcome to attend either an after-school club session or Sunday club training to gain more insight to the sport and how it should be taught. Anyone interested in either of these opportunities should contact myself (sarah@scottish-orienteering.org) to arrange.

Key skills:

There are four key skills that underpin the lesson plans provided here

1. Understanding maps - aerial views, spatial depiction and scale
2. Orientating the map using terrain features
3. Understanding orienteering map colours and symbols
4. Orienteering using tracks and obvious line features (buildings in playground)

Queries about the content:

Please don't hesitate to contact me if you have any queries about the content of this pack or how to use any of the materials.

sarah@scottish-orienteering.org

Lesson 1. What is a map?

Aim:

In a classroom environment, the participants will learn about:

- 'Bird's eye' view; map as an aerial picture of the ground.
- Introduction to symbols.
- Spatial relationship between objects.
- Size of objects from reality to map.
- Setting a map.

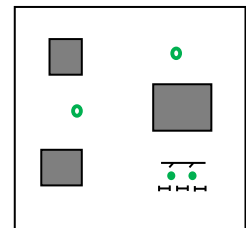
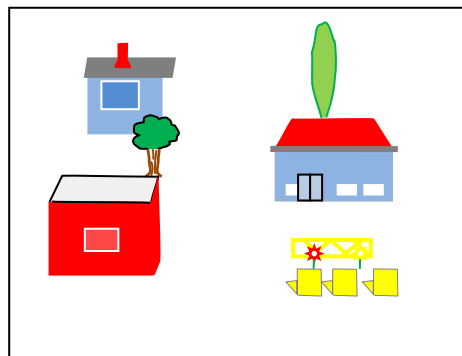
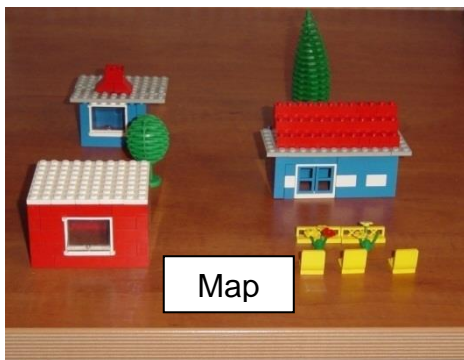
Resources:

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

The Session:

1. Lay out some simple objects on the desk, make sure they are different shapes and sizes.
2. Ask the participants to imagine they are a bird flying above the desk looking down; show them what it would look like on a map. This may be a map of pictures of the object or specific symbols to represent the different objects (examples 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 participants draw the map of the new shapes?
5. Move to a different side of the table; is the map correct now? Practise 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.



Lesson 2a Setting the map – indoor gym session

Aim:

In a hall or gym (or any other similar space), the participants are able to demonstrate that they can:

- Set the map.
- Recognise the symbols used for start, control and finish.
- Follow a course which is marked on their map.

Resources Part 1:

Indoor map, no controls printed on the map.

- One copy of the map “Indoor Maps - No controls Printed” per group.
- For each group: 2 x benches, 1 x gym mat, 4 x cones, 1 x square box.

Session Part 1:

Ask each group to select and lay out equipment as shown on the map. Discuss and demonstrate setting the map. Participants practise moving round the map keeping the map set as they progress.

Resources Part 2:

Indoor map with controls printed for ‘indoor’ orienteering.

- Teacher map for equipment and control placement from page “Indoor map with controls”.
- For each group: 3 x benches (or use skipping ropes), 1 x gym mat, 1 x cone, 1 x square box.
- 7 controls lettered B, C, K, T, A, E and R.
- Answer sheet.
- Maps numbered 1 to 8. For a class of 30 you will need to print off 2 sets.

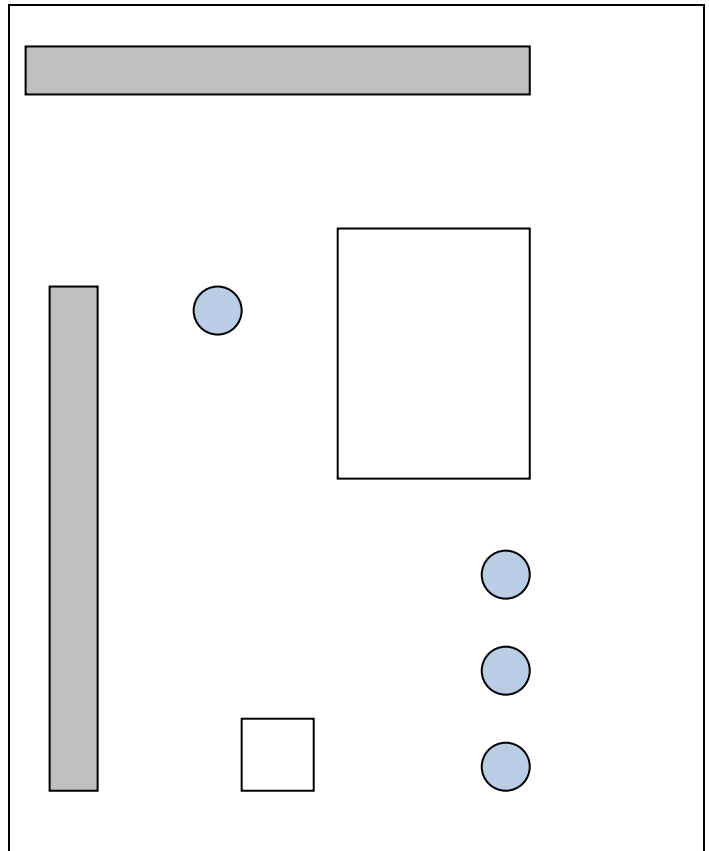
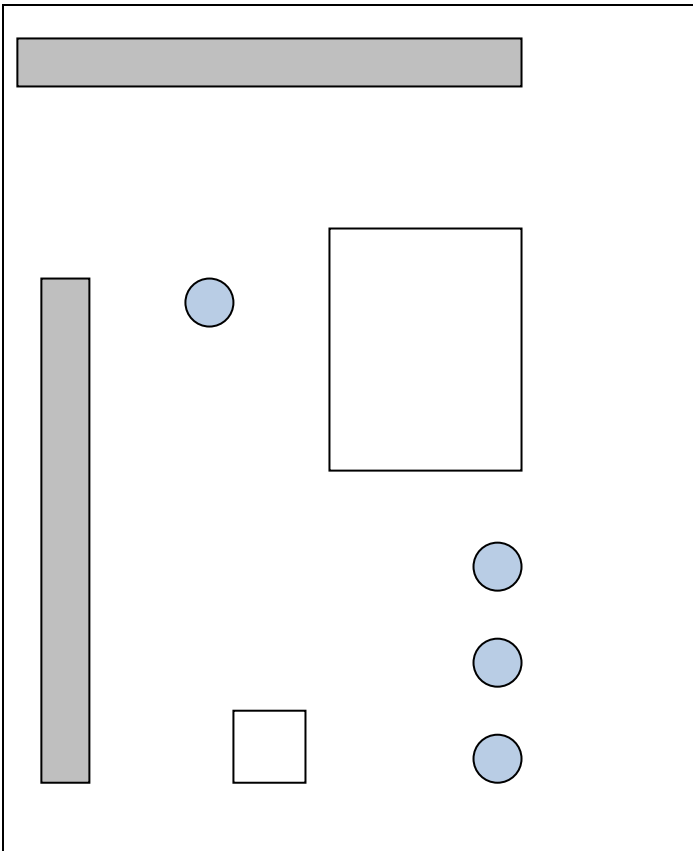
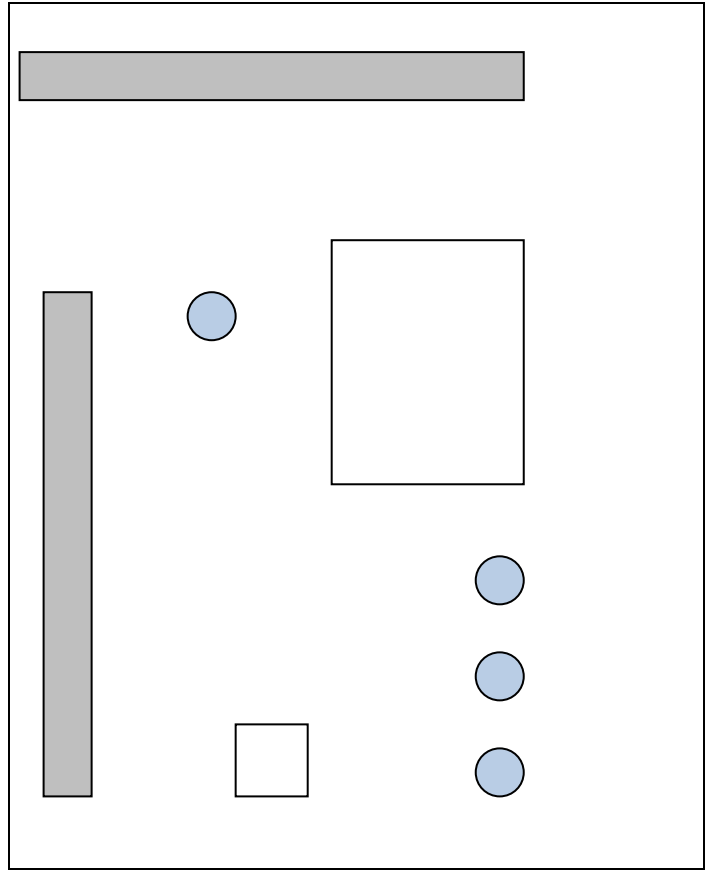
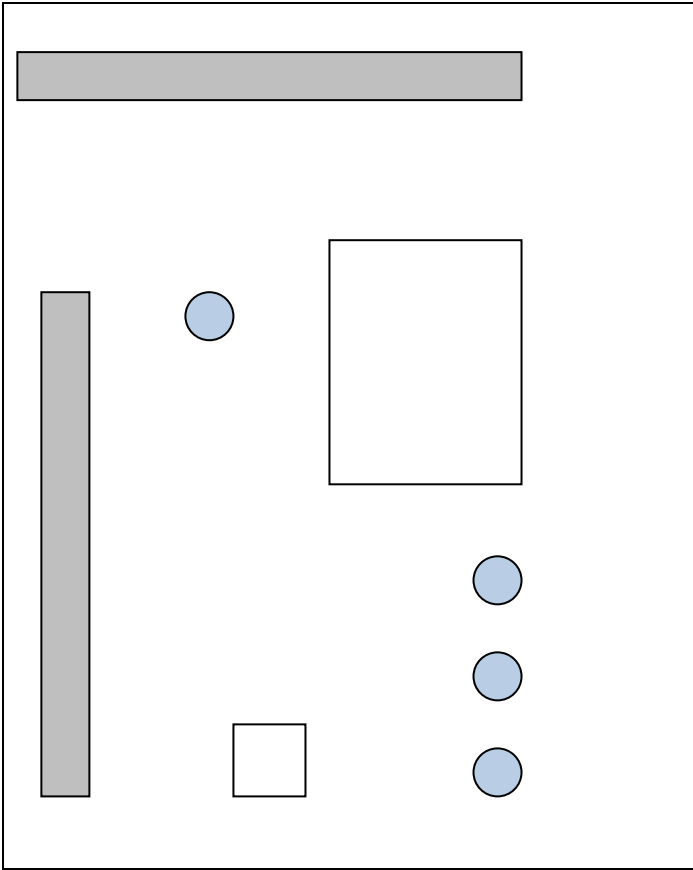
Session Part 2:

Put out the equipment and place the controls using the teacher map (2 x sets).

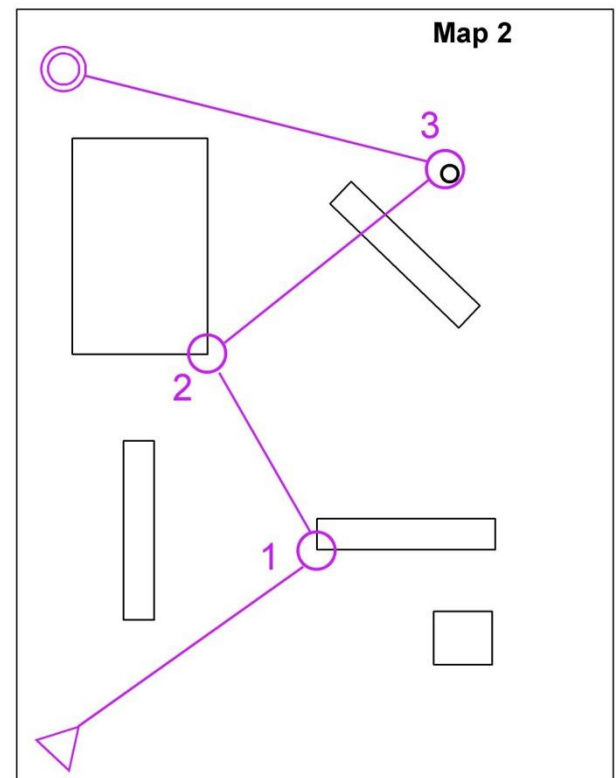
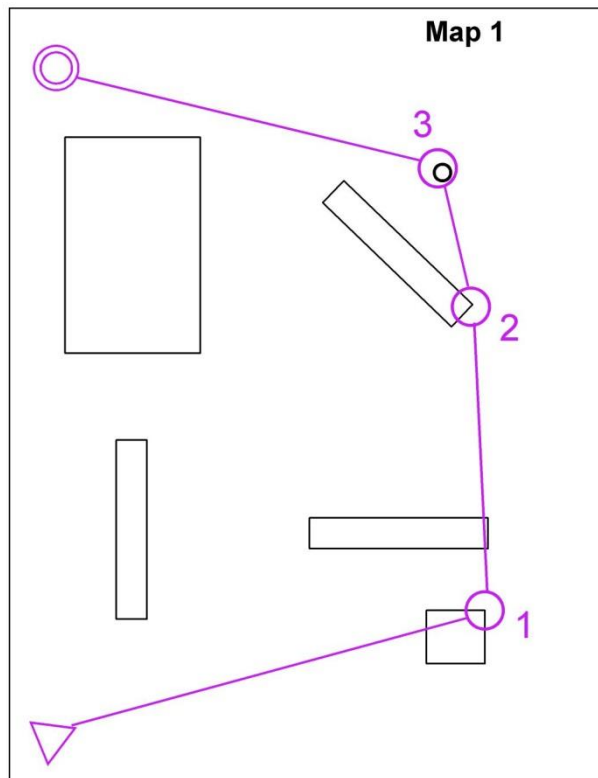
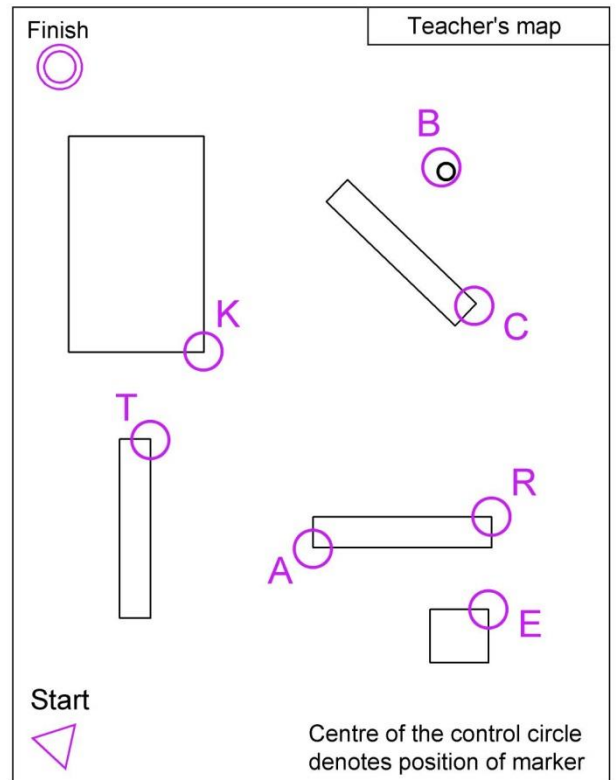
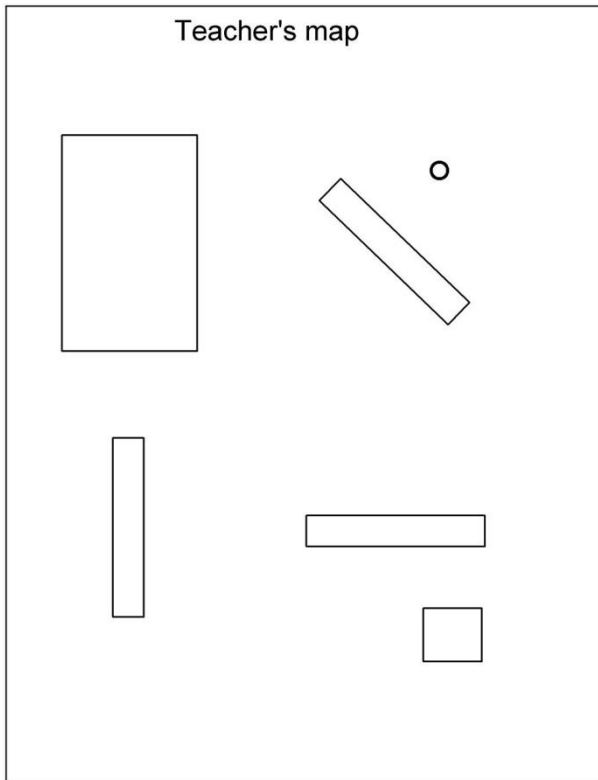
Explain the symbols for the start point (triangle), each control (numbered circle) and finish point (double circle).

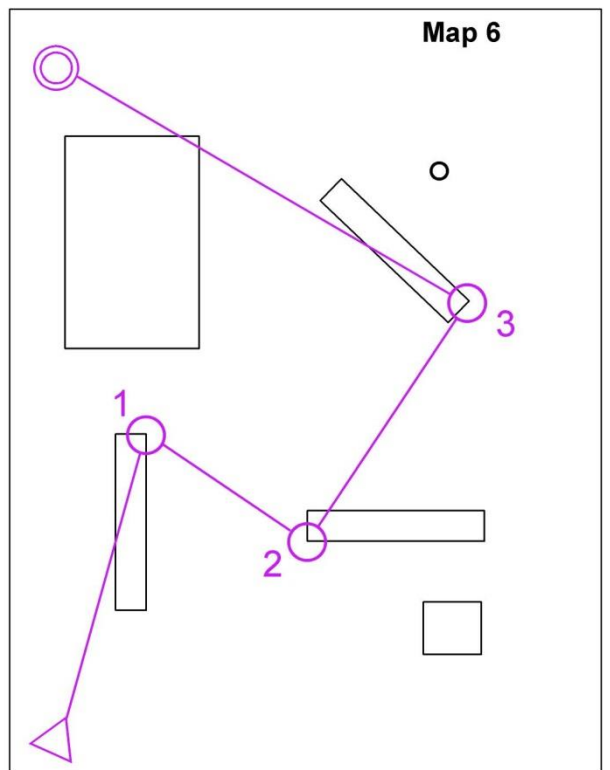
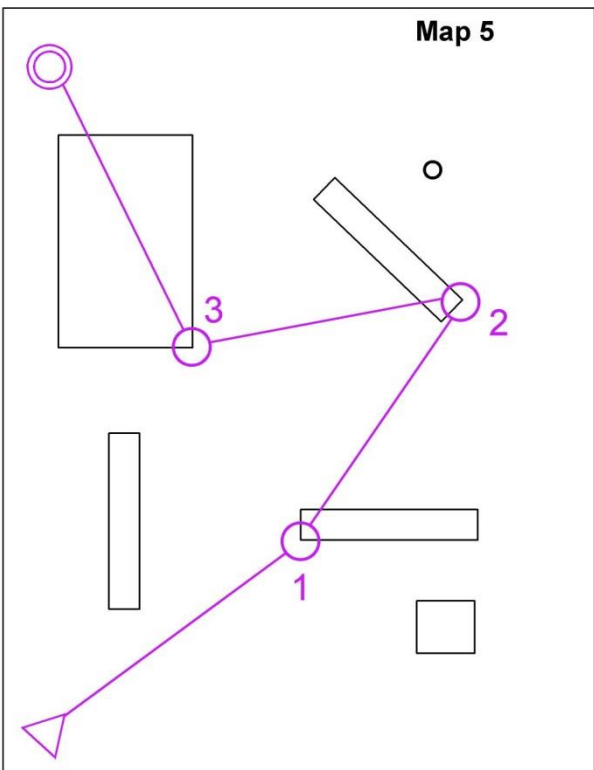
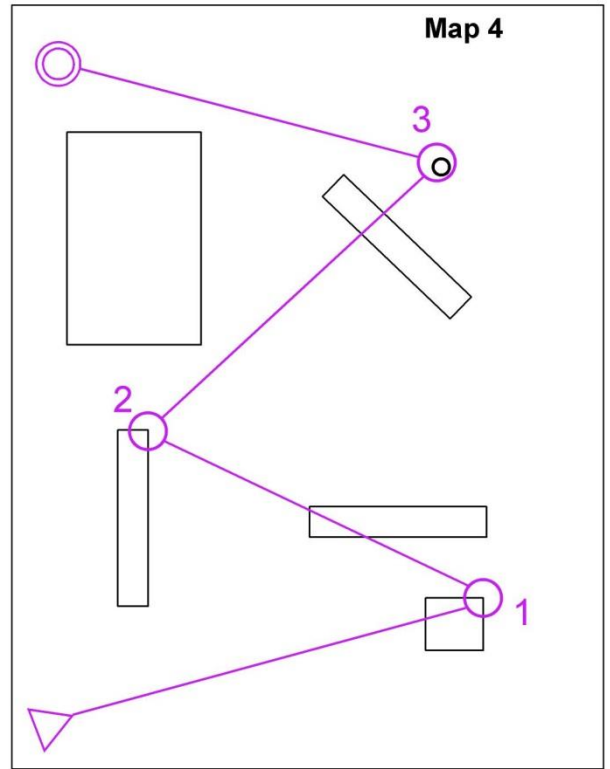
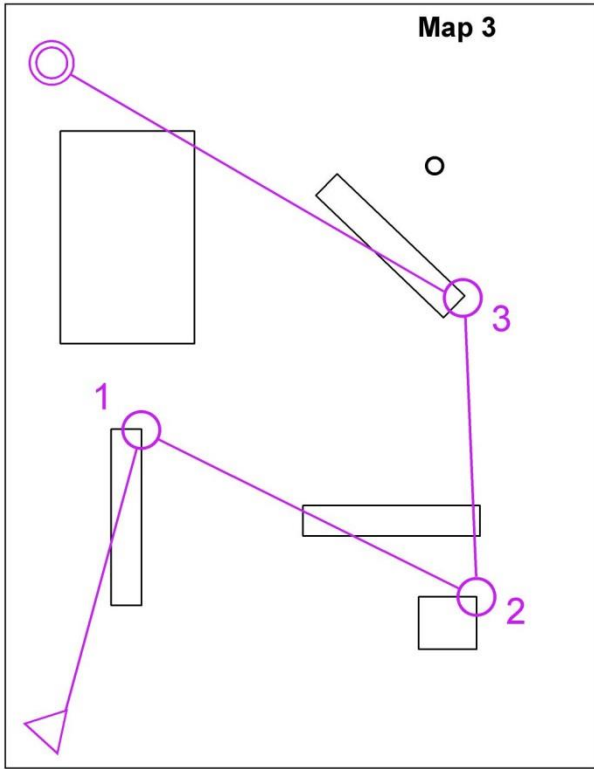
Issue one map per pair. Discuss setting the map and where the start is. Participants must visit controls in order given on the map. They record answers, if correct try a different map.

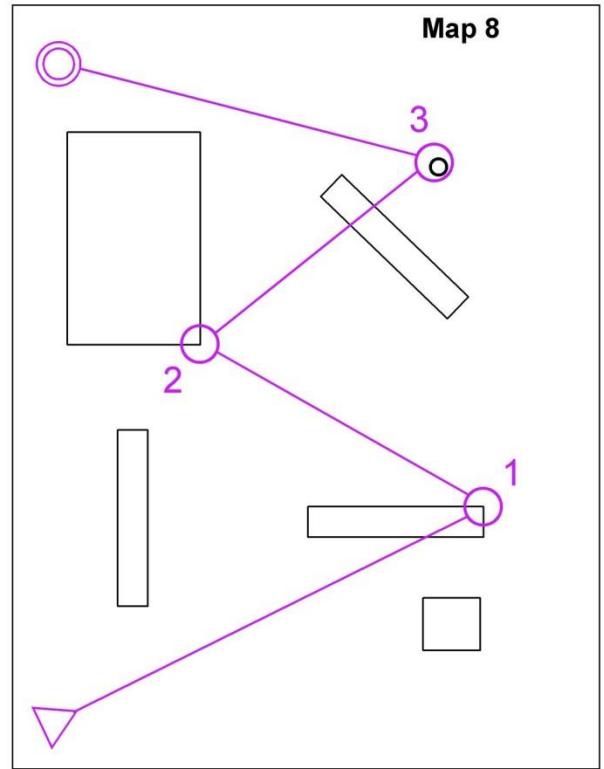
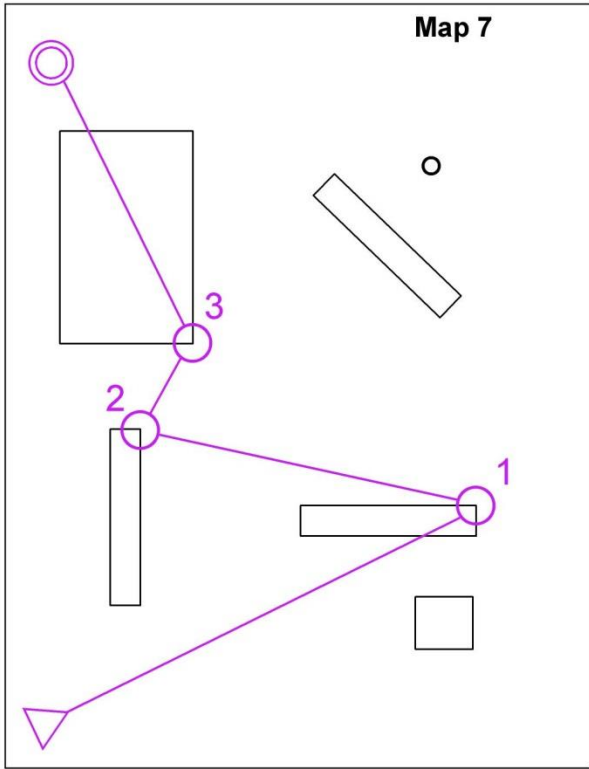
Indoor Maps - No controls Printed



Indoor Map with Controls







Answers for Gym Orienteering

Map 1 E C B

Map 2 A K B

Map 3 T E C

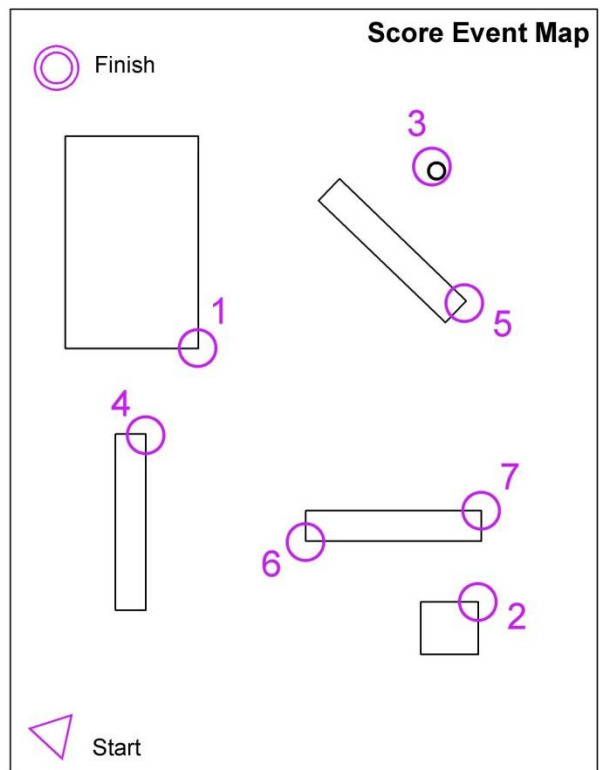
Map 4 E T B

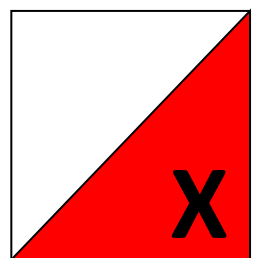
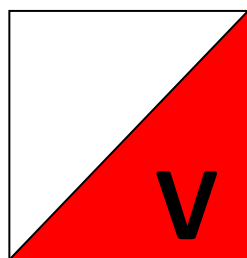
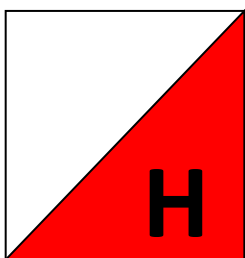
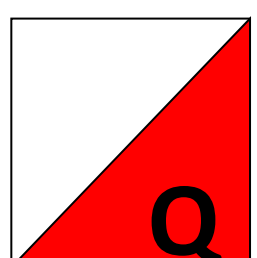
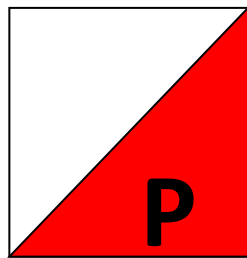
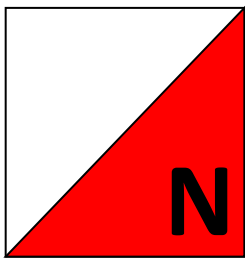
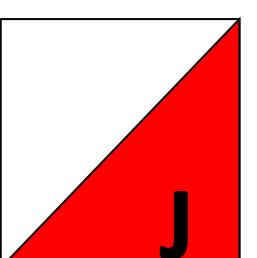
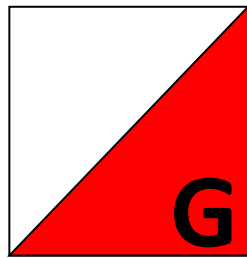
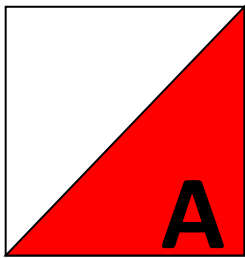
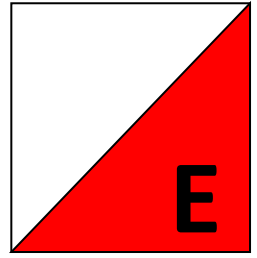
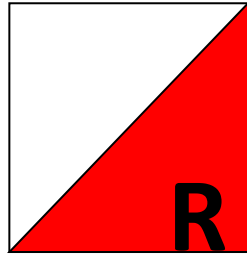
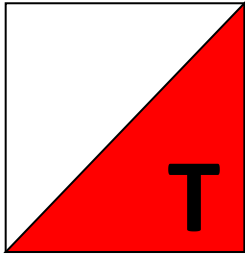
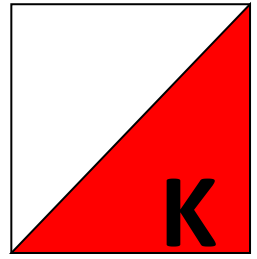
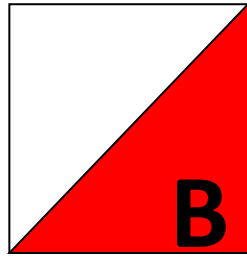
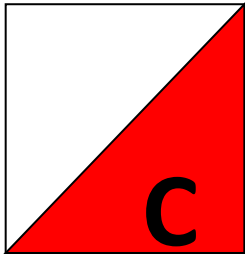
Map 5 A C K

Map 6 T A C

Map 7 R T K

Map 8 R K B





Lesson 2b. Cone Orienteering

Aim:

Given sufficient time, this exercise can be done during the same lesson as the indoor maps. The exercise will reinforce understanding of:

- Setting the map.
- Thumbing the map.
- Start, control & finish symbols.
- Planning & following a course on a map

Resources:

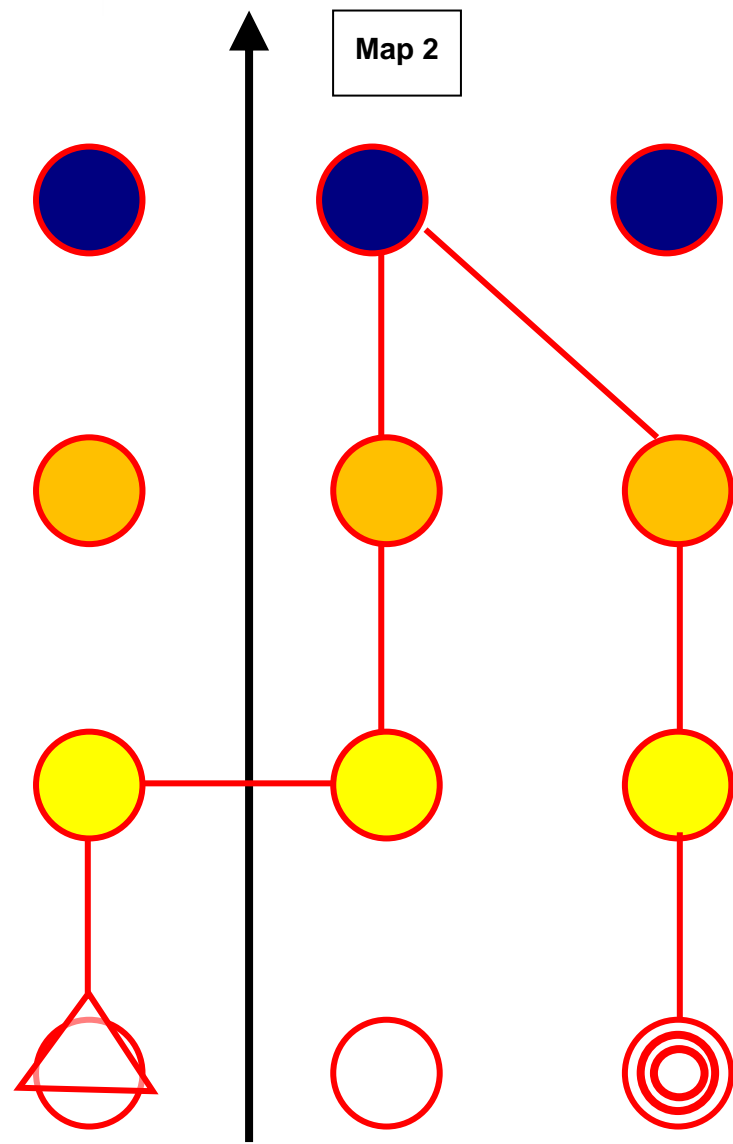
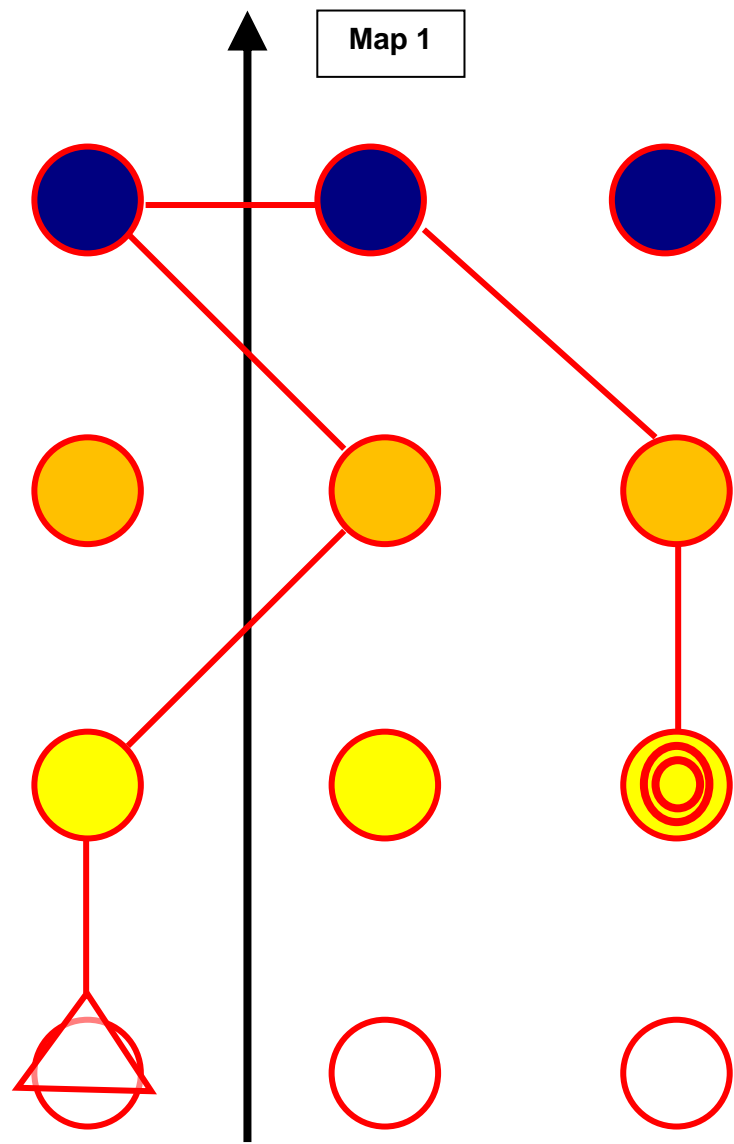
- 3 blue cones, 3 orange cones, 3 yellow cones and 3 white cones.
- Cone maps from below. For a group of 30 you will need 6 copies of each map and maybe 2 x sets of cones.

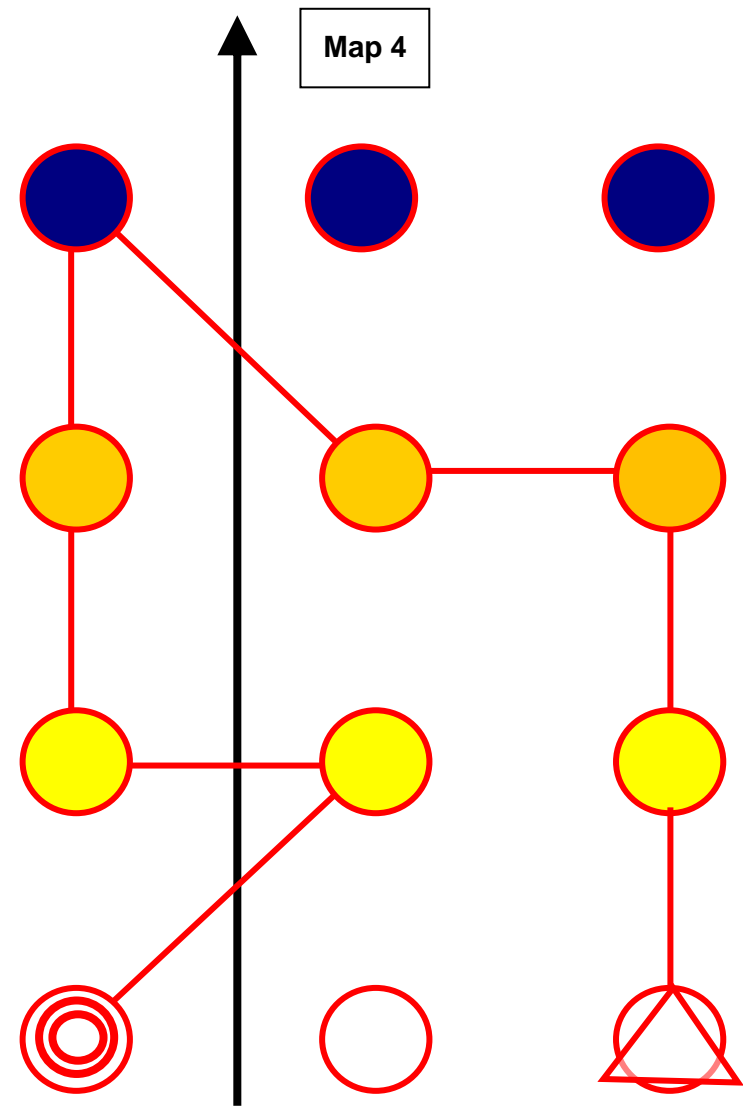
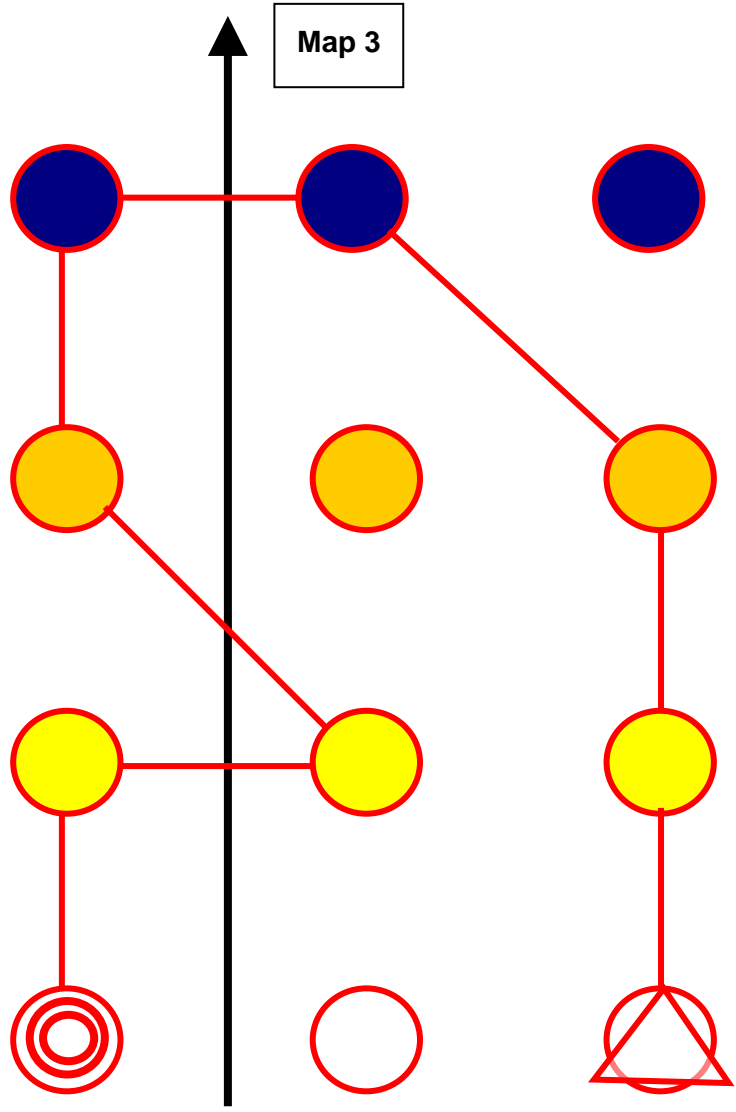
Preparation:

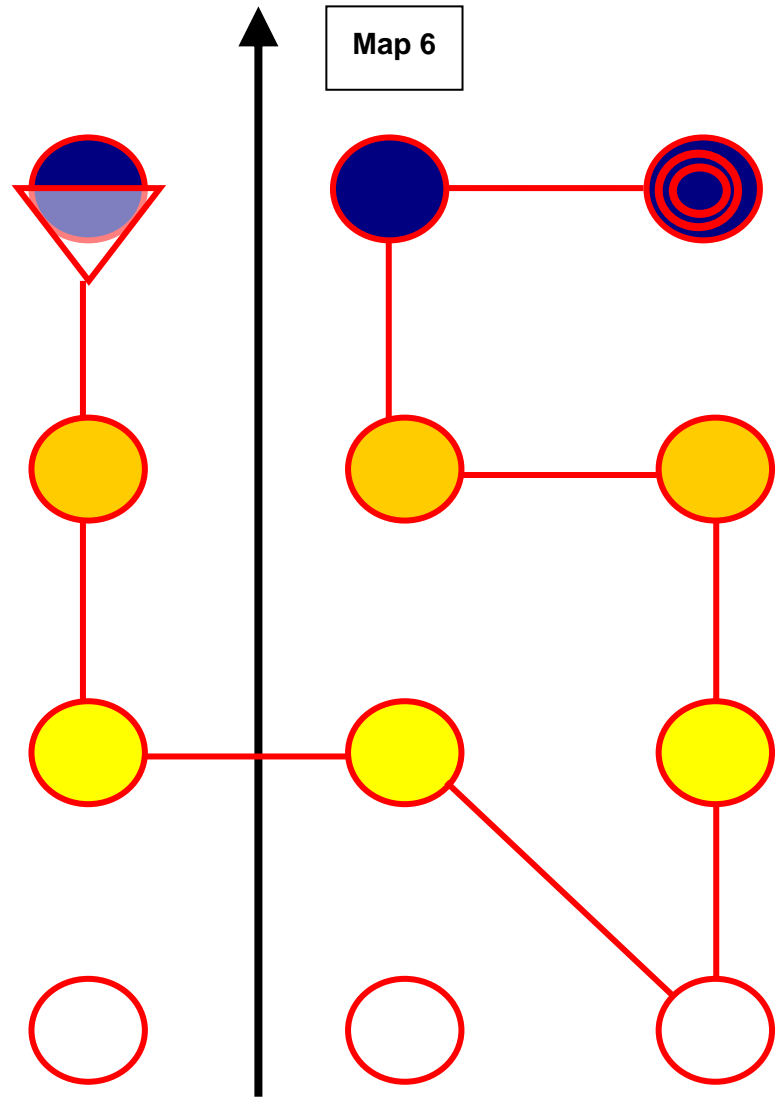
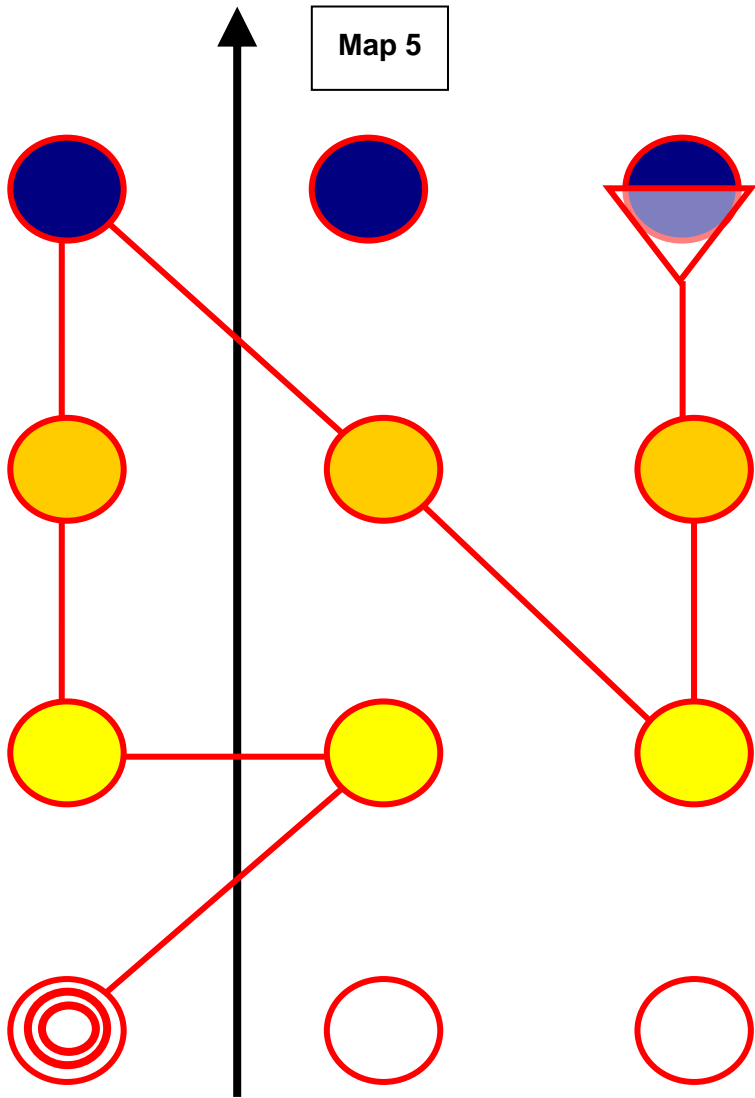
- Set out the 12 cones in a grid as given on the map. Leave a space of at least 2 metres between each cone.
- Put participants into pairs.

The Session:

- Give each pair two copies of the map numbered between 1 and 6.
- Discuss setting the map and ask everyone to set the map to the cones on the ground.
- Ask participants to move their thumb to point to their current location on the map (thumbing)
- Each pair starts at the cone marked on their map. Participant A navigates to each control until the finish. Participant B stays at the start and checks that participant A correctly navigates the course.
- At all times the map should be kept correctly set – teacher should stand at far end of cones and check map is being set as participants turn themselves during the course
- Swap maps and repeat.
- Move onto another course.







Lesson 3a. Extension to Cone Orienteering

Aim:

The exercise will remind participants about:

- Setting the map.
- Thumbing the map.
- Start, control & finish symbols.
- Planning & following a course on a map

Resources:

- 16 x cones, any colour.
- Black and white cone maps – all cones shown
- Black and white cone maps extension – course cones only

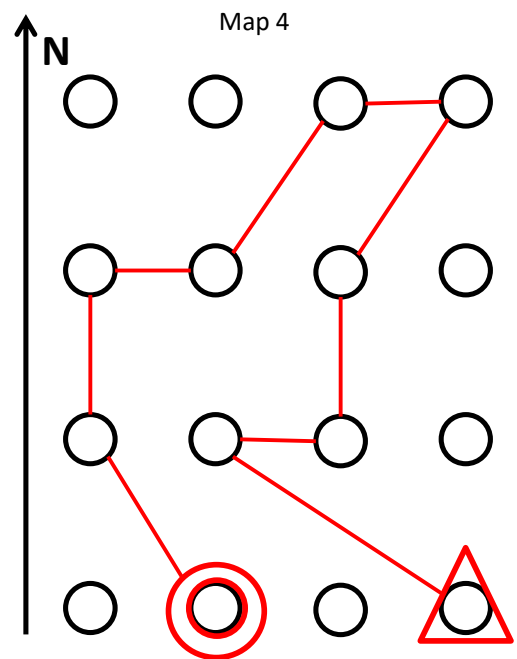
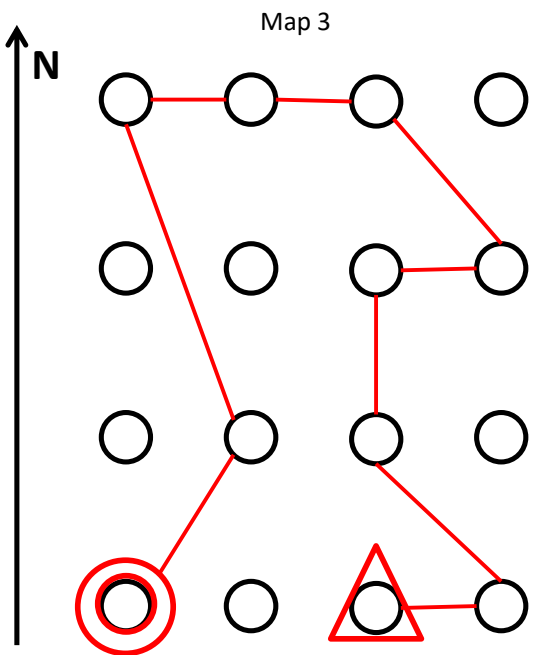
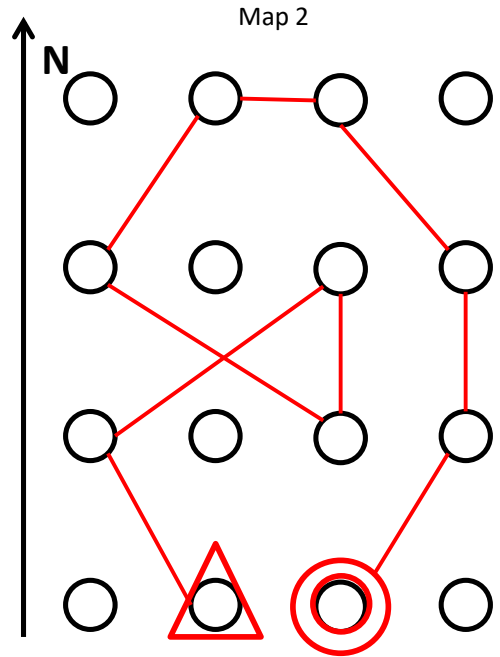
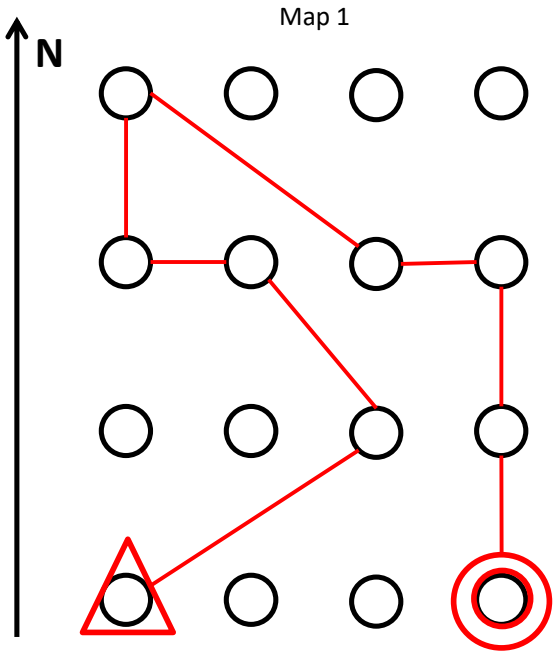
Preparation:

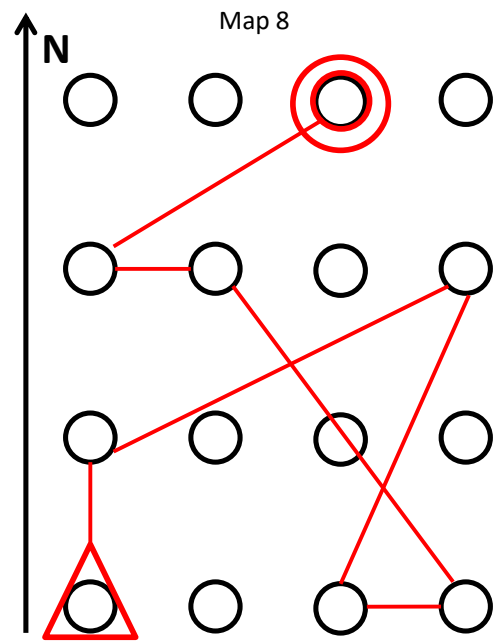
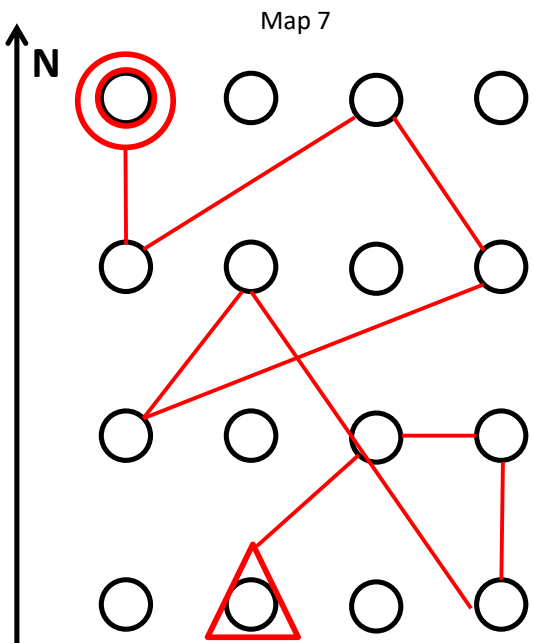
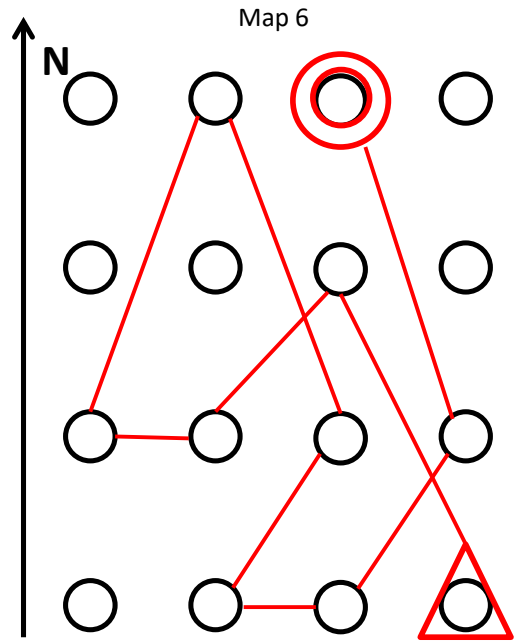
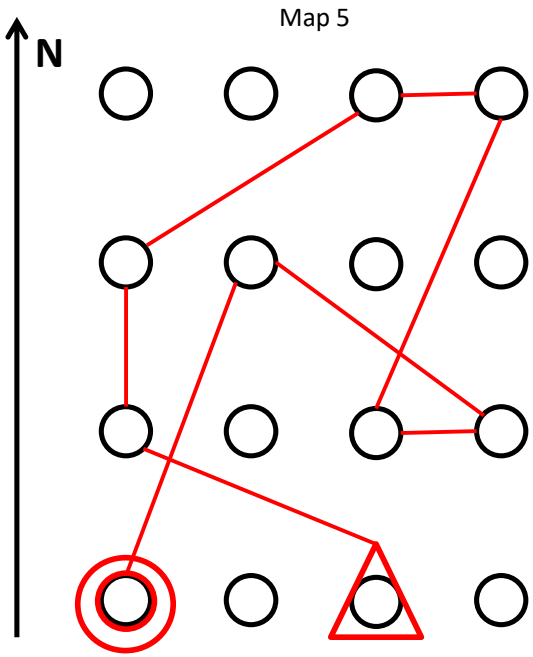
- Set out the 16 cones in a grid as given on the map. Decide which way “N” is and tell pupils this. Leave a space of at least 2 metres between each cone. May need 2 x sets of cones

The Session:

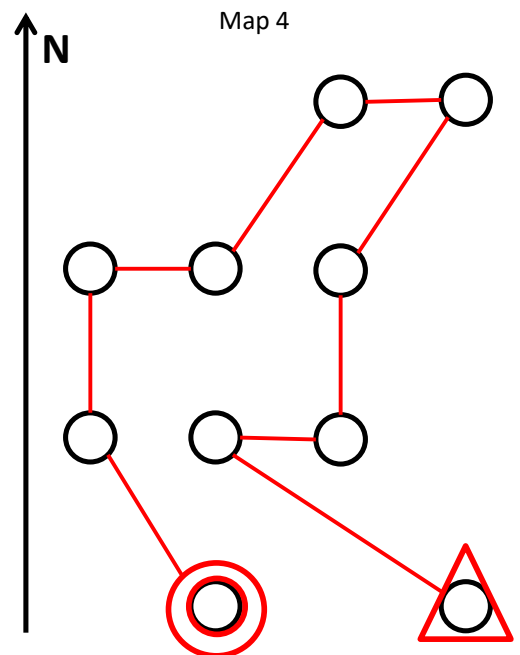
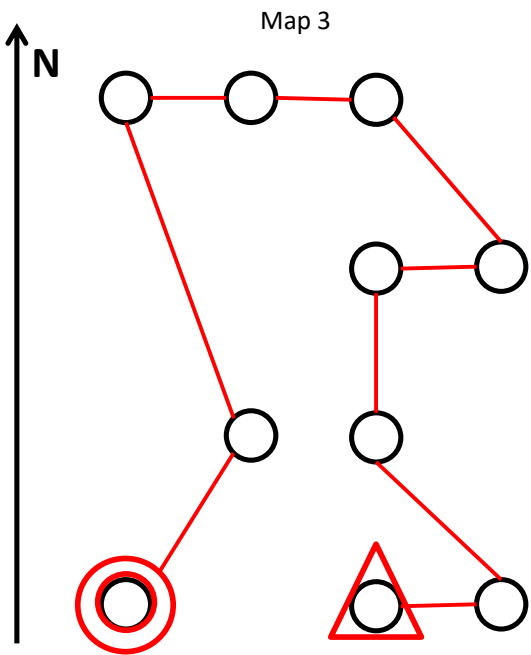
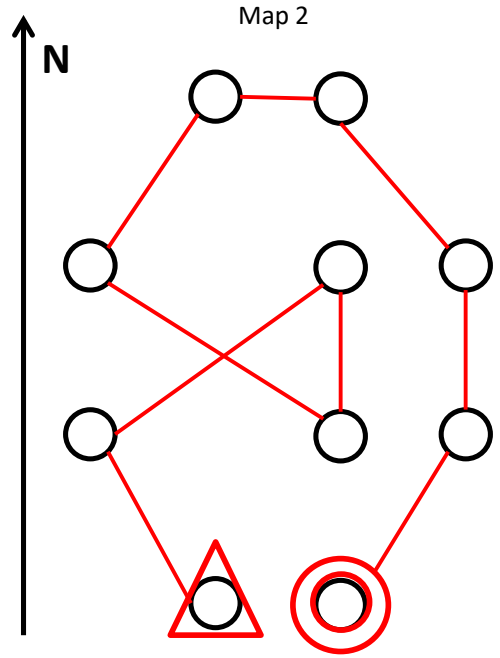
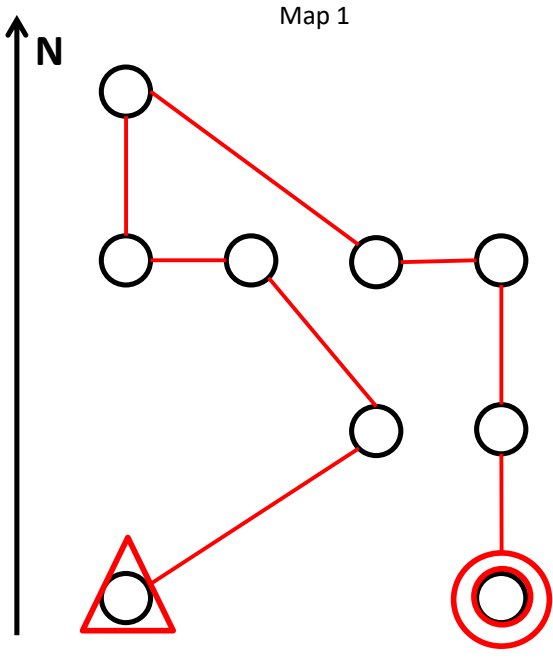
- Start with “all cones shown” maps – 4 x copies of maps 1-8 for class of 30
- Remind participants about setting the map, thumbing, symbols for start and finish
- Each participant navigates their course then swaps maps
- Teacher observes and checks that map is being set at all times
- The extension to the session is to use the black and white cone maps showing course cones only

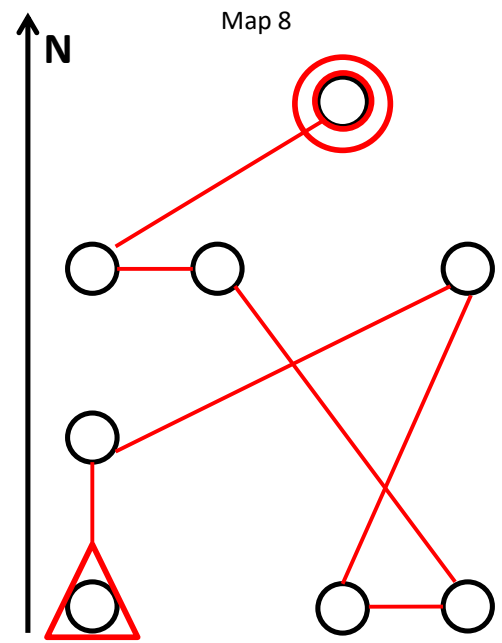
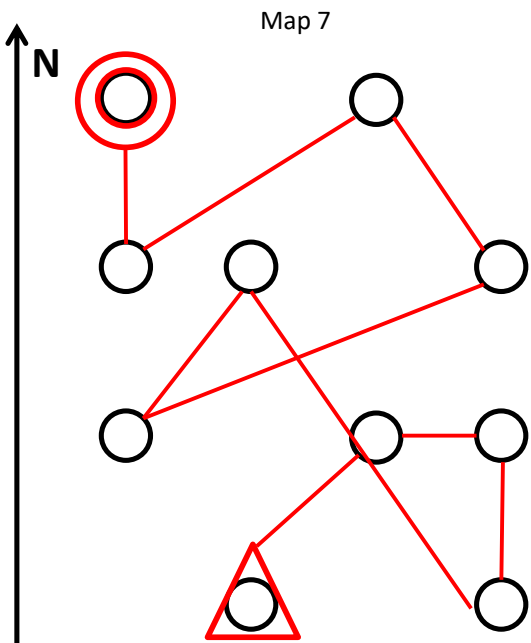
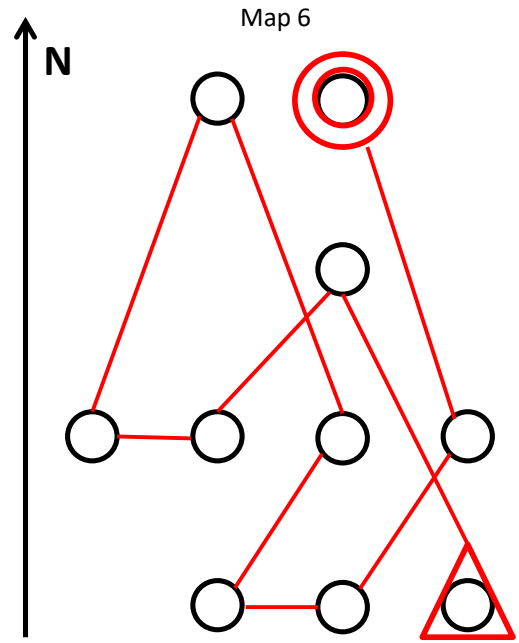
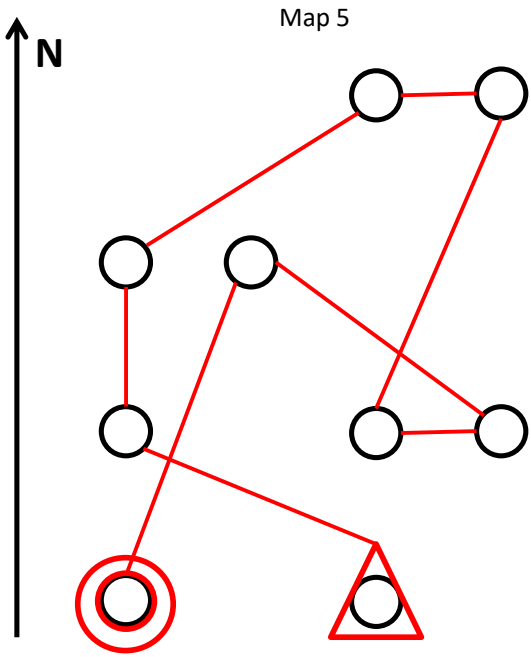
16 x cones – black and white maps





16 x cones – only cones on course shown





Lesson 3b. Map symbols

Aim:

Through a series of games, the participants will:

- Become familiar with the colours used on an orienteering map.
- Become familiar with the symbols used on an orienteering map.

Resources:

- One set of coloured flash cards for teaching.
- 1 set of game cards per team of 5 or 6 participants for playing the activity.

The Session:

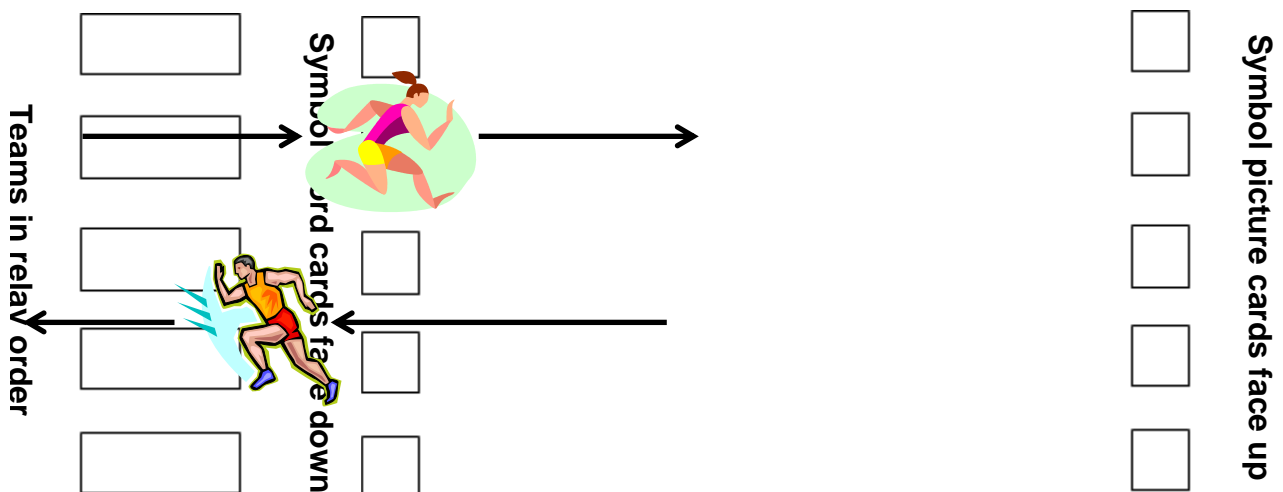
1. Using the flash cards, teach the participants the common orienteering symbols and map colours. (To assist the teacher/leader the cards can be prepared with the answers on the reverse).
2. Divide the participants into teams of 5 or 6. Place a set of symbol words face down in front of each team. Place a set of symbols cards at the other end of the hall opposite each team.
3. In relay style, each member of the team picks up the first card, fetches the matching symbol, returns to their team to check they are correct and places them down (as matching pairs) in front of the team.

This session helps participants learn the symbols, gives confidence to those who are not sure and can be physical if done in sufficient space. i.e. shuttle running.

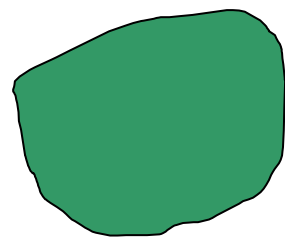
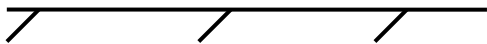
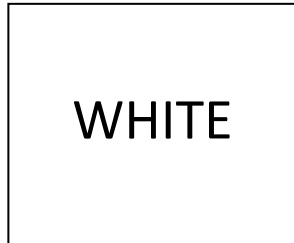
Extension Activity: *Symbol Bingo*

Each group has one set of symbols cards. One symbol is called for. The first group to hold up the picture of the symbol wins.

- Helps participants who don't know the symbols to learn from the rest of the group.
- Opportunity to increase the understanding of what each of the symbols means, within fun session.



Orienteering Symbols: Flash Cards for Learning

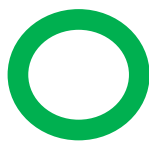
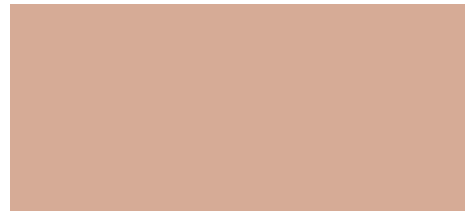
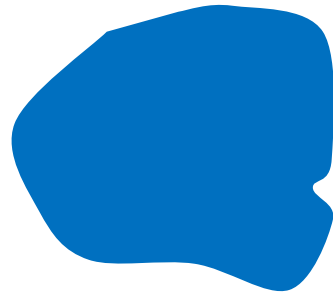
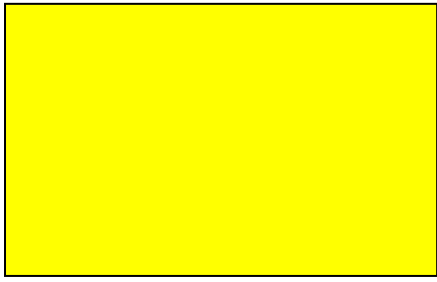


Orienteering Symbols: Flash Cards for Learning

(Explanation of symbol in red)

<h3>High Fence</h3> <p>A fence that is difficult to cross and affects the route you take.</p>		<h3>Path</h3> <p>A normal path.</p>
<h3>Forest 'run'</h3> <p>Wood that you can run through quite easily.</p>		<h3>Building</h3>
<h3>Fence</h3>		<h3>Thicket</h3> <p>An area of dense trees, which is so thick that you can't run through it, even walking is difficult. Often rhododendrons or holly bushes.</p>

Orienteering Symbols: Flash Cards for Learning



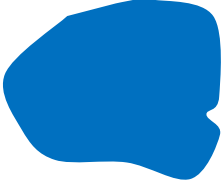
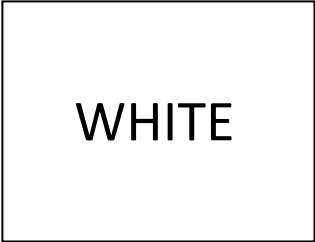



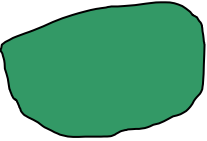
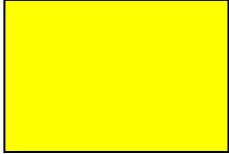





Orienteering Symbols: Flash Cards for Learning

(Explanation of symbol in red)

<p>Open Land Fields / meadows / grassland; maybe isolated trees marked with a green circle.</p>	<p>Pond</p>
<p>Wall Stone or brick wall; all rock features are black on the map.</p>	<p>Tarmac or Hard Surface</p>
<p>Single Tree</p>	<p>Man-Made Object</p>

Orienteering Symbols: Test Cards for Shuttle runs - One set per group.

Orienteering Symbols: Test Cards for Shuttle runs - One set per group.

High fence	Path	Pond
Forest 'run'	Building	Wall
Fence	Thicket	Open Land
Single Tree	Man-Made Object	Tarmac area

Lesson 4a. Symbol worksheets

Aim:

Use worksheets to remind participants about the orienteering map symbols that they learnt in the previous session.

Resources:

- Photocopies of worksheets 1, 2 and 3 - one per group / participant.
- Pencils / pens for worksheet 1 and 2.
- Crayons – blue, yellow, green, brown & black for worksheet 3.
- Optional extra – sample orienteering maps with legends to assist participants.

The Session:

1. Participants complete the sheets alone or in pairs/groups. If they are new to orienteering maps give participants sample orienteering maps (with legends) to assist them with the task.
2. More worksheets can be found on the British Orienteering web site.
http://www.britishorienteering.org.uk/page/schools_documents

Extension Activity:

3. Participants design and draw their own map using orienteering map colours and symbols.

Worksheet 1

Orienteering Symbols	
Link the words to the correct symbols	
Name	

1. Building

A X or O

2. Wall

B 

3. High fence

C 

4. Gate

D 

5. Fence

E 

6. Track

F 

7. Path

G 

8. Road in a forest or park

H 

9. Forest "run"
(trees you can run between)

I 

10. Open land (often grass)

J 

11. Forest difficult to run

K 

12. Man made object

L 

Worksheet 2

(The answers are jumbled up at the bottom of the page)

Name _____

1. Draw the symbol for:

a) Large path

b) Fence

c) Wall

d) Forest road

2. The colour used for water features is _____

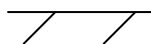
3. The colour used for open land (no trees) is _____

4. The colour used for the shape of the ground is _____

5. If the trees in the wood get thicker, the green on the map gets _____

6. The colour used for a runnable wood is _____

Answers:

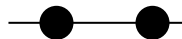


Blue



Yellow

Darker




White



Brown

Worksheet 3

Draw the symbols in the box or complete the missing letters. The first one has been completed for you.

<p style="text-align: center;">Building</p> 	<p style="text-align: center;">Pond</p>
<p style="text-align: center;">Embankment or slope</p>	<p style="text-align: center;">Footpath</p>
<p style="text-align: center;">Road or hard surface</p>	<p style="text-align: center;">Fence</p>
<p style="text-align: center;">Bushes or trees</p>	<p style="text-align: center;">Open area (grass)</p>
<p>Complete the missing letters</p> <p>M _ g _ _ t _ c</p> <p>N _ _ _ h</p>	<p>Complete the missing letters.</p> <p>S _ _ _ e 1:10000</p> <p>Complete the missing number.</p> <p>1cm on map = _ _ _ m on the ground</p>

Lesson 4b. Playground Star Orienteering

Aim:

The participants will learn about and be able to demonstrate that they can:

- Set a map to the ground
- Thumb the map.
- Follow a route on the map and on the ground.

The teacher / leader will be able to:

- Coach participants as required and allow individuals to progress at their own pace.
- Differentiate the exercise to the individual ability of the participants.
- Accurately manage the time for the exercise.

Resources:

- Orienteering maps (prepared as detailed below).
- Teachers map with “all controls” and codes marked on it
- Control markers (appropriate to area)

Preparation:

- Place control markers at locations shown on the teacher’s map, ensuring codes correspond with the map

The Session:

1. Each participant receives a map (with a single control marked on it)
2. Spend a few minutes checking that they are familiar with the map, symbols and can set the map. This could be done as a short group walk with the map before starting the exercise.
3. Explain that the triangle on the map represents the start where the teacher / leader will always be found. Also explain that they are all going to different controls so they have to do their own navigation (rather than follow!).
4. Set the participants off to visit the control marked on their map; When they find the correct control they should memorise the “code” (letter) on the control and return to the start point
5. Participants tell the teacher / leader their answer (the code) which can be checked against the teacher’s map. If correct give them a different map and control to visit.
6. Continue in this way until the time is up or everyone has visited all the controls correctly.
7. Individuals who visit the incorrect control should have some help to choose the correct route.

Lesson 5. Playground Orienteering Courses

Aim:

The participants will learn about and be able to demonstrate that they can:

- Set a map to the ground
- Thumb the map.
- Follow a route on the map and on the ground.

The teacher / leader will be able to:

- Coach participants as required and allow individuals to progress at their own pace.
- Differentiate the exercise to the individual ability of the participants.
- Accurately manage the time for the exercise.

Resources:

- Orienteering maps (as provided).
- Teachers map with “all controls” and codes marked on it
- Control markers (appropriate to area)
- Control cards for each participant (as per template below) and pencils

Preparation:

- Place control markers at locations shown on the teacher’s map, ensuring codes correspond with the map
- Add a second code (number instead of letter, or girls name, or colour, or any theme) to each control point

The Session:

1. Each participant has a map (with a loop course marked on it).
2. Spend a few minutes checking that they are familiar with the map, symbols and can set the map. This could be done as a short group walk with the map before starting the exercise.
3. Explain that the triangle on the map represents the start where the teacher / leader will always be found. Also explain that they are all going on different courses so they have to do their own navigation (rather than follow!).
4. Explain that the control description box, gives them clues about the controls that they are looking for, allowing them to check that the code is correct and telling them what kind of feature they are looking for.
5. Set the participants off on the course marked on their map; they write the second code on their control card to prove they have been round the course and return to you at the start.
6. Participants show the teacher / leader their answers (the numbers / colours / names); check these against your answer sheet. If correct give them a different map and course.
7. Continue in this way until the time is up or everyone has completed all the courses correctly.
8. Participants who complete the course incorrectly should have some help to choose the correct route.

Links to Useful Additional Information and Resources

British Orienteering Federation (UK governing body) <https://www.britishorienteering.org.uk/>

British Schools Orienteering Association (note some info **not** relevant to Scotland)

<http://www.bsoa.org>

Scottish Orienteering Association (includes lots of coaching resources) <http://www.scottish-orienteering.org/>

Grampian Orienteering Club (Aberdeen-based club) <https://grampoc.com/>

World of O (wealth of news and information) <http://worldofo.com/>

O Training.net (coaching resources) <http://o-training.net/w/>

You tube videos:

“Go Hard or Go Home” <https://www.youtube.com/watch?v=FnE-hftGQoU>

“Train Hard Win Easy” <https://www.youtube.com/watch?v=tZ7LCzFr3TQ>

“Forest Jump” <https://www.youtube.com/watch?v=c-3rH0oOh8>

“Race the Castles” https://www.youtube.com/watch?v=mAO_jVT-RV8