



LEVEL 1 ORIENTEERING: LESSON PLANS

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LESSON 1

SIMPLE 5x4 CONE GRID

Practise orientating the map on a simple course in a cone grid.

Setting up the cone field

- Put out cones in a grid of 4 x 5 (four rows of five cones)
- Place extra 'start' and 'finish' cone to help with orientation
- Create a line course of five controls within the grid.

The course

Learners must move slowly through the grid practising to:

- orientate map at each control
- thumb their position.

How it works

- Watch the learners to ensure they orientate properly; that they move their bodies & keep the map still.
- Use multiple courses to ensure no following.

To increase difficulty

- Lengthen the course to eight controls and have at least three courses.
- Increase the grid size to 6 x 6 or greater.
- Increase the distance between cones.
- Increase pace to where learners do the course at speed (running!).
- Introduce a competitive team-relay format for more fun.
- Put learners into pairs with each person starting from opposite side of grid, at the same time, so that they cannot follow each other.



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How to ensure all cones are correctly visited

The most difficult aspect of the grid is to ensure that the course is done correctly. Systems to overcome this are as follows:

Numbers

- Place numbers at / under each cone.
- Learners must write down the numbers they visit or add them up. They must return with the correct sequence or answer.

Peer viewing

- Learners work in pairs.
- Both have the same map. One observes whilst the other does the course.
- The observer then gives feedback if the course was done correctly.

Other variations

- Give learners a blank grid. Get them to make their own courses or courses for their friends. This will help lead a discussion on what makes courses difficult / easy.
- Another variant is to do a line course through the grid rather than visit controls. Here the learner must follow the line exactly.

Cone courses:

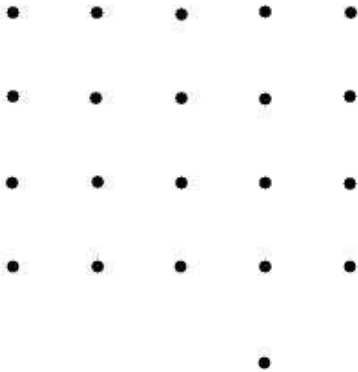
- can be setup anywhere
- easy to plan and set out
- can be used to teach other skills
- caters for all skills levels (experienced do it at speed)
- 30 cones of multiple shapes/colours can create fun (use 2l cold-drink bottles filled with water instead of cones)
- micro-orienteering course.



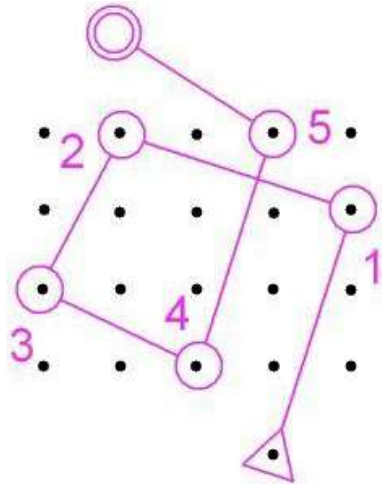
Laminate grids to reuse. Draw courses with felt-tip pen and clean afterwards with cleaner fluid and cloth.



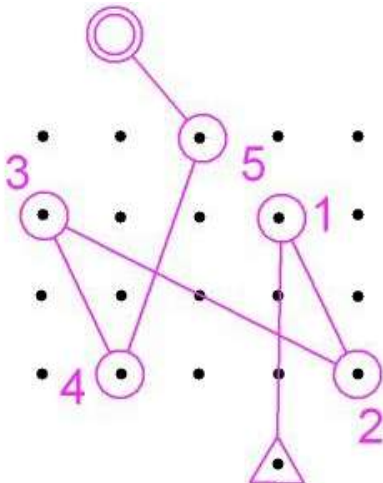
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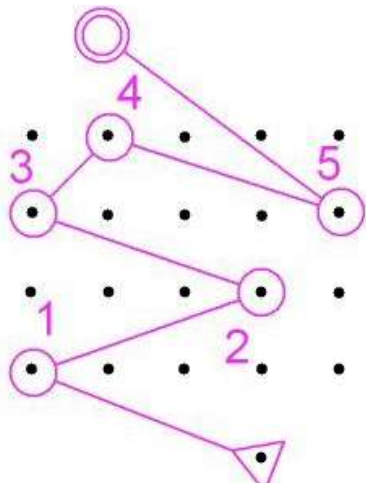
Blank 4x5 grid



Exercise 1



Exercise 2



Exercise 3



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LESSON 2

7x7 CONE GRID

This exercise practises both map orientation and route choice, using attack points. It also provides an opportunity to discuss the use of line features and attack points to speed up the orienteering process safely.

Setting up the 7x7 cone field (49 cones)

- Make a line feature in the grid with six cones of a different colour.
- Make attack points in the cones with three different colour cones.
- For the main grid of 40 controls, mix yellow and green cones.
- Use specific colour cones (red) where marked as x in the grid.

How it works

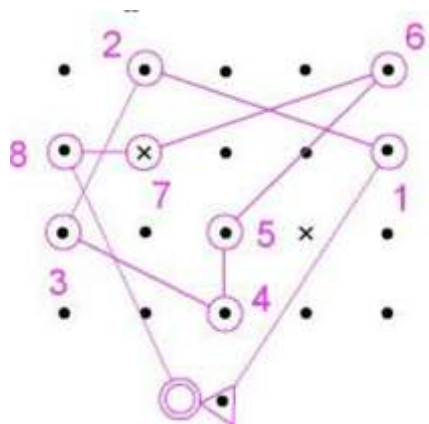
Set learners off on one of the three courses provided. The red colour cones (x) should be used as attack points, handrails and catching features.

To practise attack points on a small grid:

- set out two 4 x 5 cone grids five to 10-metres apart
- make four 8-control courses
- match runners of equal skill & set them off at the same time.

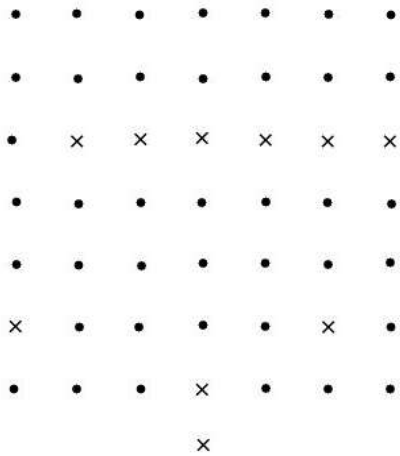
Here the runners run same course in a different grid. BUT, one grid has attack-point markers in the grid (x).

Runners should use the coloured markers (x) as attack points. When completed, runners swop maps and go again. The runner with the attack-point cones should win.

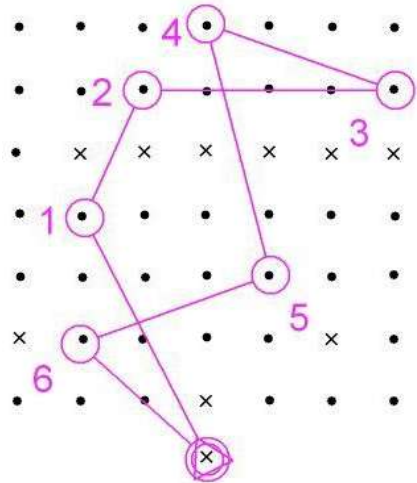




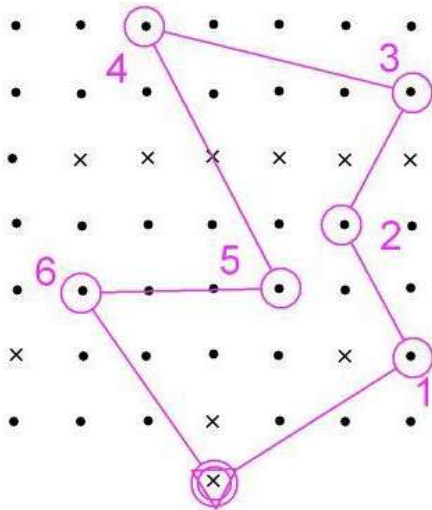
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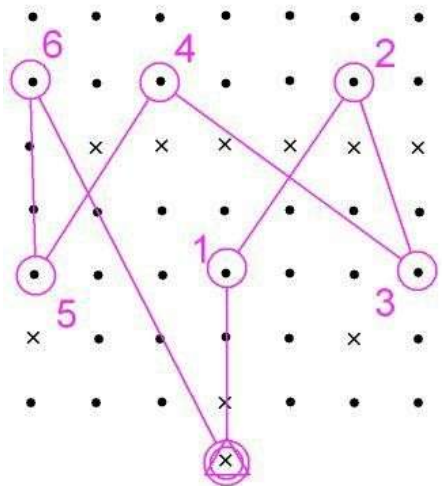
Blank grid



Exercise 1



Exercise 2



Exercise 3



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LESSON 3

TENNIS-COURT GRID

Learners practise the fundamentals of orientating the map.

Setting up the activity

- Plan a line course of 5 controls on a tennis court.
- Place cones (18 needed) at all the line junctions.
- Place an extra start cone to help with orientation.
- Learners must follow the tennis court lines at all times.

The course

Learners must move slowly through course practising to:

- orientate map at each control
- thumb their position
- ensure that the route line follows a tennis court line.

How it works

- Observe the learners to ensure they orientate properly; that they move their bodies and keep the map still.
- Have multiple courses to ensure no following.
- Place letters under each cone, written on the map so that learners get confirmation of their position as they go. Or, use numbers, which they must add to get the correct total.

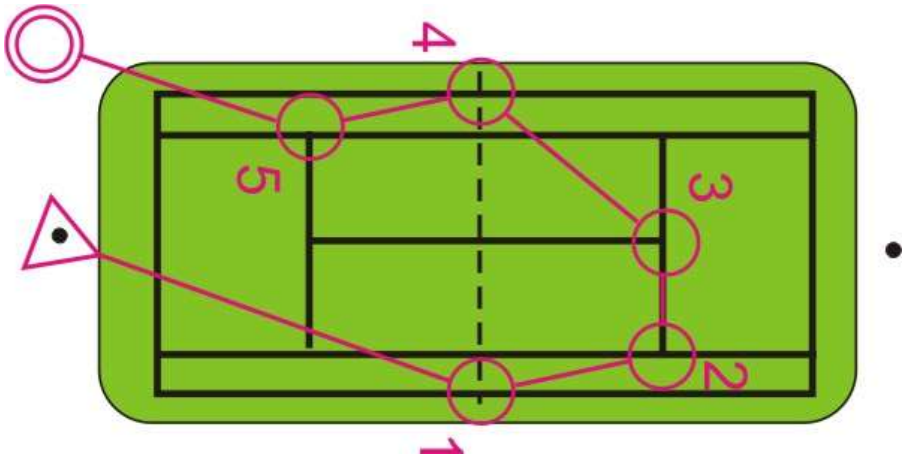


Laminate these tennis court maps to reuse. Share these and other activity maps with teachers from other grades.

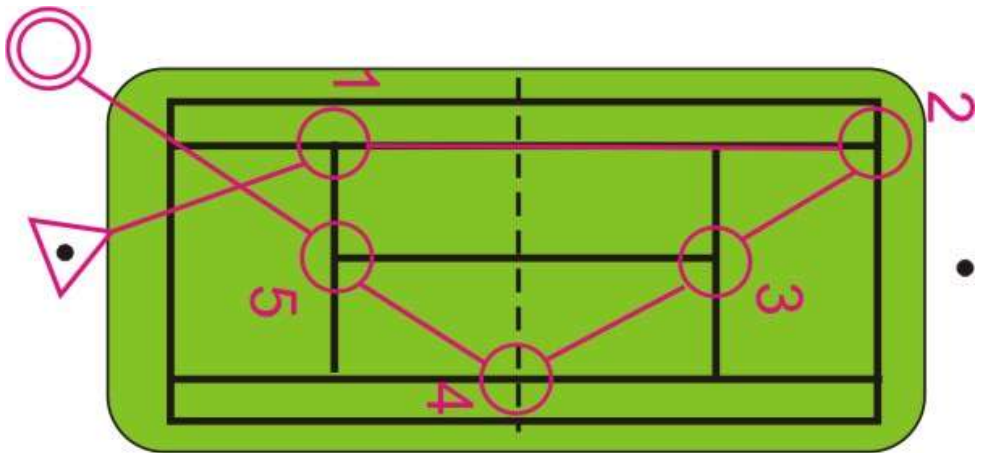


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Exercise 1



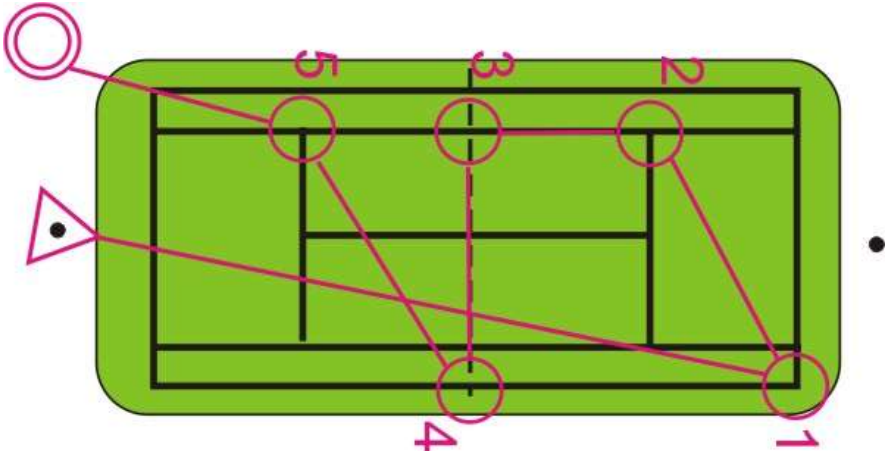
Exercise 2





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Exercise 3



To increase difficulty

- Lengthen course to eight controls and at least three courses.
- Increase pace so that learners do the course at speed (running).
- Introduce a competitive team-relay format for more fun.
- Use netball-court lines.



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LESSON 4

MAP SYMBOL CARD GAME

Learners become familiar with the map legend by matching map symbols to the word describing the symbol.

Requirements

Prepare cards with map symbols and cards with the word for the symbol (cut these out from a map legend).

Setting up the activity

- At the start (five metres from where the teams stand), set out a map legend with eight map symbols.
- 25m later, place the cut-out words from the map legend on the ground.
- 25m later, place the map symbols on the ground.

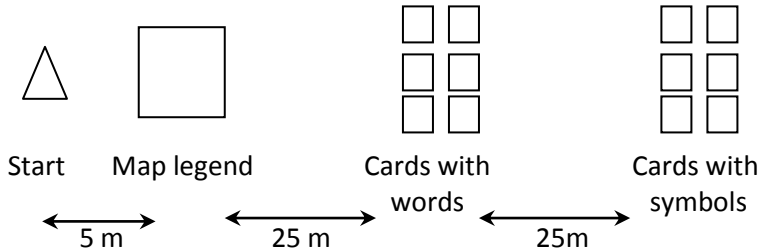
How it works

- Divide the learners into two teams of four learners (this way each learner will have two turns).
- Runner 1 (R1) runs to and looks at the legend, memorising the symbol they want.
- Then R1 runs to the word cards and takes one.
- Next R1 runs to the map symbol cards and selects the symbol card that matches their word.
- R1 then runs back to the map legend and places the two cards in the correct place.
- If it is correct R1 returns to the start, tags a team member who then follows the same process.
- If the incorrect, the cards selected by R1 must be returned to the original piles. Only then can the next team member be tagged.



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- As the learners get more familiar with the map symbols they will need to spend less time at the legend and will make fewer mistakes.
- The winning team is the one that gets all the symbols correct in the fastest time.



Variations

- Use different symbols for the two teams (i.e. have two different sets) and swop afterwards.
- Change the distance between the cards to suit the fitness levels and available time.




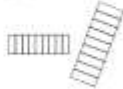













To increase difficulty

- Use more symbols and words.
- Include other symbols without matching words and other words without matching symbols.



Laminate the map legend and cards to improve durability. You can also glue them onto cardboard and use over and over and over.

Map Legend

	Earth bank, embankment		Building / Canopy
	Knoll / Pit / Shallow depression		Stairs
	Open ground		Rugby post / Tower
	Rough ground		Bin / Bench / special man-made
	Dense vegetation		Tennis court
	Out of bounds, No entry		Wall passable / impassable
	Distinct vegetation boundary		Path, walkway
	Significant trees / Bushes, shrubs		Fence crossable / uncrossable
	Water feature		



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LESSON 5

ROUTE-CHOICE GAME ON A FIELD

Learners practice studying the map and considering a route choice whilst on the run.

Setting up the activity

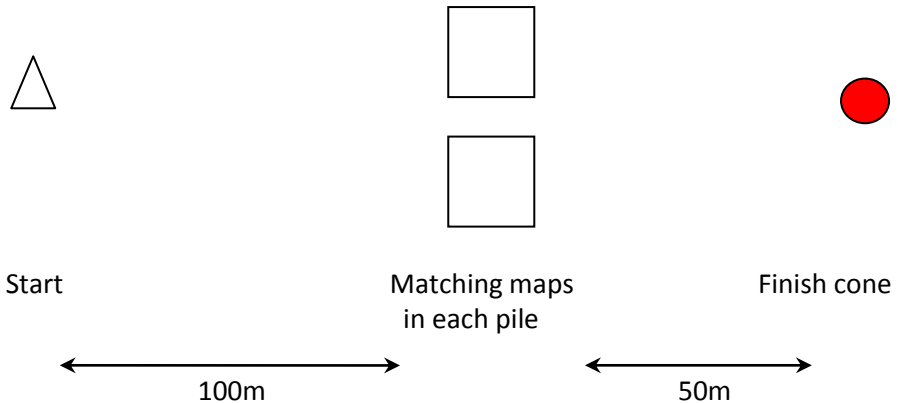
- Use any map(s) with a course on it.
- Place the maps 100m from the start. Place a finish cone 50m later.

How it works

- Before starting, choose which controls the runners must consider, like the route from control 3 to 4 to 5.
- Two runners sprint together from the start to where the maps are set out.
- Each runner collects a copy of the same map with the same course on it.
- They study map while running another 50m, making their route choice.
- At the finish cone they stop and compare their route choices.
- The runners go back for next shuttle, returning the maps to the map pile on the way.
- The next pair sets off each time the pair in front reaches the finish cone, provided there are maps in the pile.
- At the end of the lesson the teacher leads a group discussion on route choice options.



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For the map piles use:

- pairs of maps in two piles
- a variety of maps, in pairs, so that learners can run more than once.

Learners must return maps to the correct piles in the correct pair order.

To increase difficulty

- Make the 50m technically difficult by adding obstacles that they have to step in, over and around – like a ladder, hoola-hoops, wooden bench.
- Increase the distance from the start to the maps to 200m to increase tiredness: participants must sprint to the maps.
- Time the participants to increase stress.

This activity can be done individually but it is better with pairs racing against each other (physically) and comparing routes selected at the end.



Use old maps from past events and lessons for this game.



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LESSON 6

RELOCATION EXERCISE

Students learn to figure out where they are on the map based on what they can see on the map and around them.

Setting up the activity

- Plan two similar courses on your map of six to eight controls.
- Each of the same numbered controls are close to each other (i.e. 1st control, 2nd control).

How it works

- Set teams off in groups of eight people, five-minutes apart.
- Each runner has a map but is not allowed to look at it.
- Half the group will have the same map.
- A lead runner (LR) begins, leading the team towards control 1.
- *En route* to Control 1 LR stops, tells everyone to read their map to Control 1.
- All runners must then find their way to control 1 (note the group will effectively split into two).

They must first relocate to figure out where they are on the map.

- LR can remind everyone about the steps of relocation.
- LR must help anyone who is really stuck before setting off themselves.
- LR confirms that all seven runners are at the right control.
- The entire group then gathers together between the two control 1s and the process starts again with a new LR.

After each control the lead runner swops so that everyone has a turn to be LR. After three controls, team members can be swop maps to prevent runners following each other. Use cones at the controls. A different letter at each will help to confirm for learners that they are at the right place.



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To illustrate this game, compare these two maps with similar courses.



Skill of relocation is to read the terrain to the map.

Relocation steps

1. Stop, don't keep wandering.
2. Orientate your map by looking carefully for any obvious, big features, like a big dam, swimming pool, sports field.
3. If you cannot easily orientate the map, move to something very distinct, like the intersection of two line features like a fence crossing a path or a main road/path junction or dam wall and try from there.
4. If you just can't get your map orientated, retrace your steps back to the last control you visited and try again.



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LESSON 7

MAP WALK IN THE TERRAIN

This exercise focuses attention on details on the map and ground.

Setting up the activity

- Use an existing orienteering map.
- Draw a line going past various features.
- Learners try to walk exactly on the line, identifying features as they progress.

How it works

- Beginners must walk, not run.
- If done in a group, the more experienced leader holds group discussions of features as they pass by.
- Experienced learners run in pairs, each taking a turn to lead for half the course distance. The runner following behind has a map without the line and must mark the route afterwards.
- You can also put out cones, some on the 'line', some not. Learners must return to the finish and indicate how many cones were on the line.

Variations

- Learners work in pairs. Each draws a line course. They each complete their own course and put out five/six cones at various random spots on the line.
- Learners then exchange maps and complete the other learner's course collecting the cones on the way.
- They then point out, on each other's maps, where they found the cones.



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LESSON 8

MAP MEMORY EXERCISE

This exercise improves the learner's ability to see and remember details on the map.

Setting up the activity

- Plan a route on a map with six to eight controls.

How it works

- Learners run the course in pairs - Runner 1 (R1) and Runner 2 (R2). They share one map.
- R1 memorises the route from the start to control 1 and runs it without the map.
- Whilst running the route behind R1, R2 must memorise leg 1 to 2 but also keep an eye on R1's route in case they get lost.
- If R1 needs help R2 can pass over the map or offer assistance.
- At control 1 the map gets passed to R1 and R2 leads the pair to control 2.
- The two runners complete the course in this manner.
- Beginner orienteers will need cones at the control points for confirmation that they are at the correct place.

To save you the effort of putting out cones before class, set off an experienced pair first. This pair must place the cones at the control points on the course as they go along. The last pair acts as the sweepers and they can collect the cones when they get to them, returning them to you at the finish.



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LESSON 9

LINE COURSE MEMORY GAME

This game stimulates participants to pay attention to features that they pass, while following a leader.

Setting up the activity

- Plan a line course.
- Print one map with the line course per group; print blank maps for the other learners.

How it works

- One person in each group has a map on which a line course is drawn.
- The others follow the leader around the line course, paying attention to where they are walking as well as features like gardens, walls, fences and buildings.
- When they reach the finish, the rest of the group is given blank maps. They must draw the line course just completed, as accurately as they remember.
- The group can then compare courses and discuss actual route vs what they remembered.

To increase difficulty

- Increase pace. Initially this game should be done at walking pace. Running increases difficulty. Begin with a short route. Longer courses are more difficult to remember.
- Include more changes of direction.
- If the terrain allows, add obstacles to make the courses more technically difficult.



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LESSON 10

EXIT ANGLE EXERCISE WITH OBSTACLES

This grid exercise practises map orientation and improves running efficiency by getting participants to consider the angle that they approach and leave a control.

Setting up the activity

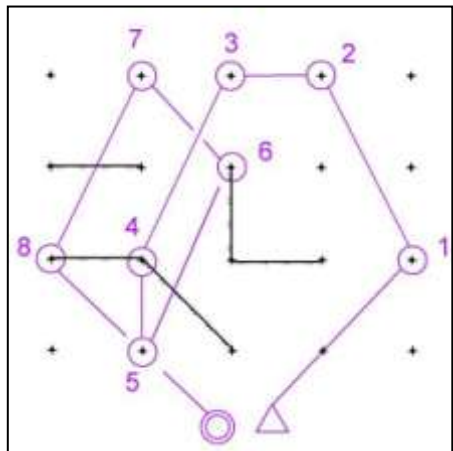
- Set out a 5x4 grid.
- Attach tape or string (on the ground) between a few controls. This acts as a barrier that participants are not allowed to cross over.
- Create a few different courses.

How it works

- Give participants a map of a grid course with eight or nine controls.
- Place numbers under all of the cones. Only by visiting the correct cones will the participant finish with the correct total for that route.

To increase difficulty

- Time each participant to simulate pressure, but also to promote measurement of improvement.
- Increase the distance between cones to make the grid bigger.
- Run this activity as a relay, with different teams starting at opposite sides. When finishing the course the competitor hands over the map to the next team member. Multiple, simultaneous participants encourage concentration and focus.





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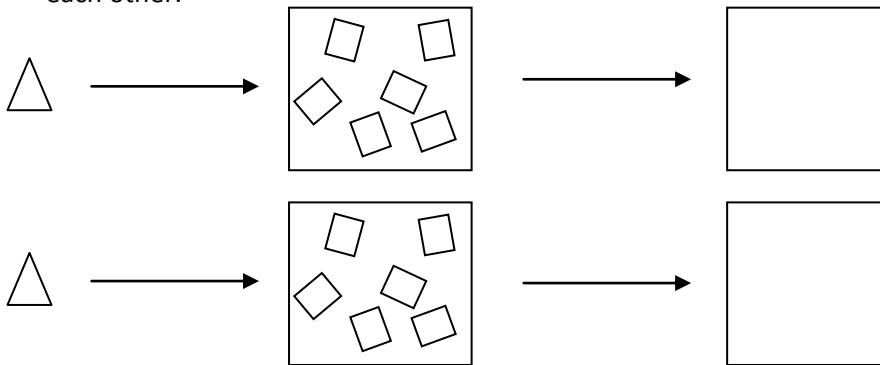
LESSON 11

PUZZLE ORIENTEERING

This fun classroom activity improves map familiarity.

Setting up the activity

- Use old maps or photocopies. Laminate the map and cut it into pieces (squares – 1.5cm x 1.5cm - or different shapes). Scatter the pieces on a board/table a distance from the start.
- Place the full map (not cut) on a table a further distance away.
- Set up two identical 'stations' so that two teams can compete against each other.



How it works

- This is a relay for teams.
- The first runner grabs a piece of map from the first table and runs to the map on the next table where they put the puzzle piece on top of the corresponding area of the master map (i.e. uncut version).
- The runner returns to the start to tag the next runner from their team.
- Time the teams. The first team to correctly complete their map wins.

Increase difficulty by using different shapes for the cut-outs or remove the map at the end, getting the participants to put the map together by joining paths and contours.



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LESSON 12

MAPS AND SHAPES

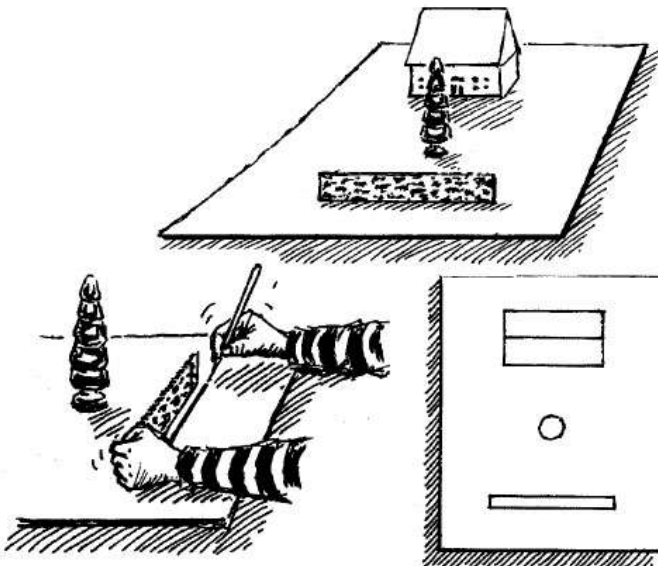
This lesson introduces the concept that maps are really just a pattern of shapes.

Setting up the activity

- Use cardboard cut outs of trees, houses and walls (get the learners to make these!) on a sheet of paper.

How it works

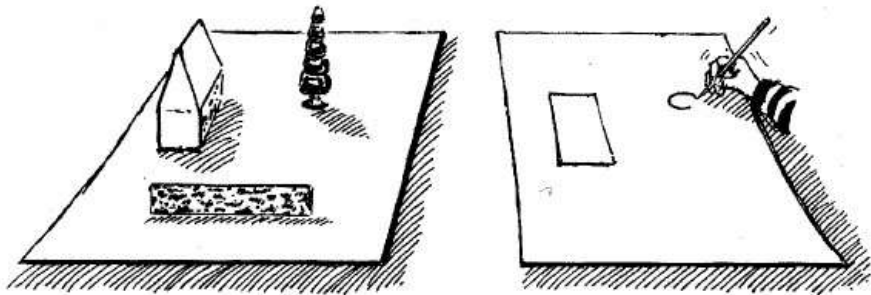
- Place three objects on a sheet of paper in a simple pattern.
- Let the children draw around the object. Then, remove the object to show the outline on the page. Discuss the shapes and the objects that match them. This is a basic map/plan.



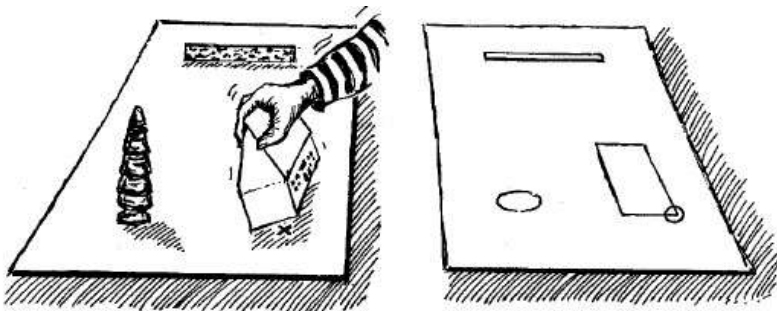


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- Arrange the shapes again on the blank page and place on a central table.
- Give the children a piece of paper and get them to draw the shapes that match the objects from where they're sitting. You need to make a plan too.



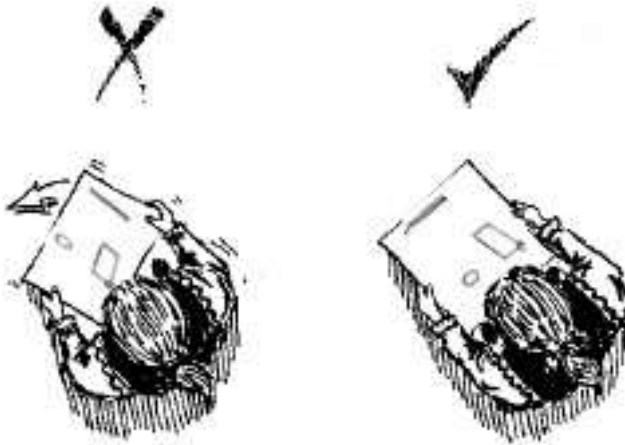
- Then, get the class to close their eyes while you hide an 'X' under the objects, like under a corner of the house.
- Ask the learners where the 'treasure' is hidden. Draw a circle on your sketch to indicate the location. Ask a child to lift the right object to reveal the X.
- Then, get the learners to mark the location of the X with a circle on their plans.





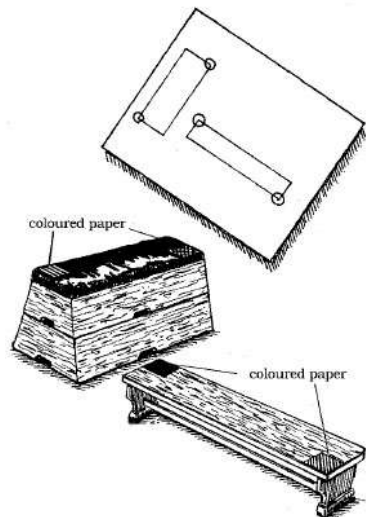
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- Finally, get the learners to orientate their maps based on the position of the objects on the piece of paper and their position in the class (get them to move to four different locations).



Variations

This exercise can be done on a bigger scale with benches and tables in a big hall. Use squares of paper to mark control locations.





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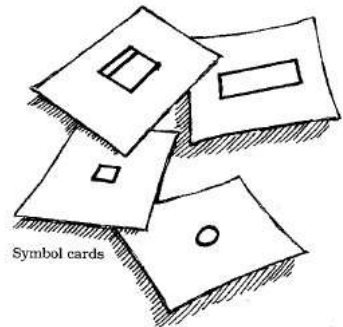
LESSON 13

MOVING OBJECTS

This is a fun, active, indoor lesson (best in a hall or gym) that reinforces shapes and position in reality vs map.

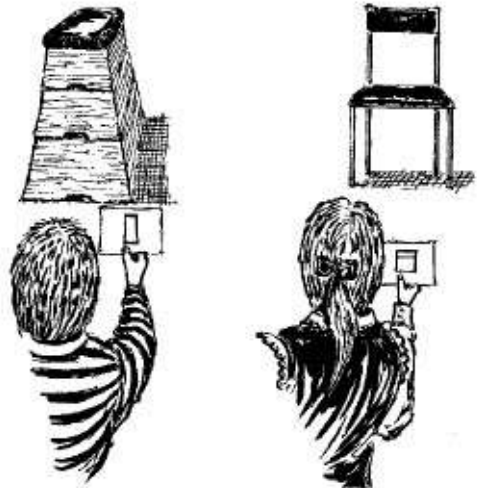
Setting up the activity

- Use a number of objects like chairs, table, dustbin, gymnastics horse. Scatter them around the room.
- Prepare sets of cards with symbols that represent each object.
- Prepare a set of 'plan' cards, each using three objects.



How it works

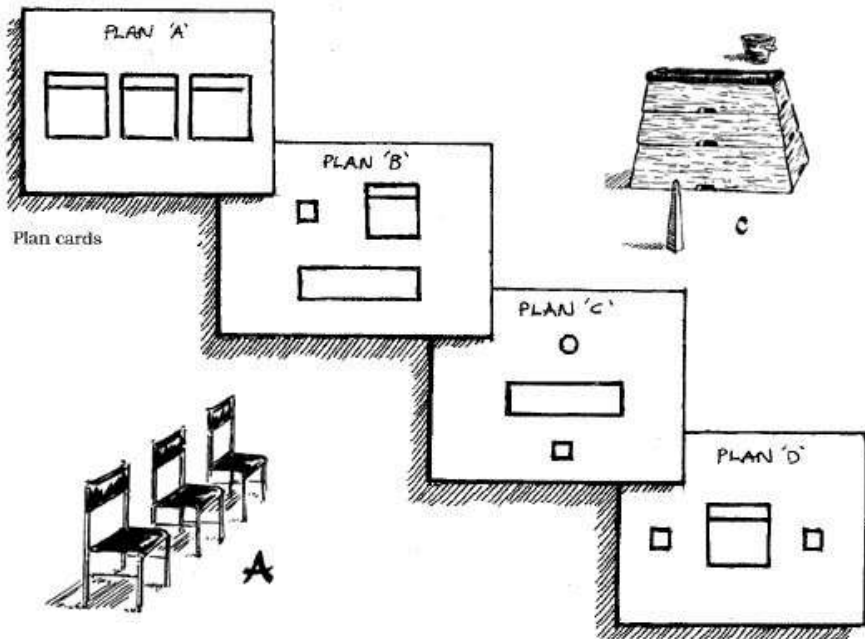
- Hold the cards up, like flash cards, describing to the learners what the symbols represent.
- Give each group a set of cards, in a box (or plastic bag). In relay format, the groups must race each other. Learners place their cards, one-by-one, at the object represented by the symbol. This can be repeated a few times with groups starting from the corners of the room.





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- Then, divide the room into four sections (if you have the space) and place three objects in each section.
- Give a set of the 'plan' cards that you prepared to each group.
- Get the learners in each group to move the objects to match the plans.



Variation

- Set out objects in a pattern and get the learners to match the correct plan card (you will need a number of similar cards) to the pattern. You will need to prepare cards with similar plans using the same objects.



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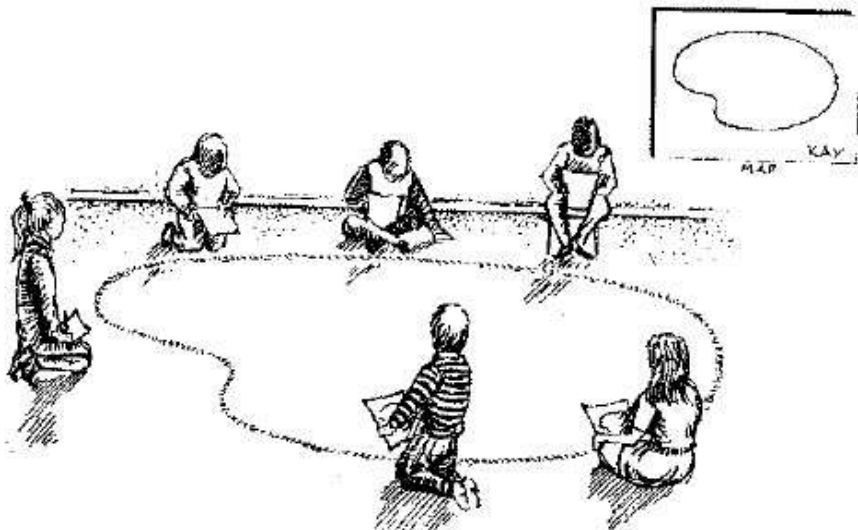
LESSON 14

TREASURE ISLAND

This fun activity practices map orientation and reinforces the use of shapes to indicate objects.

Setting up the activity

- This exercise is best done in a hall, gym or on open ground.
- Use chalk or a piece of string to outline an 'island' shape on the ground.
- Seat the learners around the island.



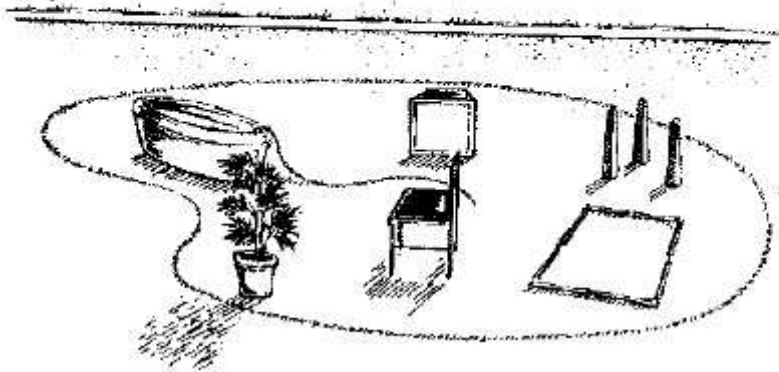
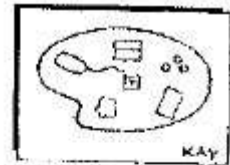
How it works

- The learners draw the shape of the island on their page.
- Add one object at a time to the island. The learners then draw it on their map. Place large features first.

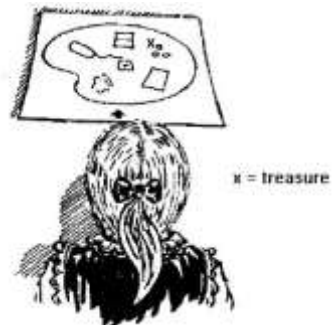


LEVEL 1 ORIENTEERING: LESSON PLANS

- Use objects like a basin of water to represent a lake; a length of blue wool to represent a river; pot plants and cones to represent trees and a box as a building.



- Then, tell the learners a story about sailors who are shipwrecked on an island. They bury treasure and plan to come back for it years later. The learners are the sailors! Get them to put an 'X' on their map to mark the location of where they would bury their treasure. Use an arrow to mark where they are sitting on the island's coast.

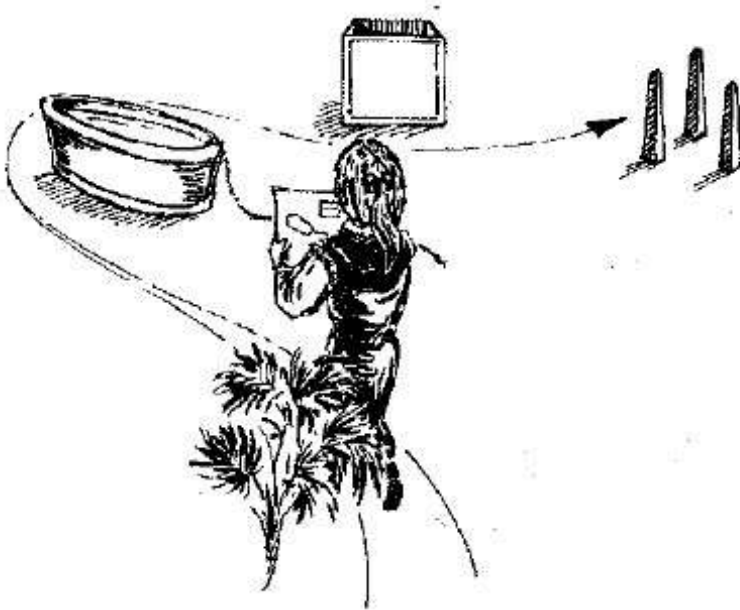


- Then, they must plan a route to get to the treasure – draw the route in on the map with a line.



LEVEL 1 ORIENTEERING: LESSON PLANS

- If the island is big enough, the learners can walk their route on the island, passing features, to get to their treasure.



Variations

- Working in pairs, learners swap maps, taking their friend's route to get to the treasure. The friend can confirm that they are correct.
- As with lesson 'Moving Objects', prepare plan cards with various object layouts. Get learners to match the correct card with the layout. Also ask them to arrange objects on the island to match plan cards.
- Create plan cards with different routes. In pairs, learners walk the routes, each checking and confirming their position on the island with reference to the map.



LEVEL 1 ORIENTEERING: LESSON PLANS

LESSON 15

DRAWING A SIMPLE INDOOR MAP

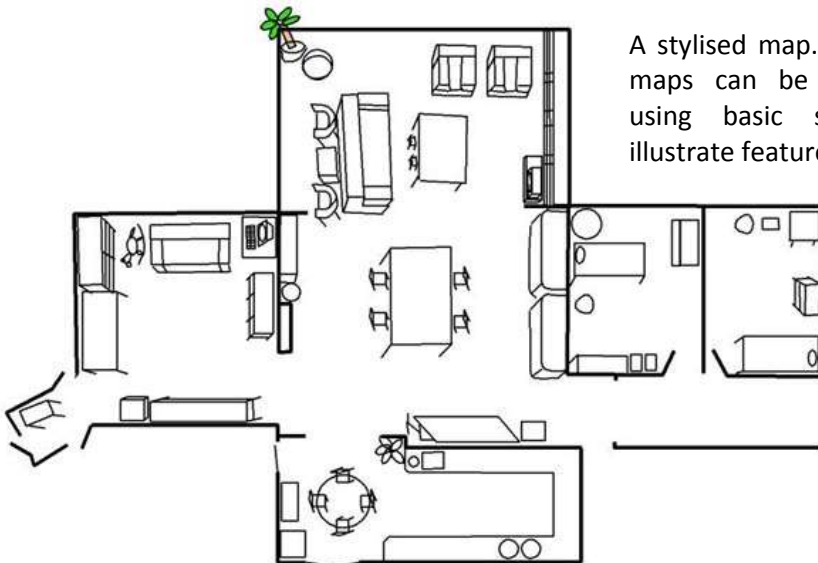
This exercise develops familiarity with mapping, scale and significant features.

How it works

- First, learners draw a map of the classroom on a piece of paper.
- Relative locations of chairs, tables, cupboards, pot plants, windows and doors should be illustrated.

The classroom map can be used for a micro-orienteering course indoors. Maps can be placed on a board for everyone to compare. Discuss merits of what makes one map better than the next.

This activity can be extended as a homework exercise, where learners map the inside of their homes. Again this is a wonderful discussion point around the positives and negatives of each map.



A stylised map. Classroom maps can be simplified, using basic shapes to illustrate features.



LEVEL 1 ORIENTEERING: LESSON PLANS

LESSON 16

GAMES USING SIMPLE INDOOR MAP

This game, where learners are asked to collect and return the objects, is simple and suitable for all age groups – especially young children. The difficulty is in placing objects in the correct location.

Setting up the activity

- For young children, prepare a simple map of your classroom. Older children and teens can use maps that they have drawn.
- Put learners into pairs.

How it works

- In the first exercise Learner 1 marks a location on their map. Learner 2 places an object at the location in the room. Learner 1 confirms whether this is correct.
- In the second exercise, Learner 1 places objects around the room and marks the locations on the map. Learner 2 retrieves the objects. If Learner 1 has incorrectly marked the location of an object, Learner 2 will not be able to retrieve it.



Learners can plan micro-orienteering courses for each other, in the class room. Each learner plans a course with multiple, numbered controls, places objects and marks the course on their map for their teammate to complete.



LEVEL 1 ORIENTEERING: LESSON PLANS

LESSON 17

STREET ORIENTEERING

Orienteering does not have to be technical; a regular street map of the roads around your school presents an accessible orienteering opportunity.

Setting up the activity

- Photocopy a map of the streets around your school from a street map book. Alternatively, print off a screen shot from Google Maps.
- Plan an orienteering course through the streets, accurately marking the control locations.
- Send the learners out on the course – paying careful attention to traffic.

Instead of putting out controls, provide a clue and multiple-choice answers like, “1. What colour is house #46’s gate” with “Red. Green. White” as the answers. Or, “2. How many pot-plants on #13’s driveway?” with multiple answer options.

Variations

- Get groups to plan courses for each other.
- Use as a time-limited score event.

RESOURCES

South African Orienteering Federation (SAOF) – www.orienteering.co.za

O-training – www.o-training.net

This website has a wide range of indoor and outdoor games and activities that teach and refine orienteering skills. Look at the “Orienteering Training” section.