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| Subject | Navigating using maps | Learning Objectives |
| Date/Period | 45 Minutes (30 minutes if walking round with a map is omitted) | * Understand the theory of this method of fair weather navigation and to understand how it could be used to help relocate when lost.
* To be able to use the compass to take bearings from the map.
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| Year Group | Bronze, Silver or GoldTailor your verbal instruction to the correct level |
| Teacher |  | Success Criteria |
| Focus of Lesson | Using maps to navigate. Introducing navigational concepts. | 1. Students can describe a leg on a map.
2. Students can orientate a map and follow it.
3. Students can take bearings from the map
4. Students understand some strategies for relocation.
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| Prior Knowledge | Have completed session 01 Introduction to OS maps. |
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| **Lesson Outline** | Assessment |
| *Introduction* | * We’ll be covering how to use the map to navigate.
* There are recognised methods to doing it well. We teach a specific system.

When on expedition everyone can get involved even when they don’t have the map. |
| *Main Body* | **Go through the powerpoint - Navigating using maps****Strategies (slide 2)**You must always have a strategy, some are more intensive than others two strategies are offered in the powerpoint**Hand rails and tick features (slide 3)*** Define the term 'a leg'. Using the map drawn in *01 Introduction to OS maps* explain the concepts of Hand rails, tick features, catchment points (you could include time as a catchment) and overshoots. It does not matter if the map is a bit scrappy, it is easier to do this on a simple hand drawn map than a real one.

**The 5 D’s (slides 4-5)*** Go through the 5 ‘s and get the group to use it on some legs using the map drawn or given in the powerpoint.
* Optional task - Use the prepared maps of the room or immediate area to get the participants to walk around a set course identifying hand rails and tick features and keeping the map orientated. Have the group go round in pairs with different numbered points to visit (like in orienteering).

**Bearings*** Explain we use 360° with North at 0° and 360°
* Give each participant a compass and give them different bearings to find by standing and facing N, E. 45° 310° etc.
* Get them to estimate a bearing from a map and put it in the compass.
* Get them to estimate more accurately using a protractor.
* Show how to use the compass as a protractor by using the procedure in the course notes
* Ask the participants to complete the sheet in the workbook.
* Ask the participants to take some bearings from the map and explain how to then use that ‘out in the field’

**Relocation (slide 6)*** Go through relocation strategies in relation to hand rails tick feature etc.
 | The powerpoint has prompts to fill in pages of the workbookAlternatively if remote working Google and Microsoft forms of various questions can be copied from the lupine sites with questions on to check learningObserve the students following the map and ensure that they are orientating it as they move.Check the results of the bearings exercise. |
| *Plenary* | Review tick features, catchment points and overshoots. |  |
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| Resources | 1. Course Notes document and workbook
2. Powerpoint.
3. Map drawn in 01-introduction to OS maps.
4. Rough (hand drawn) map large scale map of the room / surrounding area.
5. Maps.
6. Compasses.
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**Powerpoint Lesson Plan**