

# Thinking while Moving - Mathematics

## Orienteering

Stage 3 mathematics

Strand: Measurement and geometry

Sub strand: Position

### Activity set-up

- [Read Sport safety guidelines for orienteering](#)
- Teacher to decide on 8 landmarks/places around the school and a starting and finishing point.
- Teacher to create orienteering instructions. Follow link to view an [example](#) and to use as a template
- Place a cone/marker and a fundamental movement activity card at each chosen school landmark/place of the course.
- Split students in pairs using '[Height order challenge](#)'

**Pre-task:** Students will need to create a grid reference on a map of the school.

### How to play

- Students begin at starting point and read first clue.
- With a partner student use compass and trundle wheel to navigate to the correct place.
- Once at the marker students complete fundamental movement activity, record place on map using a key and recording grid reference.
- Students move around the course using orienteering instructions, trundle wheel and compass.
- Students are finished when they have completed all physical activities and navigated to the finishing marker.

### Increase/decrease challenge

- Students can draw their own map of school.
- Students can follow line on map from one marker to the next.
- Students given map of school with grid reference.

### Equipment/Resources

- Tablet with compass or a compass for each group
- Map of school
- 10 Cones or markers
- [Fundamental movement activity cards](#)
- Orienteering Instruction cards
- Trundle wheel (one per pair)

### What's some of the maths

- Mathematicians can talk, reason and share their thinking with others.
- Mathematicians can read a simple map to navigate from one point to the other.
- Mathematicians can give reasons for using symbols on a map.
- Mathematicians can calculate distance between 2 points on a map.
- Mathematicians can use N, E, S, W, NE, SE, SW and NW to indicate direction.

### Let's talk and think like mathematicians

- How was your and your partners thinking the same and different? What was the best strategy to complete the course?
- How did you use your knowledge of maps to navigate the course?

### Suggested mathematics outcomes

MA3-1WM describes and represents mathematical situations in a variety of ways using mathematical terminology and some conventions

MA3-17MG locates and describes position on maps using a grid-reference system

MA3-9MG selects and uses the appropriate unit and device to measure lengths and distances, calculates perimeters, and converts between units of length