

## The Real Map of Ireland Lesson Plans

### Lesson plan 2: The Real Map of Ireland – Understanding Contours

#### Aim / Description:

The aim of the lesson is to introduce students to different types of maps and their uses. By using cross curricular activities such as arts & crafts, maths and geography students can learn about the concept of contours on maps.

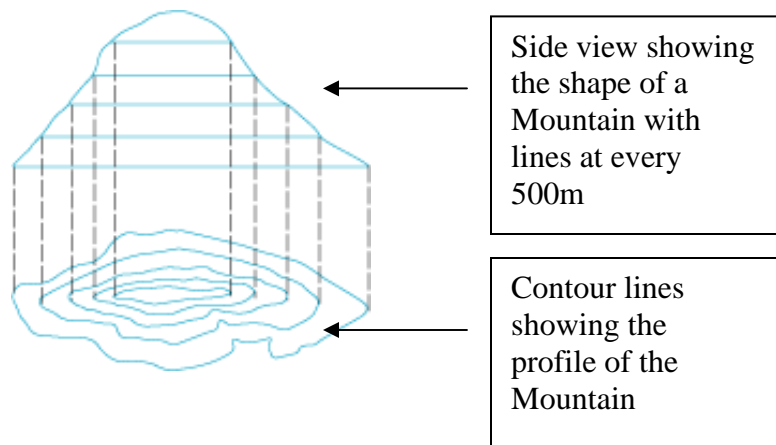
#### Background:

A contour map is a map illustrated with lines which shows the contours of the terrain (i.e. how steep or flat valleys, hills and mountains are). This can be done above sea and below sea level.

Contours lines on a map can be described to students as lines that are like pieces of string placed around the different shapes of land such as valleys, hills and mountains in a line that meets at its beginning point. The first line is at sea level (0m). Each line after that is placed at an equal horizontal distance either above or below each other.

Each line represents a different height or depth from sea level which is called *elevation*. The line showing the height or depth of elevation is usually separated at every 500m above the sea and every -500m below the sea.

By looking at the contours from an aerial view the pieces of string show how different shapes are formed.



By looking at the contour lines on the Real Map of Ireland, students can develop an understanding of what the land looks like under the sea.

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Contour lines that are spaced closely together indicate steep areas (see the Goban Spur).

The wider separation of contour lines or the absence of contour lines indicates areas that have a gentle slope or flat ground (see the Porcupine Abyssal plain).

The tops of mountains appear as separate islands which are presented as a series of closed circular contours (see Eriador Seamount)

Contours indicating land elevations can be coloured showing the difference in elevation. For example the Real Map of Ireland shows the lighter colours indicating the shallower areas. The darker the shade of colour of the contours indicates the deeper area (see the Porcupine Abyssal plain).

It is useful to show students the different types of maps using existing geography resources. For example students should understand that contours are used to show the land areas under the sea in the same way as we above the sea on the land that we live on e.g. mountains, valleys and ridges.

### Materials:

#### Understanding Contours – 3D

- Plastic cups or different shaped cones
- Cardboard
- Paint
- String
- Glue

#### Contours on the Real Map of Ireland

- 1 x Real Map of Ireland colour copy (to view)
- 1 x Real Map of Ireland - contour copy
- Colouring pencils / crayons
- Glue / sticky tape and materials for decorating



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### Lesson in action:

#### Understanding Contours – 3D

- Class discussion and demonstrate an understanding of contours
- Get the students to make a model of an island using recycled materials.
  - Glue different sized cups or cones together on a piece of cardboard.
  - Paint the cardboard and cups to represent the sea level, valleys, hills and mountains.
- Starting at the bottom of the cones on the cardboard (sea level) glue pieces of string around the valleys, hills and mountains horizontally joining the string at each end.
- Do the same at the next level at 1cm (i.e. 1cm = 500m) above the first piece of string all the way around the cups.
- Keep repeating this until the lines have been formed around the bottom to the top of the hills and mountains.
- Look over the model (an aerial view) and see how the string forms different shapes around the valleys, hills and mountains indicating the steepness and flatness of the island – i.e. contour lines. Point out how in the steep areas - the levels of string / lines are close together. In the flatter areas levels of string / lines are wider a part.

#### Contours on the Real Map of Ireland

- Discuss with the class the concept of what lies beneath the sea in the formation of mountains, ridges and flat areas and introduce the concept of contours using the Real Map of Ireland.
- Proceed with colouring in the contours on the Real Map of Ireland - contours to represent depth. Encourage the students to use different colours in the contours showing the depth of various areas on the Real Map of Ireland.
- Label the areas.

#### Outcome:

- Students learn about the Real Map of Ireland
- Students learn about contours
- Students learn about depth levels of the terrain above the sea and under the sea
- Students learn by analysing, logical thinking and communication.

