LESSON NOTE FOR WEEK 4  
TOPIC: MAP READING

SUB TOPIC: **METHODS OF REPRESENTING RELIEF**  
MAIN OBJECTIVES: By the end of this lesson, student should be able to

**(a) define Relief**

**(b) list the methods of representing relief**

**(c) state the different contour representation of land forms**

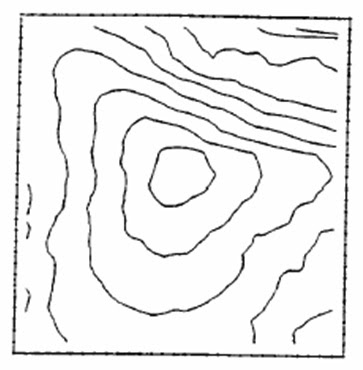
STEP I

**Relief** of an area refers to the position and character of the highlands and lowlands. The methods of representing such relief on maps include the following:

1. **Contour:** are lines drawn to join places of equal heights, level or altitude? The sea level is taken as the starting point in all measurement in meters or feet. The height of a particular point is written in line; Contour Interval in a particular map, contours are equal intervals



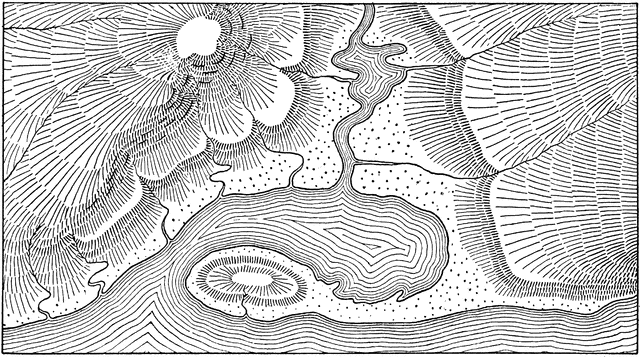
1. **Form Lines:** are lines drawn on a map like contours but are based on estimators. They are not accurate as contours and they are represented in broken lines



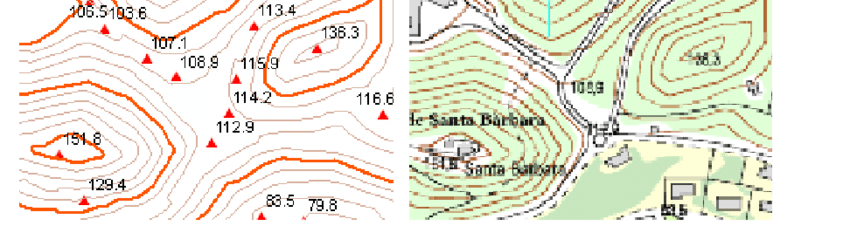
1. **Contour layering:** It is an aid to visual impression, the space between contours are often coloured or tinted. Different shades of colours are used to denote difference in height. Green is used for lowlands, yellow and brown are for highlands and white is for snow capped peak. Water bodies such as seas are represented with blue and the deeper the sea, the darker the blue colour



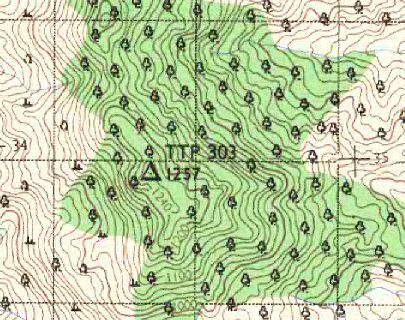
1. **Hill shading:** it is the method in which only one contour is used but the intensity (thickness) of the colour tone depends on the steepness of the hill slope. That is the deeper the shade representing it becomes
2. **Hachure:** They are short line drawn down the slope in the direction of the steepest gradient. The steeper the slope, the heavier the lines which are used



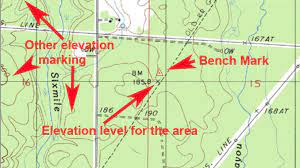
1. **Spot heights:** They are simply spots or points on the map whose height above the sea level has been accurately measured. The exact height is represented by a dot and the height i written beside it.



1. **Trigonometric stations** are simple points on the ground marking the angles of triangulation when mapping an area. They are usually indicated by a triangle and a dot in the middle with the height written beside it. There are three types of trigonometric station. These are primary, secondary and minor trigonometrical stations.



1. **Bench Mark** is a permanent mark made on objects like walls, building and bridges. It indicates the actual heights which are usually written on the objects and in most cases, it is written along on the road.



STEPII:

**CONTOUR REPRESENTATION OF LANDFORMS**

The following are some common landforms or relief features that can be represented on map by using contour lines.

1. **Valleys:** These are lowland between two highlands. Valleys are represented by V- shaped contour lines with the apex of the V- shape pointing towards the highland. When a valley contains water, it is called a river valley but when it contains no water, it is called a dry valley
2. **Spur:** These are projection of highlands into low ground. That is the V-shape points to the lowland spurs separate one valley from another and the contour numbering decreases outward.
3. **Conical Hill:** are usually circular in shape and become smaller and smaller towards the centre
4. **Round top:** hill are contours showing round top hills that are circular but do not taper to a points. The inner most circle of contour is fairly large
5. **Isolated Hill:** is a hill which stands apart or is far removed from other hills or highlands. It may either be round or conical in shape
6. **Knoll:** is an isolated peak of few meters high, associated with a highland.
7. **Ridge:** is a strip of highland which is elongated and narrow. The contour run almost parallel to each other
8. **Col or Saddle:** is a stretch of lowland which separates two highland areas on a ridge, two peaks are usually separated by a col. There is no much difference between a cola and a saddle. The only difference is that the saddle is wider than the col
9. **Pass or Gap** is also a col but is found at lower parts of highland. A pass separates two highlands but at lower level. A pass is always a col, but a col is not always a pass. A col becomes a pass when it is used or likely to be used as a route way, either for footpath, road or railway
10. **Plateau**s an extensive and broad highland area with a comparatively level surface. Plateaus usually have steep sides, if a plateau is cut off by a number of river valleys; most of the original level surface is removed by erosion, leaving behind flat top peaks. Such plateau is dissected plateau
11. **Escarpment/ Cuesta**: Escarpment refers to steep slope or the precipitous face of a ridge. The contour lines are closely packed, while Cuesta refers to a hill with a steep slope (dip) on one side and a gentle slope (scarp) on the other. Therefore dip + scarp = Cuesta
12. **George:** It is a steep sided valley with a river or stream.
13. **Watershed**: It is a highlands area which separates the headstream of rivers flowing in different directions but rising from the same mountainous source
14. **Undulating Lowland:** It gently rises and falls with low level is usually shown by irregular and well spaced contours
15. **Flood Plain:** It is a low land, bordering a river, formed by deposits of sediments carried down by a river. It is generally referred to as area liable to flooding; it is very good for the cultivation of swamp rice.

**ASSESSMENT**

1. Define relief
2. What are the methods for representing reliefs?
3. List 10 common type of landforms and describe them in detail.