

Picturing Landforms -2

Visualise and draw landforms from a verbal description

Encourage pupils to look carefully at landforms and to describe them verbally so that another person can visualise them from the description.

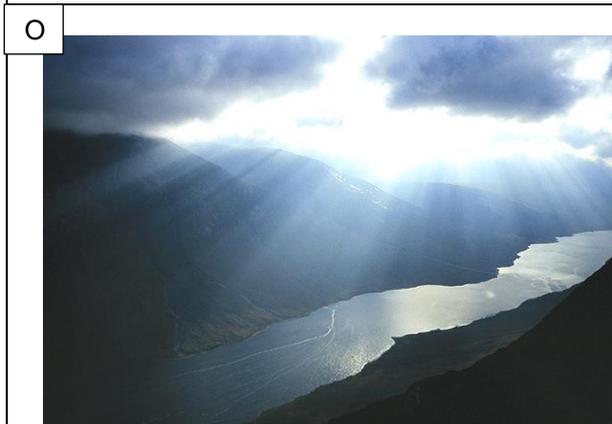
Seat pupils in pairs, with each person holding half of the photograph cards showing landforms, printed and cut up from those shown below. The photographs are all taken in the British Isles. Pupils should NOT show each other what cards they have in their hands.

Pupil A then examines one photograph and describes it as fully as possible to Pupil B, who listens carefully and then tries to draw it. Pupil B must listen in silence and not ask any questions. Pupil B then takes a turn with another card, with Pupil A doing the drawing, also in silence. Pupils should then compare their hand-drawn efforts with the photographs.

This first round should be tried without any guidance. Then give each participant the Prompt Card, to encourage them to be more specific in further descriptions, and ask them to work through the remaining photographs, comparing their drawings with the photographs after each round. Note that some landforms may be repeated on different photographs, and some photographs may show more than one landform.

(If drawing the landscape from a partner's verbal description proves too difficult, the listener could suggest a name for the type of landform instead. Both pupils could then draw a "field sketch" from the same photo before reverting to the game).

When all have finished, give out the descriptive cards and ask pupils to match the descriptions to the photographs which they have been using.



Q



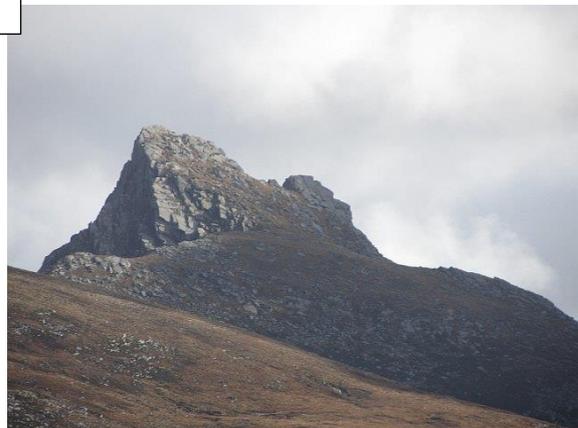
R



S



T



U



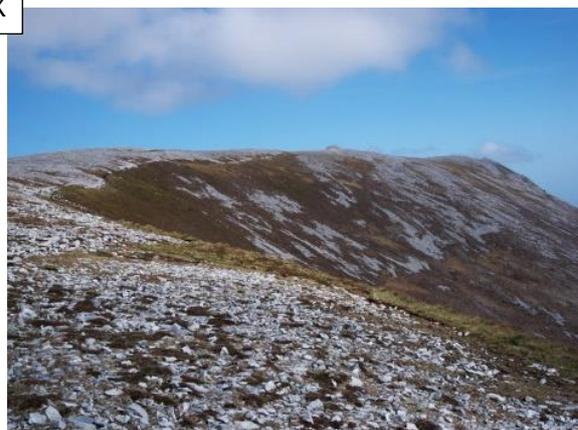
V



W



X



Prompt Card

Use this card as a check list to aid your verbal description of your photograph to your partner.

Is the photo showing:

- an upland area, a lowland area or a coastal area?
- mainly erosional features or depositional features?
- the nature of the drainage – rivers, lakes, dry valleys?
- any evidence of the structure of the rocks – folding, faulting, joints, igneous features?
- any evidence of past glaciation – deep U-shaped valleys, mounds of badly sorted debris etc?

Descriptions of the photographs

<p>1. V-shaped valley with interlocking spurs: typical of the upper courses of streams where the water has found its own course, but has not yet eroded enough to begin to straighten the valley.</p>	<p>7. Tombolo: a bar of loose eroded material, (e.g. sand and shingle) which joins an island to the mainland or to another island. Tombolos and spits are produced by the long-shore drift of eroded material.</p>
<p>2. Plateau: a relatively flat-topped hill mass, usually the result of erosion to a plane surface at a lower level, by rivers or the sea, and subsequently uplifted to its present elevation. Some scree and frost-shattered debris is shown.</p>	<p>8. Pyramidal peak: produced by freeze-thaw weathering and glacial scouring from several different directions, ideally four. (The four-sided pyramid may really only be appreciated by an aerial view).</p>
<p>3. Raised beach with a “dead cliff” behind: The beach has been raised higher than the current sea level, either by local uplift of the land or by a general drop in sea level. The former sea cliff has been left high and dry, or “dead”. The top of the island shows that the land generally has been eroded and uplifted to form a low plateau.</p>	<p>9. Delta: produced where a river enters the sea or a lake (as in V). Its sediment load is deposited as the current slackens and gradually builds out into the still water. This example is a “bird’s foot delta”, where the levées enable the river channels to extend out over the surface of the delta, with little filling in between the channels.</p>
<p>4. Fjord (fiord): although looking into the sun, the valley is clearly long, straight and deep, with the suggestion of hanging valleys on its sides, i.e. it is of glacial origin and has since been flooded by the sea, caused by rising sea level as the glaciers and ice caps melted.</p>	<p>10. Oxbow lake in a meander belt: The curved lake on the left of the picture was formed where the downstream migration of the meanders made them more and more arcuate, until the river overflowed its bank during a flood time and cut through the neck of the meander, leaving a cut-off lake, which will, in time silt up and lose its water.</p>
<p>5. U-shaped valley: formed by a valley glacier descending from the hills in the background, truncating spurs as it went and leaving hanging valleys on the sides of the main valley. The flat, boggy floor may have been formed by lakes, ponded back by moraine left behind by the glacier as it retreated.</p>	<p>11. Corrie (cirque or cwm): a roughly semi-circular, deep hollow formed in upland glaciated country. An earlier valley head became filled with snow, which gradually compacted to form ice, which then flowed out, plucking at the back wall as it did do, deepening it as it went and as further accumulation occurred.</p>
<p>6. Ridge: a roughly symmetrical, linear upland area, separating off the drainage of one side from the other. In this case the ridge is composed of older, more resistant rocks than those of the flat valley floors to the sides.</p>	<p>12. Moraine in a deep glaciated valley: The mound appears to stretch right across the valley, (apart from where it has been breached by the modern stream). This suggests that it is a terminal moraine, marking the position of the snout of the glacier, i.e. the point at which the rate of melting equalled that of accumulation of ice from compacted snow from above.</p>

The back up

Title: Picturing landforms - 2

Subtitle: Visualise and draw landforms from a verbal description

Topic: Enhancing pupils' skills of description and interpretation using photographs of landforms

Age range of pupils: 16 years upwards

Time needed to complete activity: About 30 minutes, depending on depth of discussion

Pupil learning outcomes: Pupils can:

- examine photographs of landforms carefully and describe them intelligibly;
- listen carefully to a verbal description and interpret it in a drawing;
- enhance their observational skills as a prelude to field work.

Context: This could form a useful revision activity, once pupils have studied landforms. *Answers to the matching exercise are:*
M3, N10, O4, P7, Q11, R6, S1, T8, U12, V9, W5, X2

Following up the activity:

- Ensure that pupils use the same careful description and interpretation approach to geology in the field.

Underlying principles:

- This strategy provides training in careful observation and interpretation of all relevant features.
- Being obliged to give a verbal description encourages careful observation, to ensure that clues are not missed.

Thinking skill development:

Verbal dexterity and metacognition are encouraged by the need to give intelligible verbal descriptions and to interpret from them. Applying the activity to the field situation is a bridging activity.

Resource list:

- Card sets of Photographs, Prompt Cards and Description Cards, cut out from those shown above.

Useful links:

See the table below for other Earthlearningidea activities in the "Picturing" series.

Source: Written by Peter Kennett of the Earthlearningidea Team.

Photos:

Photo **M**, Worm's Head, Gower, South Wales is by P. Kennett. All other photos are taken, with their reference numbers, from www.geograph.org.uk. All these are marked "licensed for reuse" under this [Creative Commons Licence](https://creativecommons.org/licenses/by/4.0/)". Inserting the reference number into the website will bring up an Ordnance Survey map extract of the feature and extra information.

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Picturing.....

Earthlearningidea has compiled a series of activities involving examination of photographs of geological interest and their careful verbal description to others. This table will be updated as fresh activities are added. All titles begin with: "Picturing....."

Title	Sub-title
Puzzle structures	Visualise and draw sedimentary structures from a verbal description
Trace fossils and other strange shapes	Visualise and draw trace fossils and sedimentary structures from a verbal description
Igneous rocks – 1	Visualise and draw igneous rocks from a verbal description
Igneous rocks – 2	Visualise and draw igneous rocks from a verbal description
Metamorphic rocks	Visualise and draw metamorphic rocks from a verbal description
Tectonic structures – 1 faulting	Visualise and draw fault structures from a verbal description
Tectonic structures – 2 folding	Visualise and draw fold structures from a verbal description
Minerals -1	Visualise and draw minerals from a verbal description
Minerals -2	Visualise and draw minerals from a verbal description
Fossils -1	Visualise and draw fossils from a verbal description
Fossils -2	Visualise and draw fossils from a verbal description
Landforms 1	Visualise and draw landforms from a verbal description
Landforms 2	Visualise and draw landforms from a verbal description
Landforms 3	Visualise and draw landforms from a verbal description
Landforms 4A	Visualise and draw landforms from a verbal description
Landforms 5B	Visualise and draw landforms from a verbal description