

View to the future – and the past Using a viewpoint or overview educationally

Good views can be stunning, sometimes bringing 'awe and wonder' to the study of geoscience and Earth processes. But how can views be used to encourage the development of thinking skills during fieldwork?

When you visit a viewpoint or overview with your pupils, ask everyone to annotate one image of the view to show what it might look like in the future, e.g. after 10,000 years. Then ask them to annotate another image of the view, to show what it might have looked like in the past, for example, 10,000 years ago.

These activities should provoke careful thinking into the rates and types of potential erosional and depositional processes, the parts of the view where erosion or deposition might dominate, and the weaknesses that might contribute to erosion.

They should be as accurate in their annotations as possible, to give the best possible predictions or retrodictions (predictions of the past) of likely cliff shapes, slopes and profiles of mountains, hills, valleys or flatter areas.

You can run this activity by:

- asking the group to take pictures on their tablets or mobile devices, and to annotate them using a free-to-download app such as Iphotodraw™ or Photo Pen HD™;
- giving the group a printout of a pair of photos of the view, and asking them to annotate them;
- giving the group a laminated photo of the view (or a photo in a clear plastic sleeve), and asking them to annotate it with a temporary marker, which can then be wiped off for another annotation.
- The activity seems to work best if carried out collaboratively.

Try this approach by annotating these views:

Annotate this Green Bridge of Wales, Pembrokeshire, image – once for how it might look in 10,000 years' time, secondly for how it might have looked 10,000 years ago.



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Annotate this view of Vassdalsvatnet, Moskenesøya, Lofoten, Nordland, Norway, for how it might look in 10,000 years' time, and how it might have looked 10,000 years ago.



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Add annotations to this view of Peña Montañesa desde el Castillo de Ainsa in Spain for 10,000 years ahead and 10,000 years ago.



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The back up

Title: View to the future – and the past.

Subtitle: Using a viewpoint or overview educationally.

Topic: A strategy for helping pupils to interact with the outdoor environment they are viewing.

Age range of pupils: 8 years upwards

Time needed to complete activity: 15 minutes

Pupil learning outcomes: Pupils can:

- describe how a view is likely to change in the future, and also in the past;
- apply their geological knowledge to an explanation of their prediction/retrodiction.

Context:

A good view is often enough in itself to inspire pupils. However, by asking them to undertake this exercise, they need to examine the landscape for surface processes that attack the land and then to visualise their effects in the past and the future.

If you choose a time of 10,000 years ago for the activity, it may be worth remembering that this was the end of the last glaciation to affect Northern Europe. Who knows what the climate and sea levels might be like in 10,000 years' time!

Following up the activity:

The activities can be tried on a wide number of views, large and small.

Underlying principles:

- According to the principle of Uniformitarianism, the 'present is the key to the past'; this can be applied to a view through careful visualisation.
- Similarly, the present can be shown to be the key to the future too.

Thinking skill development:

Visualising how the view might have changed involves seeking patterns in the rocks and processes, and bridging these into the past or future. Experience has shown that much cognitive conflict and metacognition are involved if the exercise is carried out collaboratively.

Resource list:

- large photographs of the view, possibly laminated or in plastic sleeves with clipboards and temporary marker pens OR
- mobile devices with apps such as lphotodraw™ or Photo Pen HD™ downloaded

Useful links:

See:

<https://www.youtube.com/watch?v=2fS2Swi0q-U> for an animation of how the Green Bridge of Wales in Pembrokeshire might have formed and might change in the future. Then see: <https://www.youtube.com/watch?v=dX6dUUz6PqY&> for a similar animation of the Durdle Door arch on the coast of Dorset, UK.

Source: Chris King of the Earthlearningidea Team; animations recommended by Pete Loader and Jo Conway.

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