



‘Physical impact – sudden or slow?’ Conference Workshop – Manchester 2015

Exploring approaches that tackle the tricky idea of how timescales affect landscapes and environments plus

approaches to looking for evidence of the short and long term impact of physical processes. These key concepts/skills are fundamental to students’ appreciation of effective decision-making in issues linked to physical environments.

Activity 2: *How Long Did It Take?*

We expend a lot of time and effort on landform description and associated explanation; quite rightly. However, the idea of time is infrequently dealt with, even glossed over (“a long time”) or ignored altogether and yet the length of time needed to produce landforms is part of the formation processes. A study of textbooks from a range of ages shows that writers have rarely addressed the notion of time, perhaps assuming that it will be “understood”. This activity attempts to assess the state of knowledge and/or powers of reasoning when trying to attribute a time frame to specific landforms.

Presenters: *Janet Hutson*

Aims:

- (a) to consider the lengths of time it takes for different landforms to be created.
- (b) to consider the reasoning processes in identifying time scales.
- (c) to increase the sense of realism that students have when studying landscapes

Resources

- (a) Images of landforms, labelled. These could be from a range of landscapes or from a specific unit. The labels ensure everyone is thinking about the same feature.
- (b) “When I Look at a Landscape, I Know How Long it Took to Form” sheet
- (c) Time scale labels on “playing pieces” (corks used at conference).

Method

1. Arrange students in pairs.
2. Hand out and go through the “When I Look at a Landscape, I Know How Long it Took to Form”. Discuss which time frames seem more or less likely and why.
3. Give each pair a sheet of images. It may be useful, even necessary, to discuss some key points about each.
4. Put out the time frame playing pieces; everyone should have access to all possibilities. Ask them to place the correct piece next to each landform.
5. Discuss what their bases for decision were; what characteristics of the feature contributed?; what use was made of prior knowledge of the processes at work?
6. Go through the “correct” answers. Inappropriate playing pieces should be replaced with the right ones then, if wished, the answers written on the sheets.

Teaching Points

- Not having to write an answer should increase risk-taking. Playing pieces can be changed easily as pairs discuss their ideas and an inaccurate answer replaced by an accurate one without the negativity associated with crossing out a wrong answer.
- Discuss the original answers:
 - do students tend to over- or under-estimate how long it takes for a landform to be created?
 - what is the range of timescales chosen?
 - which landform caused most confusion? why might that be?

- Ask students when the human lifespan is relevant when looking at the landscape. We often talk about processes being “ongoing”; to what extent is that a useful concept?

Application

- When students are producing written answers in physical geography, they may include more specific information about the time involved, thus showing a better appreciation of the landscape.