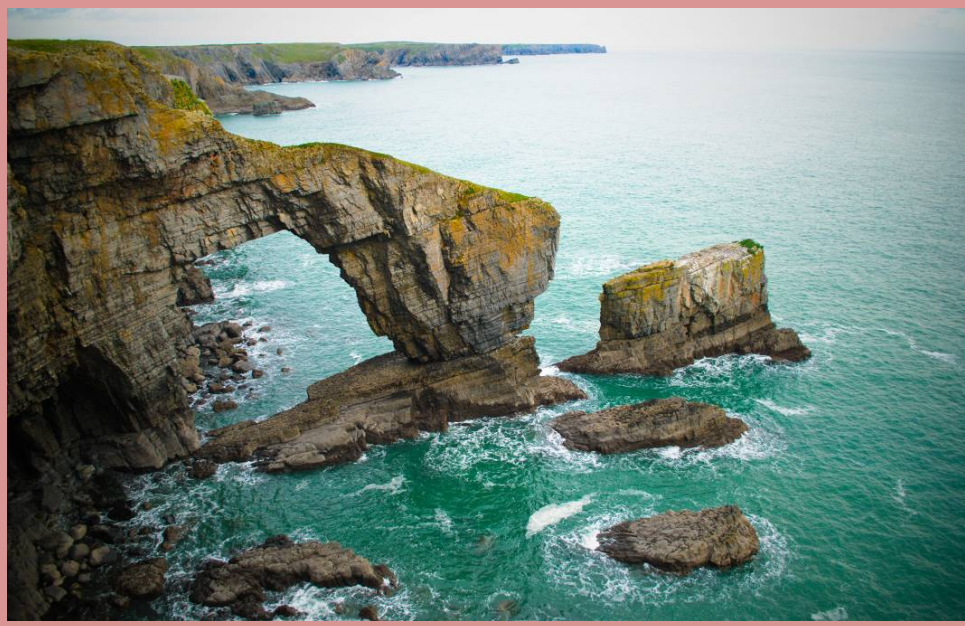


1.

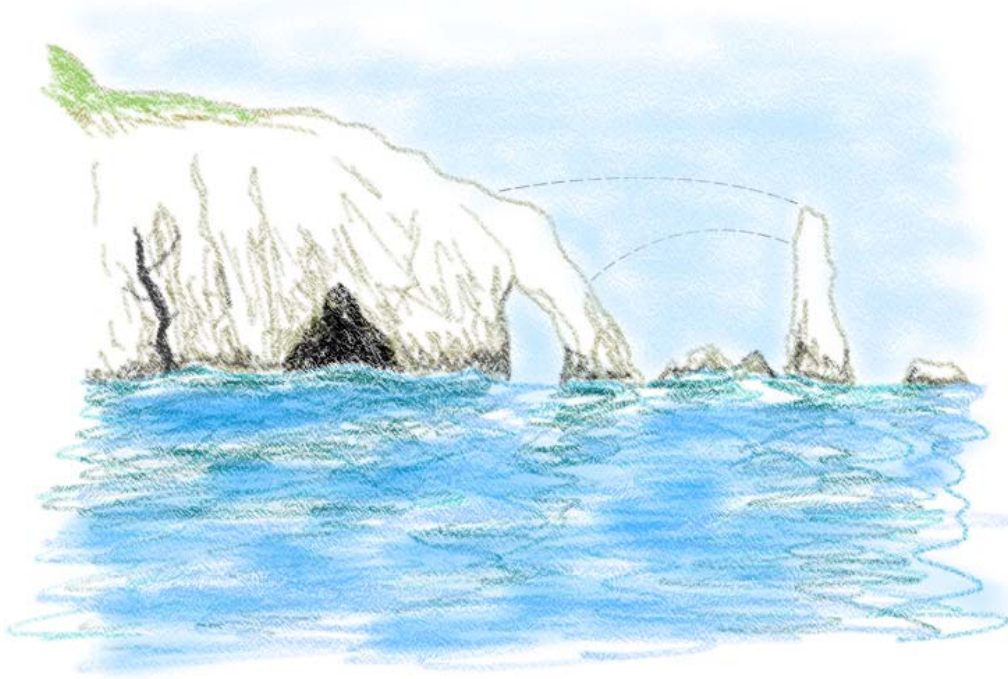


2.



1. Study the two photographs above. The first image is of the Green Bridge in Pembrokeshire in west Wales. The second image is of the Aval Cliff at Etr tat in northeast France. What similarities can you observe? What landform features can you identify?
2. Watch the three videos of how stacks and stumps form:
<http://geobytesgcse.blogspot.com/2007/08/coastal-erosion-landforms-features-and.html>
<http://blip.tv/geogtv/formation-of-a-sea-arch-and-stack-1331150>
<http://www.youtube.com/watch?v=2fS2Swi0q-U>

3. Copy or cut out the diagram below and put it on a double page spread in your exercise book. Number the erosional stages in the correct order and place them around the edge of the diagram drawing arrows to the relevant point.



- A – A stump is created as the stack continues to erode. This will be covered by water at high tide.
- B – The cracks in the cliff gradually get larger. These will develop into small caves.
- C - The sea attacks the foot of the cliff and erodes areas of weakness such as joints and cracks.
- D - Further erosion widens the cave. This will eventually form an arch, passing through the headland.
- E - The roof of the arch has collapsed to create a stack.
- F - A combination of wave attack the base of the arch, and weathering of the roof of the arch (by frost, wind and rain), weakens the arch.

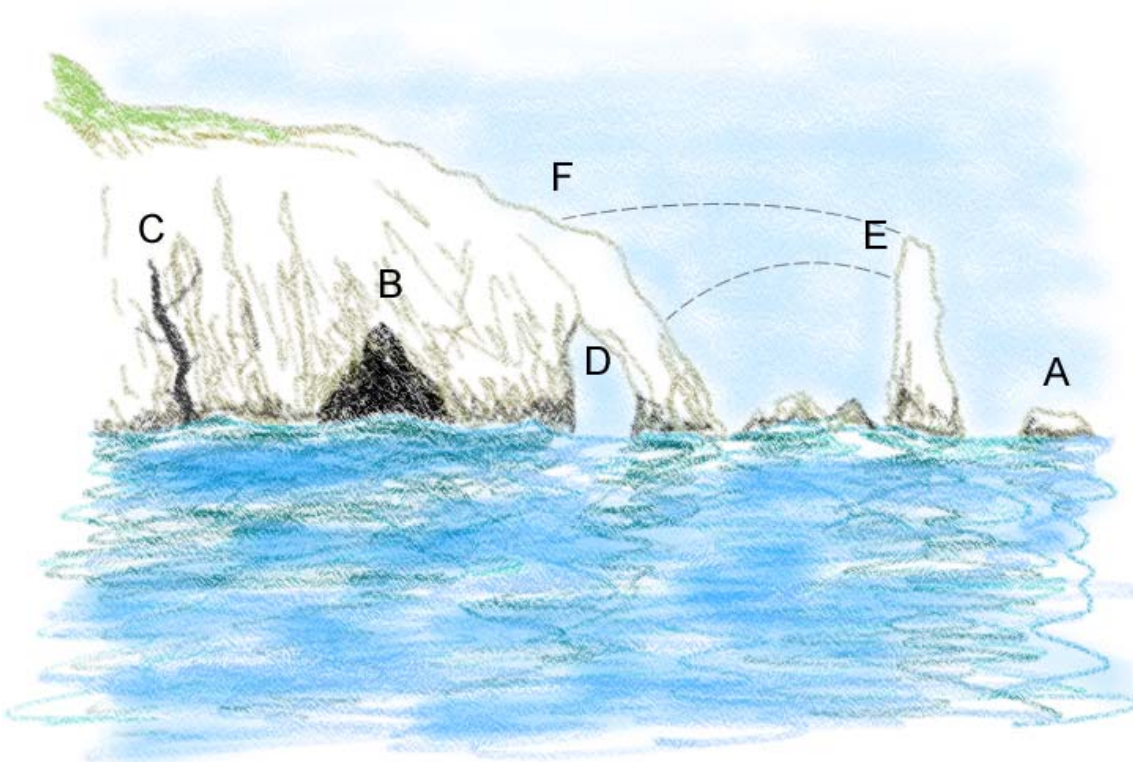
Teaching notes

Three video clips are suggested in the second exercise. The first clip, <http://geobytesgcse.blogspot.com/2007/08/coastal-erosion-landforms-features-and.html> does not feature a commentary so does not require sound.

The second clip, <http://blip.tv/geogtv/formation-of-a-sea-arch-and-stack-1331150> also does not use a commentary and again does not require sound.

The third clip, <http://www.youtube.com/watch?v=2fS2Swi0q-U> runs for three minutes. The commentary explains the processes of hydraulic action, abrasion and chemical weathering. The video included aerial views of the Green Bridge of Wales in Pembrokeshire (running from 1:43 to 2:05 minutes) and a reconstruction of the landscape over the last five million years (running from 2:06 to 2:40 minutes). Please note that access to YouTube videos may not be available in some schools.

Answers



Images

Image 1 - © frennlareo 2006 <http://www.flickr.com/photos/11330331@N07/1337350429/>

Image 2 - © JKMMX 2010 [http://en.wikipedia.org/wiki/File:Green_Bridge_of_Wales_1_-_Pembrokeshire_\(2010\).jpg](http://en.wikipedia.org/wiki/File:Green_Bridge_of_Wales_1_-_Pembrokeshire_(2010).jpg)