Riprap

You have been given riprap as your method of coastal protection. Your job is to record how riprap works and make a note of its advantages and disadvantages. You then need to prepare a short presentation that will inform the rest of the class how riprap works and give information about its strengths and weaknesses. Be as creative as you can during your presentation.

How does riprap work?

What are the strengths of riprap?

What are the weaknesses of riprap?

Draw a labelled diagram to show how riprap works.

Riprap

Riprap is a hard engineering method of protecting the coastline, which is sometimes called rock armour. Riprap consists of hundreds of large rocks piled on top of each other either at the bottom of a cliff or at the top of a beach. Sometimes riprap can be combined with sea walls and all the rocks are placed in front of the wall.

Riprap forms an effective barrier that helps to reduce the power of the waves. When the waves hit the riprap, sea water is allowed to pass through the gaps, but the energy of the waves is reduced by the rocks. This means the destructive power of the waves is stopped before it erodes the cliff.

Although riprap is fairly expensive at £1000/metre, it is cheaper than methods such as sea walls. It is easy to build because it is just a case of placing large rocks or boulders on the beach, and it is also simple to maintain.

In places where riprap has been constructed, there is often a social benefit because it is used for fishing and picnicking - even sunbathing.

Opponents of riprap say it is visually intrusive and looks messy at the top of the beach. There are many examples of the rock being brought in from outside the area, which means it looks out of place when compared to the local geology.

There have also been accidents when people have climbed over the riprap and fallen.