

Chattered, Battered or Shattered?

This exercise demonstrates how our beaches erode as a result of individual pebbles eroding.

Originally most pebbles would have come from cliff falls. As the waves break down the large pieces of cliffs the pebbles are released onto the beach. The impact of the waves then bash the uneven stones against each other chipping pieces off and smoothing the stone into rounded shapes, the longer a pebble has been rolled around by the sea, the rounder and smoother it becomes.

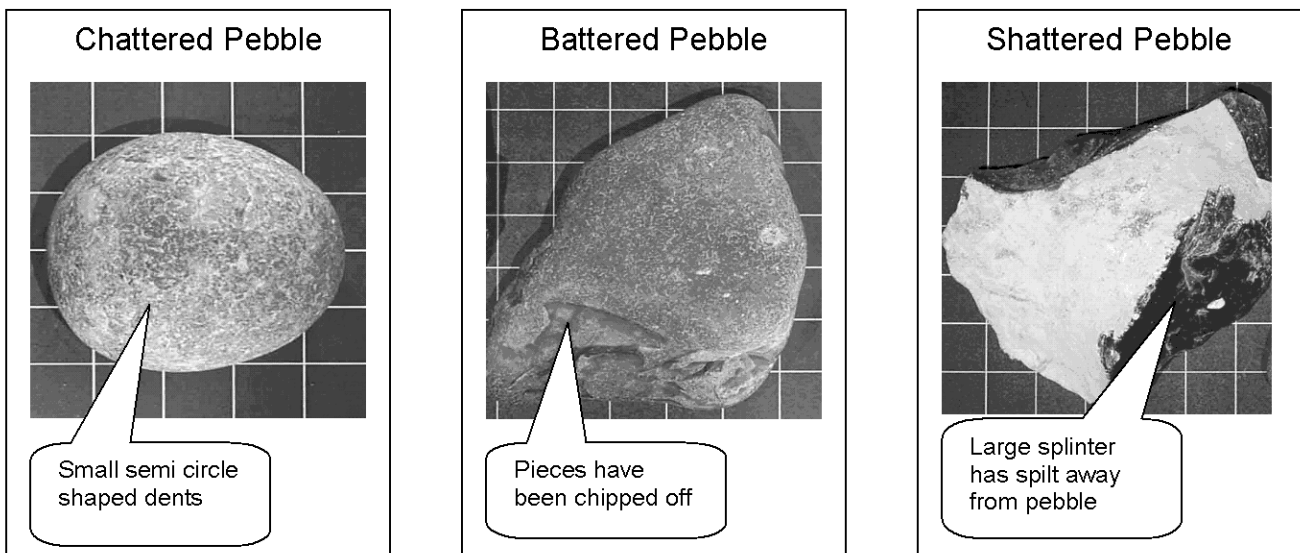
Walk along a 10m stretch of beach and find three pebbles each which have either been Chattered, Battered or Shattered.

Chattered stones are stones with “chatter marks” on them, these are small semi-circular dents found on the stones caused by waves bashing pebbles against each other. Chattered stones tend to be smooth and rounded. These pebbles have been on the beach for the longest time and are usually found nearest to the waves where they are constantly thrown about.

Battered stones have also been on the beach for a long time. These stones will probably have chatter marks on them, will appear very smooth but will still have an uneven shape. This shape of stone erodes a bit faster than the chattered stones as there are angles jutting out which can be broken off. You should be able to see dents where pieces have chipped off.

Shattered stones are usually larger and appear to be angled. They will normally have been split at some point by being thrown against other stones. You should be able to see the inside of the stone. The split or shattered parts will have been smoothed off by rubbing against other stones. However the more angled the stone the faster it will erode as there is a greater chance for jutting out parts to break off.

Once you have found your pebbles draw pictures of them on a separate piece of paper.



How do you think pebbles erode on the beach?

Why do you think the shingle has to be moved around mechanically?
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Where do you think these pebbles would originally come from?
.....

Pebble Picker

What you will need:

- * A shingle beach
- * 1 adult for each group of 4-5 children

In small groups, sit down in a small circle with lots of pebbles to the middle of the group. Select one person to be the 'Pebble Picker'. The rest of the group shuts their eyes (no cheating!). The Pebble Picker chooses a pebble from the centre of the circle, and then hands it round to each person in the group (who still have their eyes shut). After each person has felt the pebble, the Pebble Picker returns the pebble to the middle of the circle. Now everyone can open their eyes, and try to work out which pebble they were touching.

Take it in turns to be the Pebble Picker. Who is the best at guessing the correct pebble?

As an addition to this, see if the children can use words to describe the pebble they are touching.

If the pebble is being guessed easily, make the circle larger, so there are more pebbles to choose from.