## SWASH AND BACKWASH

Waves develop as circular movements in the water, caused by the action of the wind on the surface of the water (Diagram 1):



a) If you throw a beach ball or floating object out beyond the breaking waves, it does not often get washed back to the shore, but just bobs around in the water. Explain why:

As the water becomes shallower nearer the shore the circular wave breaks, sending the wave top splashing forwards, rushing up the beach (Diagram 2):







This forward movement of the water is called the **SWASH** and carries pebbles and shingle forwards up the beach.

b) Why is it called swash?

c) Does it always go straight up the beach?

The water then flows back down the beach, perhaps carrying some pebbles with it. This movement back to the sea is known as **BACKWASH**. You can feel it dragging against your ankles when paddling. It always goes back vertically down the beach due to gravity, not on an oblique course (Diagram 3):



**d)** As the water runs back down the beach two things could happen to it. What are they?

One \_\_\_\_

Two \_



