

Draw a picture of your favorite Rocky shore animal

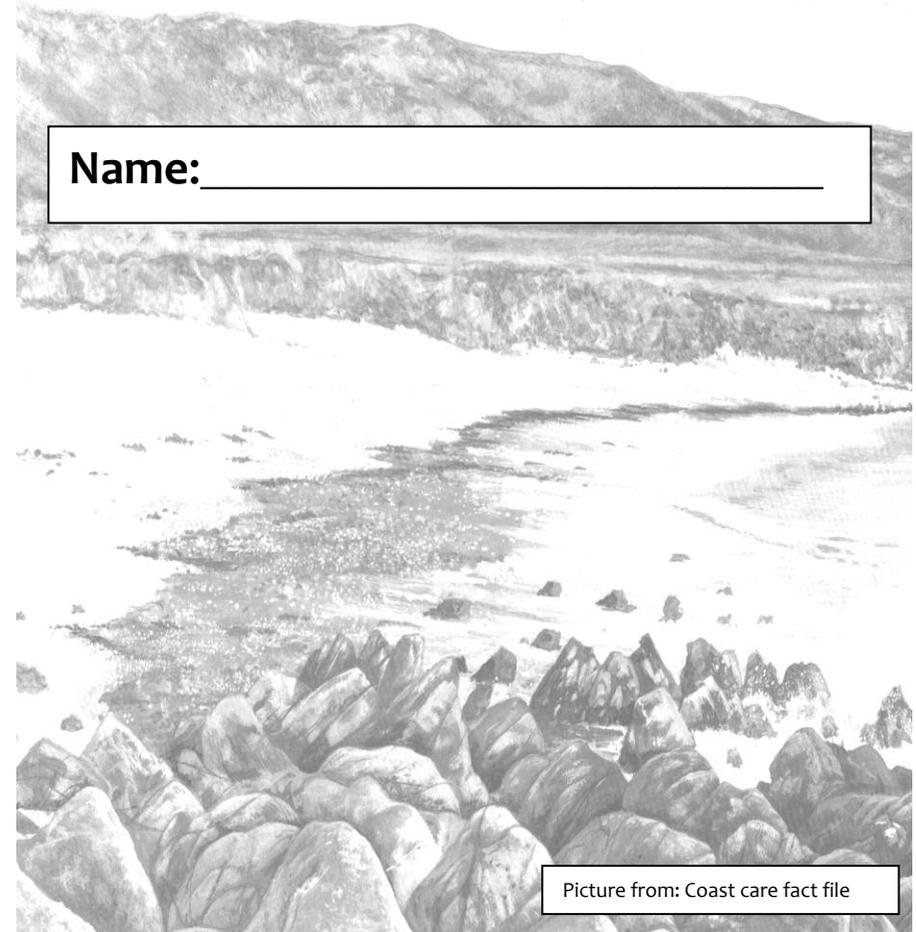
- What other animals live with it?
- How does it get its food?
- How does it protect itself?

Umdloti Rocky Shores



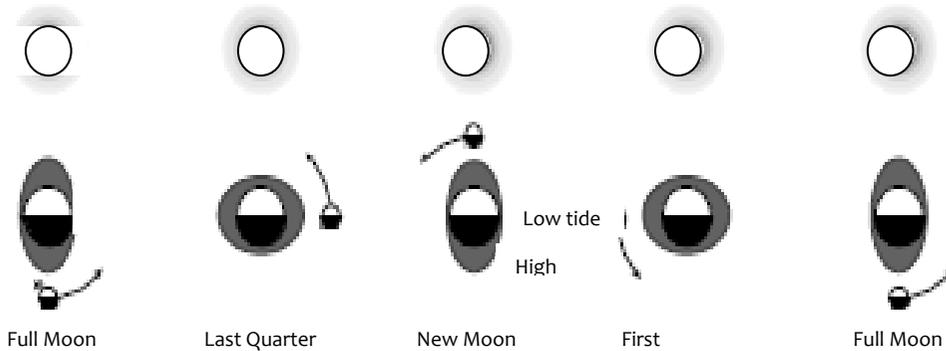
Helping people to care for our ocean

Name: _____



Picture from: Coast care fact file

The ways of the waves



Picture from: Coast care fact file

How Tides Work

Tides are the result of the gravitational force of both the sun and the moon on the earth's oceans. The moon has the greater influence as it is much closer to the earth than the sun, so the tides are said to follow a lunar cycle.

The moon's gravity pulls a "bulge" of water towards it, with the result that high tides occur on the side of the earth closest to the moon. On the opposite side, the water bulges out because of centrifugal force as the earth spins around. Since the earth rotates, each point will experience two high tides per day. As the water bulges out in these areas, it is drawn away from others, causing low tides there.

The moon takes 28 days to orbit the earth, moving a little further round the earth each day. High tides therefore occur about 50minutes later each day, or 25minutes later each tide.

Spring tides are extra high and low tides that occur every two weeks through out the year at new and full moon. At these times, the sun, the moon and the earth are all in line with each other, and their combined gravitational pull creates an extra large "bulge" at high tide. A greater area of shoreline is exposed at low tides.

Neap tides are when there is not much difference between high and low tides, and this occurs at the first and last quarter of the moon.

Tidal range – the distance between the low and high water marks can vary from place to place. In South Africa, the tidal range is usually between 1.2 and 2.5m.

Physical Factors that affect the sea shore animals

These factors are things like drying out, wave action, being eaten by a predator or trying to get food if you can't move.

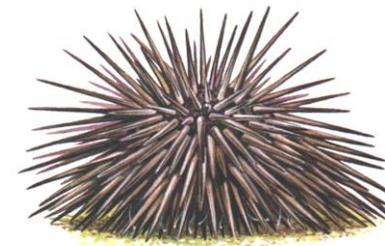
Look at the animals below and say which one of these factors they may be affected by, and the ways in which they have adapted to cope with these factors.



Mussel



Limpet



Sea Urchin



Barnacle

Examining the rocky shore

- We are going to make a detailed study of the shore and try to determine how many organisms occur in which zones.
- Start close to the sea and place down your quadrat. Count the number of animals that you find and note the number down.
- Now walk two meters up shore and place your quadrat again and repeat the process.
- Repeat this 6 times at two meter intervals. And fill in your results below.

Quadrat	1	2	3	4	5	6
Number of Organisms						

Questions:

From your findings, which quadrat had the most animals?

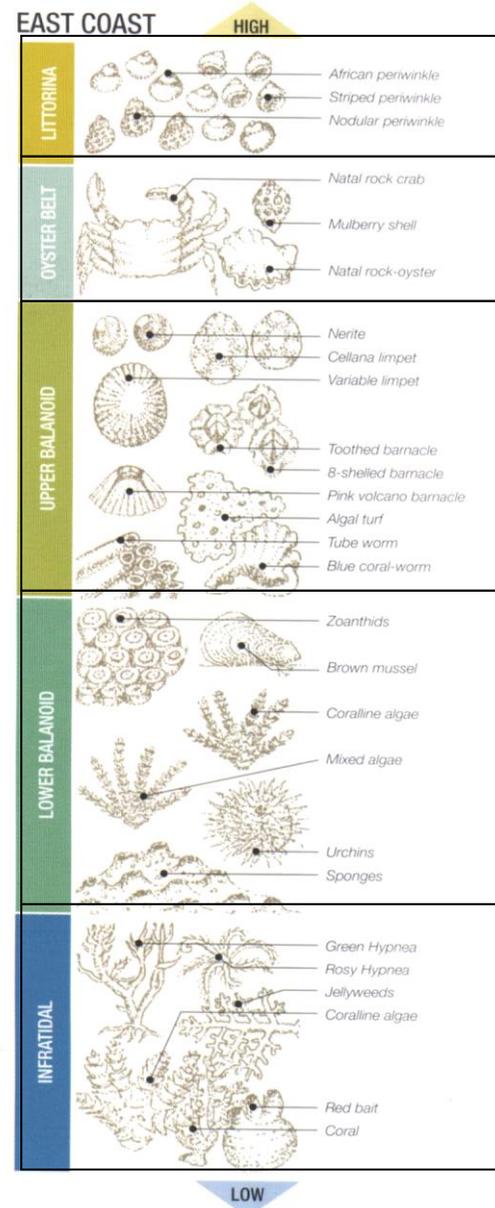
_____ Which zone
would you equate this to?

What reason could you give for so many animals in this zone?

Zonation of a Rocky sea shore

Animals on the rocky sea shore live in particular zones where the conditions best suit their particular lifestyles.

Draw lines to link the physical conditions on the right with the correct zones on the left.



Wet most of the day
Strong waves
Competition for space

Dry for more than half of the day
Weak waves
Very little seaweed & hot in summer

Dry most of the day
Small weak waves
No seaweed & hot in summer

Wet all the time
Strong waves
Many predators & lots of food

Wet half of the time & dry half of the time
Medium waves
Seaweed present

Identification



Name

Zone

Food



Name

Zone

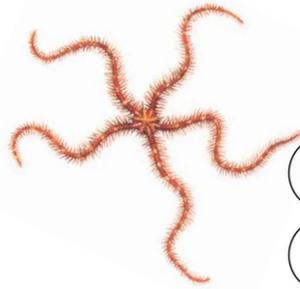
Food



Name

Zone

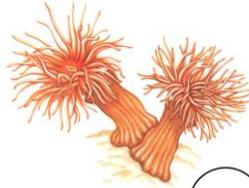
Food



Name

Zone

Food



Name

Zone

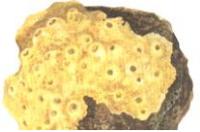
Food



Name

Zone

Food



Name

Zone

Food

Name

Zone

Food



Name

Zone

Food



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Name

Zone

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Food



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