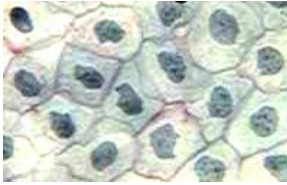


## Barnacle Investigation

Many of you have probably visited the seashore at some point in your lives. If you have, you may have noticed these small, hard, tan structures on rocks and pier pilings. Not everyone knows that they are living creatures. Let's determine how a barnacle shows each life trait.

1. Taking a look at a barnacle under a microscope reveals the following image. You can see that a barnacle has cells. Are they unicellular or multicellular? Why?

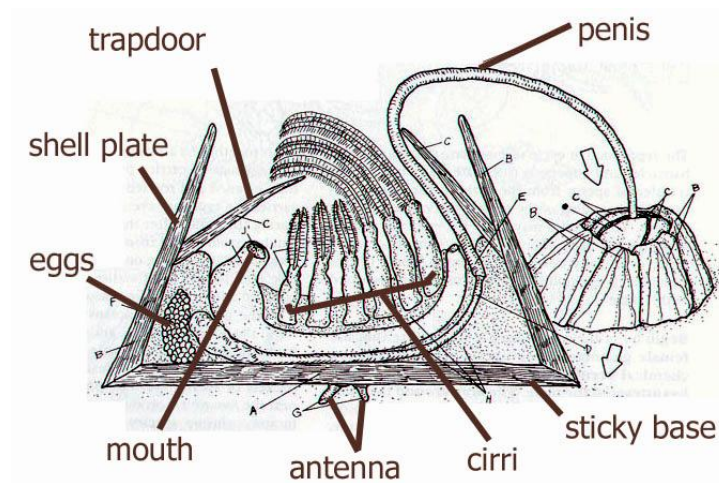


Use the information found on the following websites to answer the questions.

- ✓ <http://www.microscopy-uk.org.uk/mag/indexmag.html?http://www.microscopy-uk.org.uk/mag/artjan99/barnac.html>
- ✓ <http://www.mesa.edu.au/friends/seashores/barnacles.html>
- ✓ [http://www.reef.edu.au/asp\\_pages/secb.asp?FormNo=40](http://www.reef.edu.au/asp_pages/secb.asp?FormNo=40)
- ✓ <http://library.thinkquest.org/J001418/barnacles.html>
- ✓ <http://www.museum.vic.gov.au/crust/barnbiol.html>

2. How do barnacles grow and develop? Explain the changes they go through during their life cycle.
3. Do barnacles reproduce sexually or asexually? Explain in detail.

4. How do barnacles obtain energy? Do they eat? Do they perform photosynthesis? Are they autotrophic or heterotrophic? Explain in detail.



**Figure 1.**

5. Look at Figure 1. What structure allows them to sense changes in their environment?
6. Barnacles live on the water's edge. At high tide, they are covered with water. The water gradually recedes during low tide exposing them to the hot sun. How do they respond to this change in environment?
7. What is one condition that barnacles need to keep balanced?
8. Barnacles are constantly being crushed by the pounding waves. What structure do you think helps them respond to this environmental pressure? Explain.