AskNature Scavenger Hunt

The purpose of this activity is to get familiar with how to use the AskNature website by exploring what it has to offer. AskNature is a website that was designed for anyone who is interested in biomimicry - using examples from nature to inspire the design of solutions for human problems. It is used by engineers and designers as a resource to learn about both strategies in nature and innovative designs inspired by nature. Users can search the site by biological strategy or innovation (design) to find inspiration for new designs or learn about successful biomimicry inventions.

Connect to the Internet on your device and go to AskNature.org. Use the AskNature site to answer the questions below.

Explore Biological Strategy Pages

Each Biological Strategy page on AskNature tells a story about a phenomenon that occurs in nature. These pages are useful to people who are looking to learn more about ways that nature solves problems.

Check out what types of information you can learn from a few AskNature Biological Strategies. Using **Search** tool from the top menu, find a Biological Strategy page about how otters keep warm.

- Click on the Search tab
- Search for "otter"
- Narrow your search to "Biological Strategies"

1. Which page addresses how otters keep warm?

   Title of Page: _____

2. Explain, in your own words, the biological strategy that otters have to keep their bodies warm and dry.

   _____

   _____

   _____

   _____

Now see if you can find another Biological Strategy via a slightly different route. One of the things that makes AskNature unique from other nature websites is that it allows you to search by ***function***. In biomimicry, functions describe what a trait does for an organism

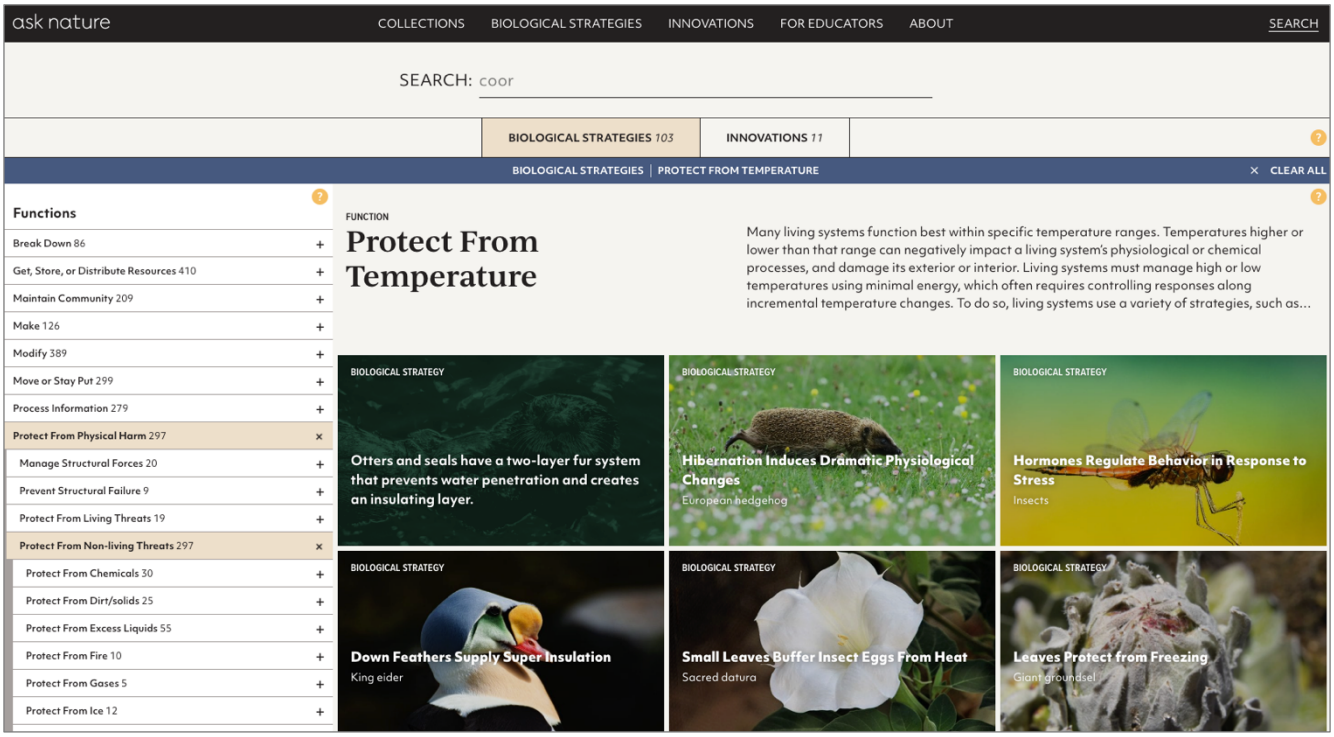
Trait: A trait describes a particular characteristic or attribute of an organism. Traits include internal and external structures, physical processes, and behaviors.

Click on "Functions Performed" in the otter Strategy page. Now you can see a list of ***functions*** related to the otter's strategy.

3. What are the functions listed?

_____

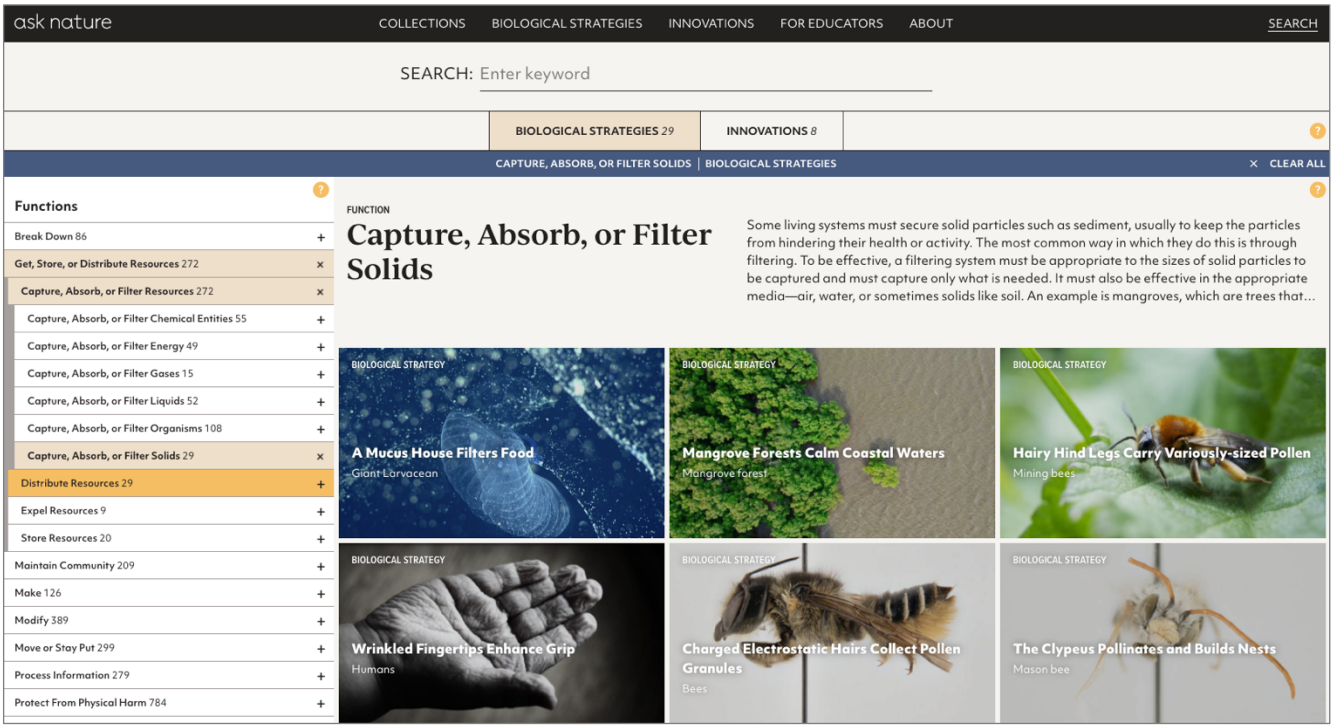
Click on "See More of This Function" to view a search result of all of the strategies on AskNature that also do that function. You will also see, in the Search feature, how this function is nestled under larger categories



This nested list of functions was created because designers who are using AskNature to inspire a solution to a problem need to be able to narrow down to a very specific function.

Functions can be used to help you search the site.

For the next few questions, pretend you are a designer looking to build a device to clean pollution from a river and you don't want your device to get clogged up. From the **Search** tool, try using Functions to narrow results by strategies to *filter solids.* It turns out nature has a lot of solutions to filter solids!



It might make sense to visit the Biological Strategies page, "*Filters Prevent Clogging.*" Find and click on that page.

4. On which two animals does this strategy page focus?

   _____

   _____

Watch the video linked from this page of the American Paddlefish feeding.

Explore Innovation Pages

Many of the Strategies on AskNature helped inspire some innovative product ideas. To learn about these biomimicry case studies, follow the instructions below to discover a few different ways to navigate to them.

5. What kind of product did the fur of otters and other mammals inspire?
   - Navigate back to the page "*Fur Keeps Heat in and Cold Water Out*" from step 2 above.
   - Follow the link from this page to its related Innovation page.
   - Title of Innovation Page: _____

6. What are some Innovations that have been inspired by nature's solutions to filtering solids?
   - Go to Search
   - Filter by Innovations
   - Filter by function - *Capture, absorb or filter solids*

   List some Innovations: _____

   _____

7. Using **Search**, see if you can find an innovation inspired by elephants.

   Title of Innovation Page: _____

Explore Collection Pages

8. Navigating to **Collections** from the top menu bar, choose a collection of Biological Strategies associated with a topic that interests you. Click into a strategy that interests you. What is one of the functions listed for this strategy? Has this strategy inspired a design? If so, what is it called? If not, write a sentence explaining how this strategy could inspire designers in the future.

   Collection: _____

   Biological Strategy: _____

   Function: _____

   Innovation (if there is one): _____

   How might this Strategy inspire a new Innovation?

   _____

   _____

After Your Exploration

Share with the whole group what interesting strategies and innovations you found while exploring question 8.

9. What excited you about the AskNature website?

10. What confused you about how the AskNature site works?