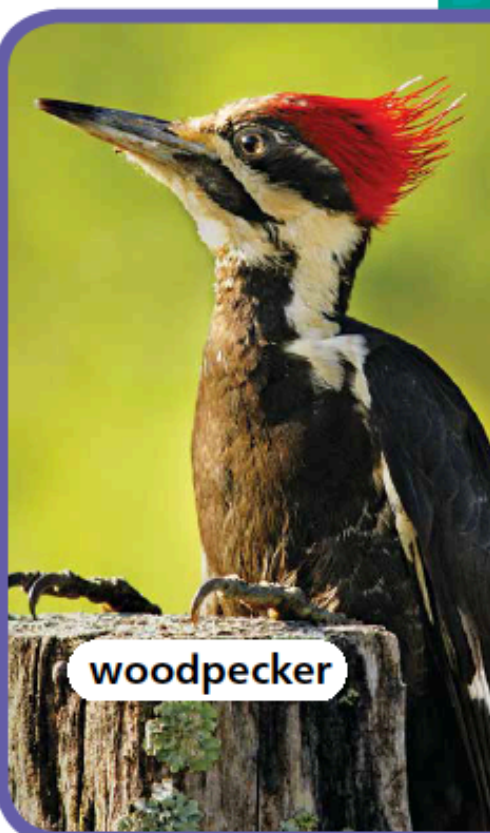




Different Shapes, Different Uses

Different birds have different beaks. Some beaks have sharp points. Some beaks are shaped like hooks.

Differentiate Which beak is the right shape for making holes in trees? Circle it.



Analyze People make tools based on animal parts. Tell something people do with a pointed tool.




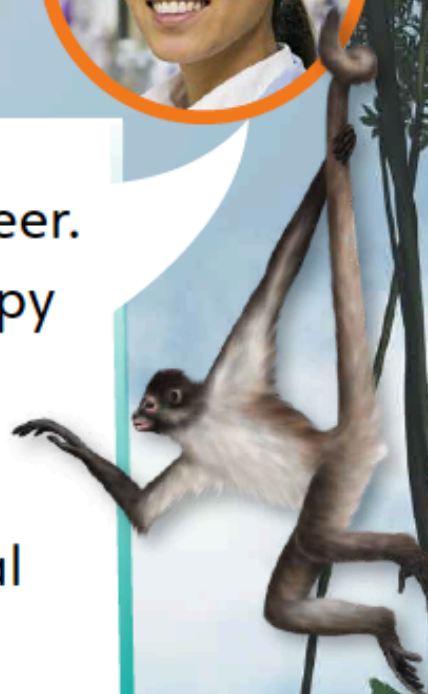
STEM NATURE Copycats

How can you copy plant and animal parts to solve a problem?



Hi! I am Dr. Basha! I am a bioengineer. I make things that help people. I copy plant and animal parts.

Look for ways plants and animals use their parts to live. Use an animal or plant part to help solve a human problem. The path shows the Quest activities you will complete as you work through the topic. Check off your progress each time you complete an activity with a **QUEST CHECK**  **OFF** .



1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.



Roots Help Plants Survive

Some plants have just one thick root called a taproot. It goes deep into the soil and gets water. The taproot helps the plant stay where it is.

Identify Find something in the picture that works like a taproot.



dandelion with taproot



tent stake



Engineer It!

Design

STEM



VIDEO

Watch a video about how bioengineers solve problems.

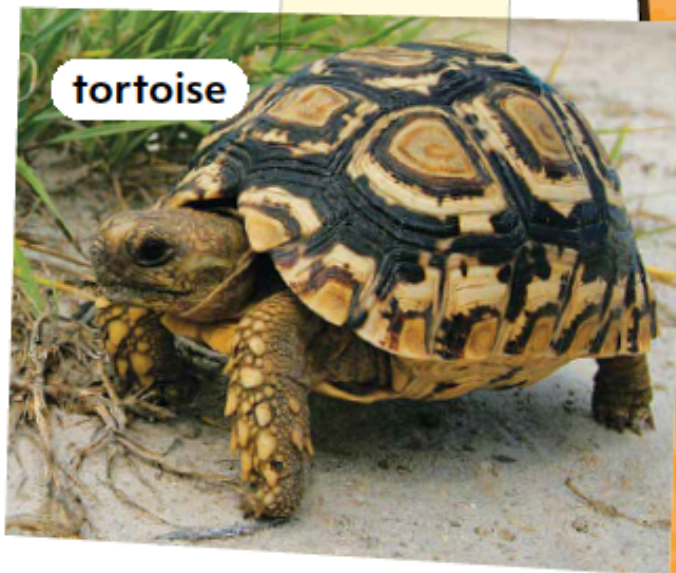
Design a Tool

Bioengineers study plant and animal parts. They might study a turtle shell to design a better bicycle helmet.

Would you like to help a bioengineer solve a problem?

Design It

Animals use tools. Look at the photos. Design a tool you can use to solve a problem.



tortoise

chimpanzee



- Choose an animal tool you will copy. Think about the tool you will make. What do you think people could use this tool for?



- Think of what you need to build the tool.
- Design the tool.
- Describe how your tool will work. How can you make it better?
