



Chimps and Tools

Audience

This activity is designed for ages 8 and up.

Goal

Students will be able to replicate how chimpanzees learn to make tools.

Objective

- To understand why the use of tools is an important chimpanzee adaptation.
- To compare how people use tools and how chimpanzees use tools.

Conservation Message

Many of the world's primates live in habitats that are currently being threatened by human activities. Most of these species live in rainforests in Asia, South America and Africa, all these places share a similar threat; agriculture and climate change. In the last 20 years some chimpanzee populations have declined by 90%. There are some easy things we can do to help these animals! Buying sustainable wood and paper products, recycling any items you can, and spreading the word about the issues.

Background Information

Chimpanzees are found in savanna woodlands, grassland-forest mosaics and tropical moist forests, from sea level to about 3,000m in elevation. They are members of the great ape group which includes orangutans and gorillas. Chimpanzees are extremely social animals that have tight knit family groups led by a dominant male. Their diet consists of fruits, leaves, nuts, honey, insects, and occasionally eggs and meat. Tool making was first observed in chimpanzees in the 1960s. This first behavior observed was a tool used for "fishing" out insects from a log. The chimp found a piece of grass and inserted it into a termite mound, the termite's bit onto the piece of grass, then the chimp pulled it out of the mound and was able to eat the termites off the grass! Since that first observation we know that chimps use tools for all sorts of different tasks. These tasks include eating, drinking, cleaning themselves, obtaining objects that are out of reach and even as weapons. They will even modify the tools they use to make them even better at reaching a goal. To get more termites out of the mounds some chimpanzees will gather sticks that have multiple leaves on them to get even more for

their meal. Each troop of chimpanzees use tools in different ways and these skills are passed on to new generations through observational learning.

Materials Needed

- Which Tool Works Best? Worksheet
- Pen or Pencil
- Nature Items (Rocks, Sticks, Twigs, Leaves, etc.)
- Hard-Shelled Nuts (Brazil Nuts, Walnuts, Chestnuts, Acorns, etc.) If nut allergy is a concern, use hard candy/filled lollipop.
- Small Dried Fruit (Raisins, Craisins, Dried Cherries, etc.)
- 2 Medium-sized Bowls

Length of Activity

30 minutes

Procedure

- Go to an outdoor area where you can find plenty of rocks, sticks, twigs and leaves. You can gather the items you will need and bring them back inside or do the activity outdoors.
- Read and preform each task on the Which Tool Works Best worksheet.
- After completing the task, answer the questions.

Extensions:

- Use different food items such as chocolate candies, marshmallows, pretzel sticks, grapes or rice.
- Use different tools found around the house such as pasta ladle, chopsticks, drinking straw, toothpicks, or a whisk (do not use fork, knife, or spoon).
- Pick up and transfer the food items with different tools into a bowl.

Which Tool Works Best?

Task 1: Ant Fishing

Chimpanzees love to eat ants and termites; they use special tools to “fish” for these insects. Place the raisins or other small dried fruit on a flat surface, line them up in a line to replicate ants marching.

Your task is to find a tool that will help you move all the “ants” into a bowl.

What tools did you try?

What tool was the most successful? Why?

What other types of food could a chimpanzee use this method for?

Task 2: Nut Cracking

Chimpanzees are very good at cracking open nuts with tools. Place hard-shelled nuts on a flat surface (concrete slab or the ground).

Your task is to find a tool that will help you crack open all the nuts without smashing the good stuff inside!

What tools did you try?

What tool was the most successful? Why?

What was the easiest type of nut to crack open?

Task 3: Collecting Water

Chimpanzees make special tools to collect water. Fill a bowl with water and place another empty bowl next to it.

Your task is to find a tool that will help you move water from the full bowl into the empty bowl. Remember, you must use a tool, and cannot simply pour the water from one bowl to the other bowl.

What tools did you try?

What tool was the most successful? Why?

Why is this skill important for chimpanzees?
