ACTIVITY AT HOME

PINK PALACE MUSEUM

Life Science

Engineering

AMAZING ANIMAL ARCHITECTURE: ANT BRIDGES

Determine how ants build bridges.

Materials

2 cardboard boxes with flaps (any size)
10-20 clothespins
10-20 pipe cleaners
Scissors
Something heavy to weigh down boxes

Procedure

- Place both boxes on an even surface so that their flaps are a foot apart.
- Cut all of your pipe cleaners in half. Taking 1 pipe cleaner, wrap it around a clothespin and twist the ends so that the pipe cleaner is secured. It should look like your clothespin has 2 fuzzy legs. Wrap another pipe cleaner around it so that it has 4 legs. This is going to be your ant! Repeat this process with the rest of the clothespins to make an army of ants.
- Your goal is to connect your ants together to create a bridge between the 2 boxes. You may use the “legs” or “mouth” of the ant to connect them together. How many ants did it take to connect the 2 boxes? Is your bridge sturdy? How could you make it stronger?
- Retry this experiment as many times as you want. Try changing just one thing about the experiment at a time or testing your bridge by placing “ants” on it.

Results

Ants can create bridges with their bodies to travel between objects.

Source: Princeton University

Why?

Army ants are nomadic ants that, despite forming colonies numbering in the millions, never build a permanent home. Instead, these ants create temporary structures using just their bodies. While marching along in search of food, these ants will lock themselves together to create bridges over gaps in their path. With extremely poor eyesight and a tiny brain, these ants use just their instincts to coordinate construction and deconstruction, deciding where and when to build, and calculating how many ants they have to spare to build the bridge.

To learn more about life science, check out the Pink Palace Museum's *Natural History* Exhibits.