



Balancing Bats

Create a paper bat that can balance almost *anywhere* using its center of gravity. Then, learn some amazing facts about the world's only flying mammal. Maybe bats are not so creepy after all!

TEKS:

SCI 2.9 C: The student is expected to compare the ways living organisms depend on each other and on their environments such as through food chains.

SCI 3.6 C: The student is expected to observe forces such as magnetism and gravity acting on objects.

SCI 4.6 D: The student is expected to design a descriptive investigation to explore the effect of force on an object such as a push or a pull, gravity, friction, or magnetism.

Materials:

- Balancing Bat template (attached)
- Construction paper or cardstock
- Colored pencils or markers
- Pencil
- Scissors

Experiment/How-To:

1. Print the attached Balancing Bat template. If you print the template directly onto construction paper or cardstock, skip to step 4.
2. Use scissors to cut out the Balancing Bat and place it onto a sheet of construction paper or cardstock.
3. Trace around the outside of the template with a pencil.
4. Use scissors to cut out the construction paper/cardstock Balancing Bat.
5. Use colored pencils or markers to decorate your bat.
6. Hold out your index finger. Place the bat on your finger where it says "balance on your finger here" and see what happens!

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STEM Connection:

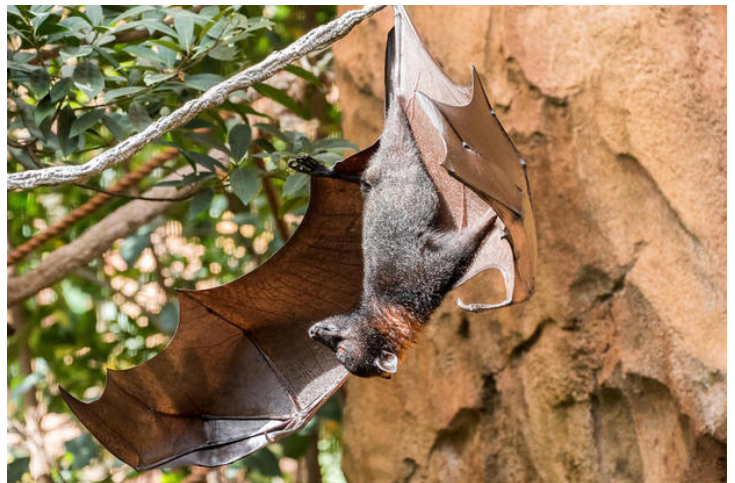
Were you able to get the bat to balance on your finger? If so, that means that you found the bat's center of gravity. The spot marked "balance here on your finger" is the location where the bat's weight is equal on either side of your finger. That means that gravity, or, the force that pulls things towards the earth, is evenly distributed on each side of the bat. If gravity is the same on both sides of the bat, neither side is able to pull the bat toward the ground, so it balances! Can you walk around with the bat balanced on your finger? Or, can you balance the bat on top of your head?

Did you know that many people are scared of bats? Bats are nocturnal, meaning they are active during the night, and they are sometimes associated with vampires. This makes bats one of the most popular "Halloween animals." However, there is nothing to be afraid of! In fact, there is an entire career dedicated to studying bats. Chiropterologists study these flying creatures, and they would probably want you to know that bats are the only mammal that can fly, and that there are over 1,400 species of bats in the world!

Some bats are really tiny—the Bumblebee Bat is the size of a bumblebee—and some are very big, with wingspans of up to 6 feet. Also, bats are incredibly important for our ecosystem. They eat mosquitoes, disperse seeds, and pollinate over 300 different species of fruit. Without bats, we would not have bananas, mangos, or even *chocolate*. Trick-or-treating for Halloween candy would not be possible without the help of bats!



The Bumblebee Bat



The Golden-Crowned Flying Fox

Career:

Chiropterologists study bats. They study how bats live and their migration patterns. They work with environmental conservationists to help protect the bats and their habitats so that they can continue to live and be studied for many years to come.

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Resources:

<https://www.businessinsider.com/bats-creep-a-lot-of-people-out-here-are-5-of-the-coolest-species-2016-7#vampire-bats-4>

<https://www.doi.gov/blog/13-facts-about-bats>

Photo Sources:

<https://www.redbrick.me/creature-feature-bumblebee-bat/>

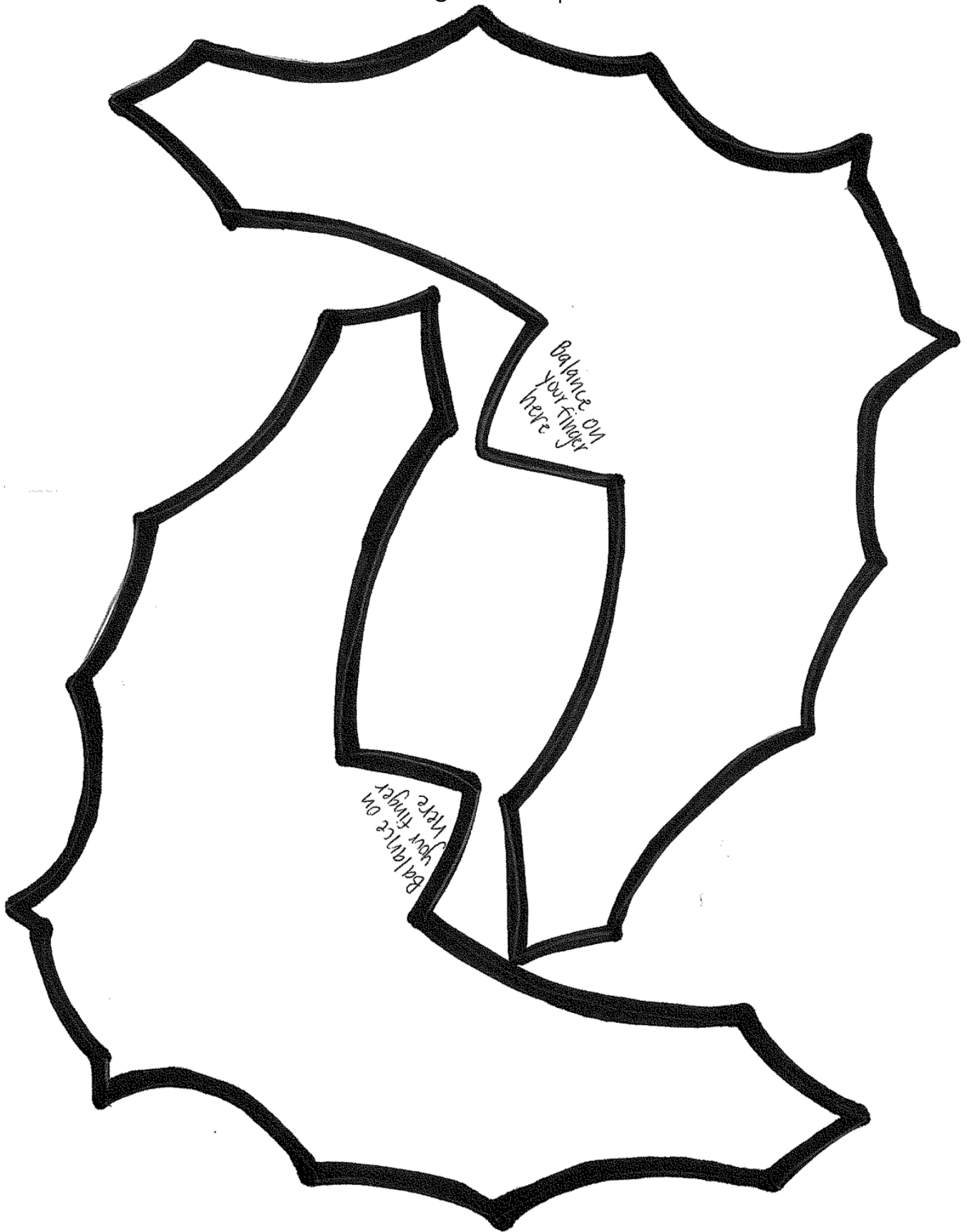
<https://www.cbsnews.com/pictures/largest-animals-of-their-kind-on-earth/14/>

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Balancing Bat Template



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