

# Pollinator Shadow Puppet Show

A STEAM activity for ages 5 & up

Using common household materials, children and families can create a pollinator shadow puppet show using the provided patterns and a little creative ingenuity!

## Cultural Connection:

The art of shadow puppetry has long been used as a source of entertainment across cultures, particularly in Egypt, India, China, Turkey, and Indonesia, and was later introduced in Europe around the 17th century. Some say these shadow puppet shows were the forerunners of modern movies! Typically a master puppeteer performs a tale or story along with live music. The stories told often involved constellations, history, or current issues affecting the community.



Photo: Pixabay

## Fun Fact:

In China, some of the earliest shadow puppet screens were made from the bark of mulberry trees, and created by pounding the bark into thin pieces. The puppets themselves were made of leather and moved using sticks of bamboo or cane.

## Science Connection:

A shadow forms when an opaque or translucent object blocks light. **Opaque** means no light will pass through, and **translucent** means some light will pass through. When an object blocks the light's path, darkness appears on the other side, thus creating a shadow. For example, when the sun casts light on a tree, it provides shade on a sunny day.

## Did you know?

Shadows have been used to tell time for centuries. As the sun moves across the sky during the day, the shadow it casts on the sundial moves too. The number the shadow covers on the sundial indicates the time of day. The object on the sundial that blocks the sun's light is called a **gnomon**.



Photo: Pixabay

## Supplies needed:

- Pollinator silhouette templates
- Copy paper
- Scissors
- Glue
- Dowel rods or skewers (string also works)
- Tape
- Medium size cardboard box
- Pencil
- Flashlight

## Optional:

- Hole punch
- Exacto blade or utility knife for more precise cuts (with parental supervision)
- Brads to create movement (i.e. the wings of an insect can move if brads are attached rather than glued)



# Let's Get Started!

## Step 1:

Print silhouette patterns on copy paper and carefully cut out.  
(Note: the tree pattern should be attached to the box.)

**ProTip:** A hole punch will create interesting patterns and designs on your pollinators.

## Step 2:

Tape the silhouettes to the dowel rods or string. These will be the moveable pieces for the shadow puppet show.

**ProTip:** For more options, if you have old or damaged books lying around, those can be cut and used to make the silhouette puppets too.

## Step 3:

Assemble your box. Cut out the front of the box out leaving at least 2 inches around the opening. Tape or glue white paper inside of the box to make a screen. This will be the backdrop for the puppet show.

**ProTip:** Use the box flap over the top of the screen to create an interesting stage design.

## Step 4:

Cut openings on the sides of the box where you will be operating the puppets, and place the flashlight inside.

## Step 5:

Lastly, darken the room and turn on the flashlight. Now your stage is ready for a shadow puppet show!

## Step 6:

Write a fun story about pollinators. Give your puppets names, and think of a story, whether fiction or nonfiction. Here's a little intro to help you get started!

*Not long ago in a land not so far away lived a beautiful hummingbird named Henry Hummingbird, a bee named Beatrice Bee, and a butterfly named Betty Butterfly. All lived happily at a San Antonio park with lots of friends in the animal kingdom where they shared hundreds of acres to play, eat, and sleep....*



## Additional Resources

Only the Shadow Knows—The Science of Shadow Puppetry

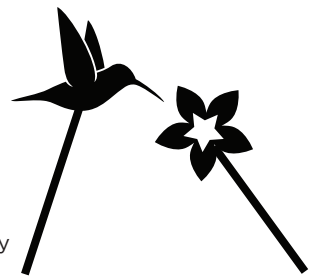
[www.clevelandart.org/lesson-plan-packet/only-shadow-knows-%E2%80%93-science-shadow-puppetry](http://www.clevelandart.org/lesson-plan-packet/only-shadow-knows-%E2%80%93-science-shadow-puppetry)

The Science of Shadow Puppets

[www.kennedy-center.org/education/resources-for-educators/classroom-resources/lessons-and-activities/lessons/6-8/the-science-of-shadow-puppets/](http://www.kennedy-center.org/education/resources-for-educators/classroom-resources/lessons-and-activities/lessons/6-8/the-science-of-shadow-puppets/)

Light and Shadow (K-2 lesson plan)

[www.youngscientistlab.com/sites/default/files/lesson\\_plans/K2\\_LightandShadow.pdf](http://www.youngscientistlab.com/sites/default/files/lesson_plans/K2_LightandShadow.pdf)



# Patterns

