



WHAT MAKES A SHADOW?

DISCOVERY PLAY ACTIVITIES WITH YOUR YOUNG CHILD



ABOUT THIS ACTIVITY:

Encourage your child to explore creating shadows by using a flashlight, sunlight, or lamp and placing their hands, toys, or objects in front of the light.

Help your child notice how shadows form when light is blocked and how shadows change size, shape, and position when objects or the light source moves closer or further away.

As your child tests different objects and materials, they begin to understand which objects block light, let it through, or partially show light.

STEM LEARNING AREAS:

Physical Science: Concepts related to objects or things, what they do, and how they move

- **Light:** Helps us see and when blocked, makes a shadow

Math: Concepts related to numbers, patterns, shapes, and space, and how to use them to solve problems

- **Distance:** How far apart things are or how far is needed to go to get from one place to another

WHAT DO I NEED?:

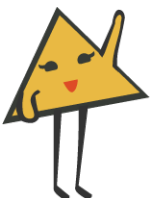
- Light source: Flashlight, Lamp, Sun
- Household items to block light (toys, cooking utensils)

WHAT CAN I TALK ABOUT?:

- Sun
- Light: Block, Opaque, Transparent, Translucent
- Shadow
- Size: Big/Small
- Spatial Orientation: Distance, Close/Far

WHAT CAN I ASK?:

- What do you notice?
- What happens to the shadows when we move? What happens to the shadows when we move the objects?
- What do you think would happen to the shadow if we took the light away? Will the shadow go faster? Slower? Will the shadow get bigger? Smaller?





WHAT MAKES A SHADOW?

ADAPTATIONS FOR DISCOVERY PLAY ACTIVITIES WITH YOUR YOUNG CHILD

Every child is different. Do what works best for encouraging your child's independent exploration during this suggested playtime activity. These are only suggested activity adaptations. Consider consulting your child's care team first.



Follow your child's lead and interests. Enthusiastically ask your child questions about what they are doing and what they like.



Answer your child's questions. If you do not know the answer, work together with your child to discover the answer.



Encourage your child to participate in the activity as much as possible. Praise your child's efforts and successes.

ENVIRONMENT

- If possible, limit background noise and distractions
- Wear sunglasses or hat if sensitive to bright light
- Use modified or flexible seating
- Place activity items on an anti-slip mat or in a container or tray
- Place objects within reach

MATERIALS

- Have child's assistive technology ready and available, including augmentative & alternative communication (AAC) device and/or power wheelchair
- Add additional materials to flashlight and objects to make it easier to grasp, lift, or turn

INSTRUCTION

- Use a variety of methods of communication (sign language, gestures) to meaningfully engage children
- Use pictures or icons to signal next steps
- Provide prompts to help the child create a shadow and help the child imitate



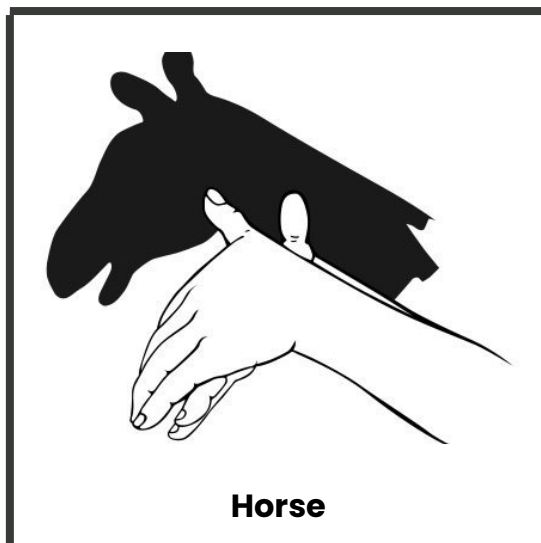
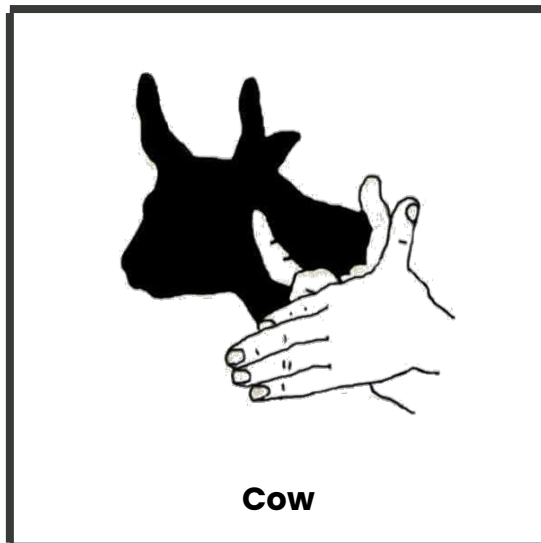
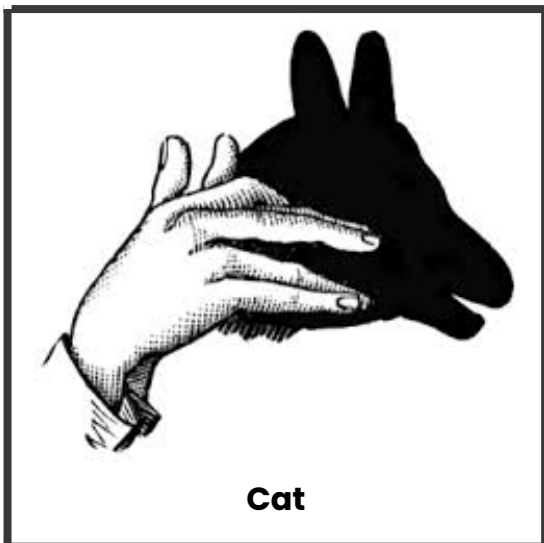
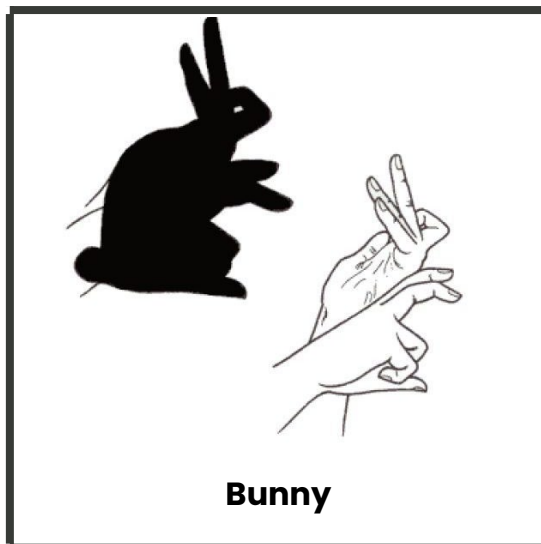
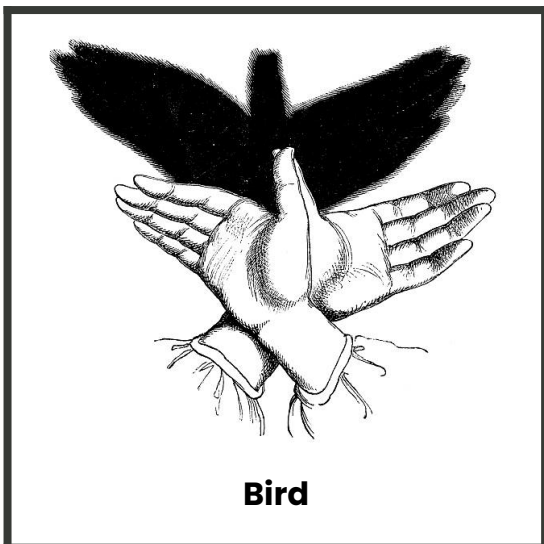
Need visual cues?

Visit [STEMIE's Visual Cue Library](#) or check out STEMIE's tips for creating and using visual supports with [A Guide to Visual Supports](#).



WHAT MAKES A SHADOW?

VISUAL CUES FOR DISCOVERY PLAY ACTIVITIES WITH YOUR YOUNG CHILD





WHAT MAKES A SHADOW?

ACTIVITY IDEAS FOR DISCOVERY PLAY ACTIVITIES WITH YOUR YOUNG CHILD

ADDITIONAL ACTIVITY IDEAS:

- Compare and contrast shadows of different sized objects (blocks, balls, spoons) with a single light source and with two or more light sources. Create a visual chart to capture the data.
- Trace shadows created by toys on paper.
- Use hands to create animal shadows (see page 3 for ideas).
- Go outside and 'dance' with your shadow.
- Check out these great books about shadows:
 - *Bear's Shadow* by Frank Asch
 - *Moonbear's Shadow* by Frank Asch
 - *The Snowy Day* by Ezra Jack Keats

