

Topic: Celebrating light and sound

Producing a light and sound extravaganza

Lesson concepts

- Light and sound are produced by a range of sources and can be sensed
- People use science in their daily lives
- Questions can be responded to
- Investigations can explore and answer questions
- Observations can be compared with others
- Observations and ideas can be represented and communicated

Today students will:

- ▶ demonstrate ways in which light and sound can be used and changed.

Resources

Digital

Video — Behind the scenes: Show of hands (2:07)

Sheets

Sheet 9 — 'The three billy goats gruff'

Sheet 10 — Billy goat puppet outlines (cut out outlines prior to lesson)

Find and prepare

Sound recording device (for example: mobile phone)

Materials to make/change light or sound, for example: plastic container with lid, cardboard box, aluminium foil, cellophane, coloured paper (for example: tissue, A4 paper), bubble wrap, empty plastic bottle to use as a shaker, items to put in shaker (for example: pebbles, rice, confetti, sand, water), rubber bands, drinking straws, cardboard rolls (for example: postage tubes, kitchen wrap rolls), rulers, tins with lids (but no sharp edges)

Thin card / stiff paper

Scissors

Glue, tape and reusable adhesive

Drinking straws, iceblock sticks or pencils to attach to shadow puppets

Exercise book

Key terms

light, sound

For definitions and explanations of terms, please see the [Glossary](#).

Learning alerts

Be aware of students selecting materials and objects unrelated to producing light and sound effects.

Suggested next steps for learning:

Remind students that the purpose of the activity is to create a sound/light show, rather than a play.

Lesson

Consolidate learning

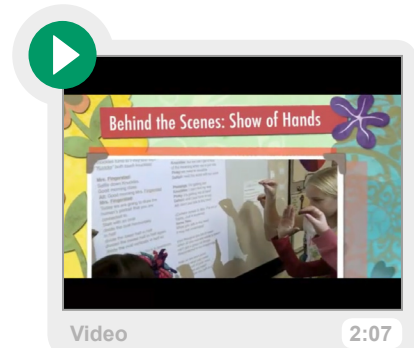
Say to students

- ☞ In this lesson, you will have the opportunity to demonstrate your science knowledge and understanding by planning a performance of light and sound.
- You will have time in this lesson to plan and prepare your show.
- The video you're about to view shows how a class of students planned their light and sound performance of a shadow puppet show. ☞

1. View the **Video — Behind the scenes: Show of hands** (Tricia Fuglestad, Vimeo).

In this video, students are creating a shadow puppet show for an audience. They:

- work out how to create the puppets
- practise telling the story
- draw a story map to plan
- create sound effects (for example: slapping knees)
- practise their shadows and their storytelling
- record their voices telling the story
- use a camera to take photos and videos of the shadow puppets.



Fuglestad, Tricia, *Behind the Scenes: Show of Hands* <http://vimeo.com/19876918> CC BY-NC 3.0 creativecommons.org/licenses/by-nc/3.0/

Investigate ways to produce light and/or sound effects

Say to students

- ☞ Now, it's time for you to plan your own performance. You can choose a story you know well, or I have the story of 'The three billy goats gruff' and the shadow puppet shapes for it. ☞

2. Display **Sheet 9** — [‘The three billy goats gruff’](#) and read to students.
 - a. Discuss the events in the story and possible sound effects using everyday objects.

Focus question

Q. *How will you make sounds that suit?*

A. For example: I can use a recorder to make bird sounds and tap a block of wood with a stick to make the sound of the goats crossing the bridge.

- b. Read through the story slowly and ask students to try out objects and materials to create the desired sound effects at the appropriate time in the story.
- c. Encourage students to change sound effects to suit the different-sized goats (for example: a softer sound for the little goat and a louder sound for the big goat).
- d. Practise sound effects while you narrate.
- e. Record the narration of the story with sound effects (optional).

Prepare presentation using appropriate light and/or sound effects

3. Display character outlines cut from **Sheet 10** — [Billy goat puppet outlines](#) and assist students to glue on card and attach straws, iceblock sticks or pencils to these to create shadow puppets.

Note

As these outlines are for shadow puppets, they do not need to be coloured in — the shape is the relevant part.

Say to students

“ During the next science lesson, you will make a video of your puppet show for an audience. You will use the puppets while the narration and sound effects are being played. ”

Encourage students to practise using their puppets with the narration while the sound recording is played, or while you read the story and make the sound effects.