

# GRADE 1 SCIENCE

## Key Features

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### Focus Areas

- the relationship of vibrations and sound,
- light travels from place to place, allowing objects to be seen,
- communication with light and sound,
- structure and function of plants and animals,
- parent and offspring behaviors for survival,
- motion of the sun, moon, and stars in the sky, and
- the amount of daylight through the year

### By the end of Grade 1, students can

- Design simple tests to gather evidence.
- Use observations and texts to communicate new information.
- Use tools and materials provided to design a device that solves a specific problem.
- Show how sound can make matter vibrate, and vibrating matter can make sound.
- Observe that objects in darkness can only be seen when illuminated by a light source.
- Investigate the effect of placing objects made with different materials in the path of a beam of light.
- Explore how light and sound can be used to communicate over long distances.
- Design a solution to a human problem by mimicking plants or animals.
- Identify patterns in parent and offspring behavior that help offspring survive.
- Observe that most young are like, but not exactly like, their parents.
- Describe patterns of the sun moon and stars.
- Relate the amount of daylight with the time of year.

## Home to School Connections

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### Questions you can ask your learner could include:

- How is your favorite sound made?

- What do we use to help us see in the dark?
- How do birds communicate over long distances?

### Questions you can ask your learner's teacher could include:

- What vocabulary is used when discussing the external features of plants and animals?
- How does science relate to everyday situations?
- What are some places in the community where we can learn science as a family?

### Activities and learning you can do outside of the classroom to support your learner could include:

- Pluck a stretched string to observe the vibration.
- Hold a piece of paper near a speaker playing sound and observe how it moves.
- Place an object in the path of a beam of light (sunlight, flashlight) and observe what happens.
- Go into a dark room and look for objects creating light. Discuss where the source of light is from (electricity, sunlight).
- Listen to the sounds of nature and identify ways animals communicate with one another, such as birds chirping or insects creating vibrations.
- Observe how animals use their body parts in different ways (protection, movement, grasping) and discuss how the different parts of plants (roots, stems, leaves, flowers, fruits) help them survive.
- Identify the signals made by offspring (such as crying or cheeping) and the responses of the parents (such as feeding, comforting, or protecting the offspring).
- Identify leaves from the same plant have the same shape and differ in size.
- Keep a moon journal. Go out and observe the moon, note the moon's shape and position in the sky, and make drawings.
- Trace your shadow with sidewalk chalk every half-hour to observe the movement of the sun over the course of the day.
- Record the daily sunrise and sunset times daily for a week through observation or published resources.

## Books

- Bang, Molly. *One Fall Day*
- Bernard, Robin. *A Tree for All Seasons*
- Carle, Eric. *Papa, Please Get the Moon For Me*
- Davies, Jaqueline. *The Boy Who Drew Birds: A Story of James Audubon*
- Diehn, Andi. *Waves: Physical Science for Kids*
- Fogliano, Julie. *And Then It's Spring*
- Fowler, Allan. *So That's How the Moon Changes Shape!*
- Frost, Helen. *Monarch and Milkweed*
- Gibbons, Gail. *Sun Up, Sun Down*
- Goldstone, Bruce. *Awesome Autumn*
- Jenkins, Steve and Robin Page. *Animals in Flight*
- Rocco, John. *Blackout*
- Rylant, Cynthia. *In November*
- Schwartz, Corey Rosen and Coulton, Beth. *Goldi Rocks and the Three Bears*
- Sidman, Joyce. *Swirl by Swirl*
- Stewart, Melissa. *Feathers: Not Just for Flying*
- Trumbauer, Lisa. *All About Sound*

## Resources

- American Museum of Natural History: Ology (<https://www.amnh.org/explore/ology>)
- Britannica Kids (<https://kids.britannica.com/>)
- CK-12 Foundation: (<https://www.ck12.org/student/>)
- Discus Kids (<https://www.scdiscus.org/discus-kids>)
- Edventure Children's Museum (<https://edventure.org/>)
- Exploratorium (<https://www.exploratorium.edu/>)
- Khan Academy Kids (<https://learn.khanacademy.org/khan-academy-kids/>)
- NASA Kid's Club (<https://www.nasa.gov/learning-resources/nasa-kids-club/>)
- PBS Kids Science (<https://pbskids.org/games/science>)
- South Carolina State Museum (<https://scmuseum.org/>)