

It's for the Birds

AFTER 3: Feeder Design Challenge

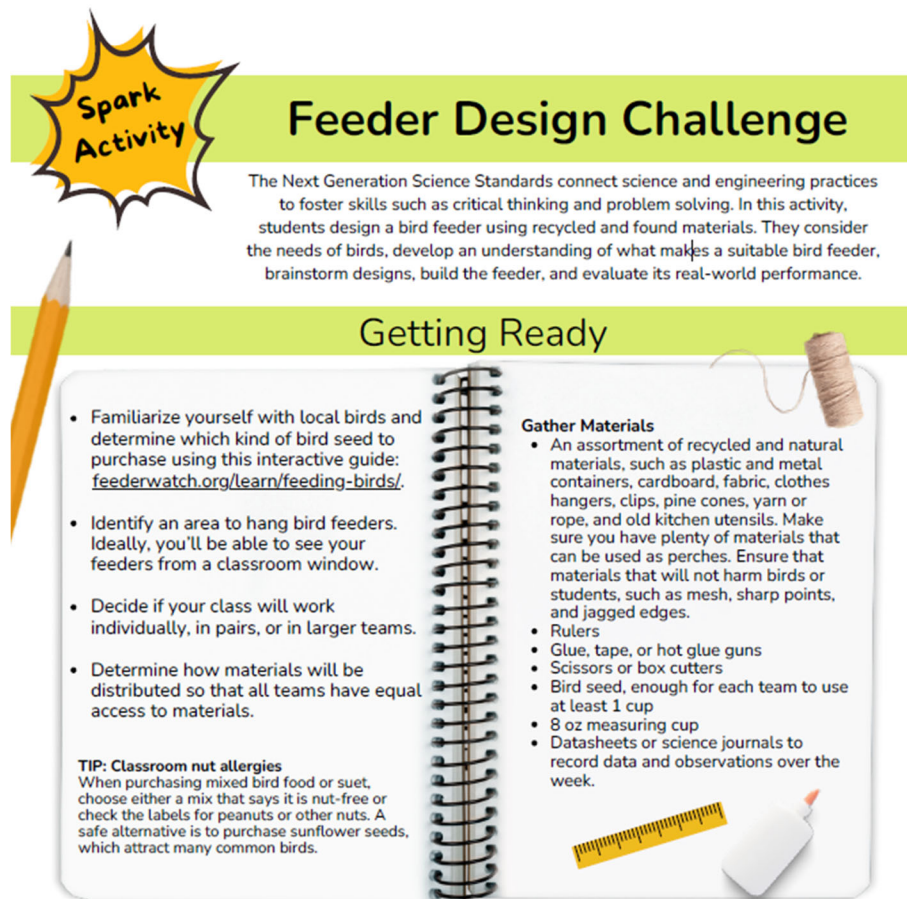
After your visit to apply knowledge about bird diet and habitat to building bird feeders. Students design a bird feeder using recycled and found materials. They consider the needs of birds, develop an understanding of what makes a suitable bird feeder, brainstorm designs, build the feeder, and evaluate its real-world performance.

Estimated time: two 45 minute sessions

Materials & Instructional Strategy

For all lesson components, see the downloadable PDF of the Feeder Design Challenge from Cornell University.

<https://www.birds.cornell.edu/k12/spark-guide-feeder/>



Spark Activity

Feeder Design Challenge

The Next Generation Science Standards connect science and engineering practices to foster skills such as critical thinking and problem solving. In this activity, students design a bird feeder using recycled and found materials. They consider the needs of birds, develop an understanding of what makes a suitable bird feeder, brainstorm designs, build the feeder, and evaluate its real-world performance.

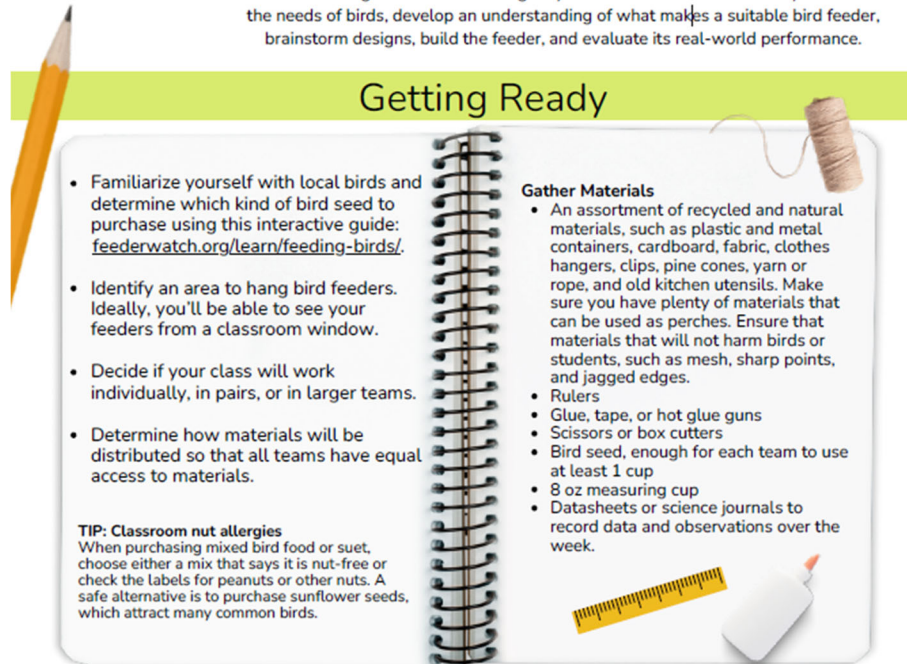
Getting Ready

- Familiarize yourself with local birds and determine which kind of bird seed to purchase using this interactive guide: feederwatch.org/learn/feeding-birds/.
- Identify an area to hang bird feeders. Ideally, you'll be able to see your feeders from a classroom window.
- Decide if your class will work individually, in pairs, or in larger teams.
- Determine how materials will be distributed so that all teams have equal access to materials.

TIP: Classroom nut allergies
When purchasing mixed bird food or suet, choose either a mix that says it is nut-free or check the labels for peanuts or other nuts. A safe alternative is to purchase sunflower seeds, which attract many common birds.

Gather Materials

- An assortment of recycled and natural materials, such as plastic and metal containers, cardboard, fabric, clothes hangers, clips, pine cones, yarn or rope, and old kitchen utensils. Make sure you have plenty of materials that can be used as perches. Ensure that materials that will not harm birds or students, such as mesh, sharp points, and jagged edges.
- Rulers
- Glue, tape, or hot glue guns
- Scissors or box cutters
- Bird seed, enough for each team to use at least 1 cup
- 8 oz measuring cup
- Datasheets or science journals to record data and observations over the week.



Distributing Materials

Distributing materials for the challenge can be chaotic with larger groups. To streamline, consider:

- Categorizing materials by size and allocating a quantity from each category to every group, e.g., one large item, two medium items, and five small items.
- Implementing a point system for material categories, limiting students to a certain number of points to "purchase" supplies. Assign a higher point value to larger or more desirable items, with smaller items like perches worth fewer points. This fosters critical thinking and creativity in designs.

Explain your distribution method clearly and let students review materials before starting their designs.

