

4-H is an opportunity to try new activities and learn new skills. If you're looking for an idea and want to try something new, check out the projects below. 4-H Friday will be created weekly with a variety of projects and skill levels highlighted each week. Please remember the social distancing guidelines while doing these projects. If you would like to take a picture of you or your family doing one of these 4-H projects, feel free to email it to me at penny.tank@wisc.edu, with the subject line: 4-H Friday Photo and each family will be entered into a drawing at a later date for some special gifts! I may even ask for your permission to post a few on Facebook or our website/newsletter. We have some supplies at the Extension Office that could possibly be mailed to your home if needed. Email Penny to discuss. *Penny Tank, 4-H Program Educator*

Straw Rockets



UW-MADISON EXTENSION

Did You Know?

The modern rocket design was created in the beginning of the 20th century. Rocket designs are still improving today. Engineers develop new rockets using control variables. By changing one variable at a time they can determine if a change will increase or decrease performance. Designs might fail. Engineers use those trials to improve designs.

Design A Straw Rocket

1. Gather supplies
2. Cut two labels in half the short way to make four 1" x 1 1/4" labels.
3. Wrap one label around the end of the *larger* (milk shake) straw; seal completely to make a rocket nose cone.
4. Attach both ends of the three remaining labels at the opposite end of the same straw.
5. Stick the adhesive together and crease to make three rocket fins.
6. Test fire the rocket by inserting a *smaller* (drinking straw) inside of the larger straw rocket.
7. Ready to launch? Stand at the launch line (marked by masking tape) Aim the rocket into the air, away from anyone else and launch by blowing hard.
8. Create a flight log to record each person's distance.
9. Remember health and safety: discard the smaller straws after using them and only launch rockets in an orderly fashion at the official launch line one at a time so nobody gets hit.
10. How did it go? Hoping it would go farther? Try changing the fins or change the nose cone label. Does a shorter or longer straw make a difference in the flight?

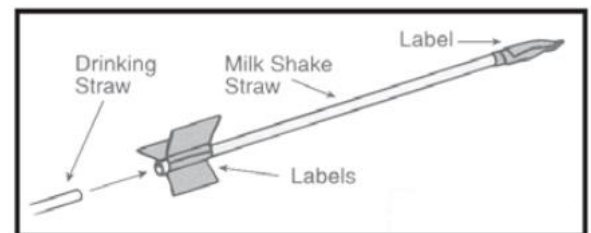
4-H Project Area: Aerospace

Life Skill: Inquiry

Time: 20-30 minutes

Supplies:

- 2-1"x2 1/2" adhesive labels
- 1 smaller drinking straw
- 1 larger milkshake straw
- Scissors, masking tape
- Tape measure
- Paper to create a flight distance log per person



Reflect:

- What happened when you made changes to the fins of your rockets?
- How did the changes affect your straw rocket's flight?

Science of Sound

Did you know that sound travels in waves, just like the waves you see in water? Sound travels very quickly—up to 770 miles per hour! Compare that to a car that travels at 55-70 miles per hour on the highway. Make your own pan flute out of straws, experiment with sound, and make your own music!

Supplies:

- ❖ 6-8 drinking straws
- ❖ Tape
- ❖ Scissors
- ❖ Strips of paper to decorate pan flute or colored tape



Directions:

1. Cut straws to different lengths. You can use the left over straw pieces from some to make the flute longer.
2. Lay out a piece of tape (sticky side up) that is about 2 times the length of the straws placed together.
3. Place the straws shortest to longest next to each other on the tape.
4. Fold the remaining tape over the top of the straws – be sure it covers all of the straws to hold them together or you may need to add a little tape.
5. Tape a strip of paper or colored tape around the pan flute on top of the tape line to decorate your instrument. Make sure the straws stay flat.
6. Blow across the top of the pan flute.

Reflect:

- What happens when you blow across the top of the pan flute? How is the sound being made?

When you blow across the top of the straws, the air in the straw vibrates. The vibrations are sound waves that travel out of the straws and reach our ears causing us to hear a sound.

- How does the length of the straw affect the sound?
- What do you think might happen if we used wider straws?
- What might happen if we used narrower straws?

Adapted from: Wisconsin Cloverbud Activities Year 3, Science of Sound

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Bee Dough

Create a Bee Model

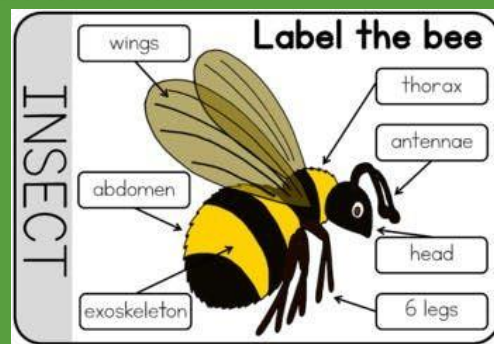
Objective: To correctly identify the parts of a bee

Time: 20 Minutes

Supplies:

- 8 oz package of cream cheese
- 1/2 cup non-fat dry milk
- 1 tablespoon honey
- Slice almonds (or the like for wings)
- **Alternate:** Use playdough or modeling clay

Create dough into shapes of a honey bee. A bee should have a head, thorax, abdomen, and two pairs of wings attached to the thorax.



DO:

- Wash your hands.
- Combine the cream cheese, milk, and honey in a bowl and mix until well blended.
- Use a tablespoon of dough to shape into the form of a honeybee.

REFLECT:

- ❖ What are the three main parts of the bees?
- ❖ What jobs do bees have?
- ❖ What else do you know about bees?

APPLY:

- Compare the dough bee model to an illustration of a bee.
- Now it “bee” time to eat (only if your supplies are edible)!

Source: Wisconsin 4-H Afterschool Team: September 2005

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