

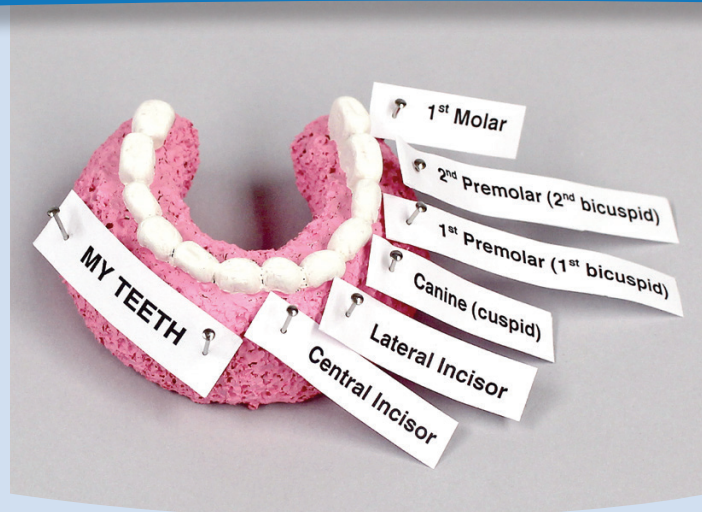
Teeth Time

MATERIALS

FOR STUDENT: (one per student unless otherwise noted)

- FloraCraft® Make It: Fun® Foam Ball, 2 1/2" diameter slice (See "FOR TEACHER")
- Small mirror (to see their teeth)
- Ear of field corn*, one per three - four students
- Straight pins, shortest length possible, eight
- Pencil
- Paintbrush, medium size
- Paint apron
- Thick white tacky glue
- Paper plate
- Paper towel
- Plastic cups, two
- Plastic zip-sealed bag (to hold after making)

Note: Ears of corn can be purchased at farm and garden centers, family farms, pet stores, etc.



FOR TEACHER:

- FloraCraft® Make It: Fun® Foam Balls, 2 1/2" diameter (six per pkg.), one per two students
- Copy paper, one sheet per five students
- Pencil
- Ruler
- Serrated knife
- Paper cutter
- Acrylic paint: Warm White and Bubblegum Pink
- Paintbrush, medium size chisel
- Water bucket
- Paper towels
- Old newspapers or plastic tablecloth (optional)
- Plastic-lined garbage can
- Wet wipes
- Drying area
- Thick white tacky glue
- Glue gun (for teacher only)
- Computer and printer

TEACHER PREPARATION

Note: Read through all the instructions first and check out the TIPS! Plan for two class sessions with drying time after each of them. After the second session, have a glue gun plugged in and ready to use (ideally set on low temperature) but out of student reach. This can give you immediate adhesion when you're in a hurry to help students. It is also recommended that you make one sample first, before preparing the materials for any others, since knowing how the parts fit, might affect how you prepare the rest of them.

[1] Use a serrated knife to cut a foam ball in half. Then, hold the foam ball half as you did when you cut it. Measure 3/4" in from the cut edge and cut again, parallel to the edge, creating a slice. (Discard the small piece that remains.) Repeat with the other ball half.

Use the serrated knife in a vertical position to carefully cut a 3/4" diameter circle out of the center, as well as a 1" piece (with angled sides) from the edge. (Note: The cutout area should resemble a keyhole and the main piece will resemble a horseshoe.)

Discard the keyhole pieces. With the main horseshoe piece, compress and slightly round all the edges and corners, by pressing the foam edge down onto the table with gentle, even pressure as you

rotate the foam to smooth. Use fingers to smooth the inner edges and ends.

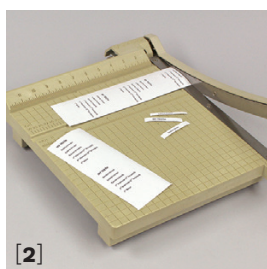
[2] Print the "MY TEETH" labels. Use the paper cutter to cut them into approx. 3/8" wide strips and trim the lengths as needed. Cut one set per student.

[3] Put one set of labels and eight straight pins into a plastic cup for each student. Set them aside for now.

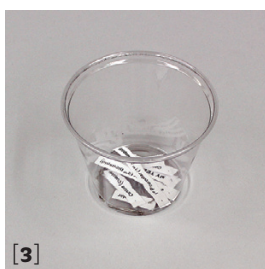
[4] For each student, place on a paper plate: Foam shape, mirror, pencil, paintbrush, and tacky glue. Put near the plate a plastic cup of water and paper towel. Have the paint ready. Also place the ears of corn on a few students' plates for them to share.



[1]



[2]



[3]



[4]

SCIENCE

GRADE LEVEL

FOURTH – FIFTH

COMPLETION TIME

- Three 30 minute sessions

OBJECTIVES

Students learn to:

- Understand the purpose of teeth in our bodies
- Recognize the names of the lower teeth
- Discuss mouth / teeth hygiene

STANDARDS

- From Molecules to Organisms: Structures and Processes - Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction
- Use a model to test interactions concerning the functioning of a natural system

LESSON

INTRODUCTION

Discuss the purpose of teeth in the human body and the basic structure of teeth. Show an image of the lower teeth and review the teeth that you want to introduce, explaining that each student will be able to make their own replica like their own teeth, from foam and corn kernels. (Note: The model has the number of teeth that students at this age typically have. Modify as needed for students with more teeth.)



INSTRUCTIONS

[1] Have the students put on their paint aprons and roll up their sleeves, explaining that this paint won't come out of clothes. Show them your model and explain that this is a fun way to learn about our teeth but that the kernels of corn are not exactly the same size and shape of their teeth, but they are approximate.

Have the students look into their mirrors at their bottom row of teeth. Discuss the information you want them to know – the teeth names, comparing the size and shape of the front teeth to the back teeth, etc. Have them count their own teeth. Let them know that you want them to make their corn teeth duplicate their real teeth, so if they are missing a tooth somewhere, they should make that tooth missing on their model.



[2] Next, ask the students to look at the ear of corn, with the classmates who are sharing it. Point out that the small kernels toward the narrow end of the ear look like their front teeth, while the larger, more square kernels at the wide end of the ear look more like their back teeth. Have the students rub to pull off the kernels at both ends of the ear, searching for the right size teeth for themselves. Explain that they may take a handful to their plate and sort through the kernels, there.



[3] Explain that it's important for the students to figure out which

kernels should go into their foam and where, before they insert the kernels. (Make sure their foam is narrow side up.) Have them plan them first and then demonstrate how to carefully insert the kernels into the foam, starting at the center front and working back, with one side at a time. Remind them to check their own teeth and push in the kernels just far enough to hold, for the teeth that are all the way in, or further in for those teeth just coming in. If they have just lost a tooth, have them push in a kernel and then remove it, to leave the space.

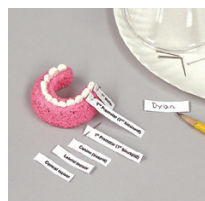
After the students have placed their kernels into the foam, have them double check by counting their own teeth and counting the kernels to be sure that they have the right number. Then demonstrate and have the students remove them, one at a time, and squeeze dots of glue into the foam hole and reinsert.



[4] Ideally, let these set to firm up for a few minutes. If you can spare the time, wait until the glue has completely dried (an hour or so) before painting. If not, proceed by having students put on their paint aprons, squeeze white paint onto their plates and have them paint their teeth white. Encourage them to make all brush strokes go down so that the teeth don't pop out. Explain that it's ok for the paint to get onto the foam at the base of the teeth. Have them check carefully for any unpainted areas.

Gather the mirrors and ears of corn. Have students wash out their brushes in the water cups

and dry them on paper towels. Then, they can put their names on their plates with the pencil, empty their water cup and put the cup, paper towel, pencil and brush back on the plate with the teeth, in the drying area.



NEXT SESSION

[5] Have the students collect the plates with teeth and get fresh water in their cup. Squeeze pink paint on their plates. Demonstrate how to dip just the tip of their brushes into a small amount of paint and carefully paint all along the gum line, next to the teeth. Then, have them paint the rest of the foam. They can clean up as they did in Step 4 and let them dry in the drying area.

NEXT SESSION

[6] Have the students collect the plates with teeth as well as the plastic cups of labels and straight pins. Discuss the names and locations of the teeth. Then demonstrate how to insert a pin into the front of the name label and then into the foam next to the correct tooth on the right side of the teeth. On the back of the "MY TEETH" label, have the students write their name, then use two pins to attach it to the front of the teeth. (Note: The pins will extend above the foam but the labels can go all the way down to touch the foam.)

Point out that the teeth model has all the labels on one side, but that the names of the teeth are the same for both sides.

MODIFICATIONS

To simplify project:

- Have the students work with a partner to make one model between them.
- After the students glue the kernels of corn, spray paint the models with several coats of white spray paint, in a well-ventilated, newspaper covered area (inside a large cardboard box.) Then they can paint the foam with pink acrylic paint.

To expand project:

- Make a set of upper teeth, too.
- Discuss which teeth the students will be getting next and where they will come in. (Discuss growth of jaw, braces, etc.)

For multiple ages:

- Younger and older students can work side-by-side, with the older students helping with the assembly.
- Older students can make and label theirs, while the younger students can look at their teeth and spaces where teeth are missing and duplicate that look.



INSTRUCTIONS

LABELS

MY TEETH

Central Incisor

Lateral Incisor

Canine (cuspid)

1st Premolar (1st bicuspid)

2nd Premolar (2nd bicuspid)

1st Molar

2nd Molar

MY TEETH

Central Incisor

Lateral Incisor

Canine (cuspid)

1st Premolar (1st bicuspid)

2nd Premolar (2nd bicuspid)

1st Molar

2nd Molar

MY TEETH

Central Incisor

Lateral Incisor

Canine (cuspid)

1st Premolar (1st bicuspid)

2nd Premolar (2nd bicuspid)

1st Molar

2nd Molar

ADDITIONAL IDEAS

- Print the labels on cardstock and laminate them before cutting, so that they are more durable.
- For fun, display the teeth in glasses with waves of water drawn on the glass with paint markers.
- Create one large classroom set of teeth using a large sheet of foam and teeth cut from the same foam. Shape the teeth by curving them on the table and painting them.
- As an object lesson, make a model using broken kernels of corn. After painting, color in areas of the teeth with dark marker to represent decaying teeth, that can happen when students don't brush and floss.
- A comparison of both healthy and decayed teeth would be a good Science Fair, 4-H or scouting project.
- Give the students rubber bands and wire or paper clips and see if they can make replicas of braces.

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TIPS

- When cutting a foam ball in half with the serrated knife, roll the foam ball as you press the knife blade into it, watching that it is creating two equal halves. After reaching the beginning, saw back and forth to finish cutting.
- If you prefer, you can have the students do the smoothing and rounding of the foam instead of you. Just remind them to be careful not to push on the foam too hard without support in the horseshoe area, or it can break.
- When trimming the lengths of the 3/8" wide strips, leave enough room for the pins to be inserted on both ends of "MY TEETH" and on the front end of each of the teeth names.
- If students get pink paint on their teeth, have them quickly put a small corner of their paper towel into water, squeeze out the excess and carefully wipe off the pink paint with the damp towel.
- Have extras of everything.
- Check the nozzles of the tacky glue bottles to be sure that they are clear. When using and storing tacky glue bottles, make sure that the caps are on and set them on their sides. This keeps glue in the nozzles so that there is minimal squeezing when using.