OPEN WIDE!
Fun Science Activities Inside!
Overview:

In this experiment, kids may be surprised to learn how much sugar is in popular drinks and how this hidden sugar can damage teeth!

Parents, make sure to help kids with this activity!

Supplies:

- Six clear disposable plastic cups
- One 12-ounce can of dark soda pop
- One 16-ounce can of a popular energy drink
- One 15-ounce bottle of apple juice
- A teaspoon measuring spoon
- White sugar in a bowl—about 5 cups
Key takeaway from this activity:
We often don’t realize how much sugar is in our drinks, but it harms our teeth just as if we were eating candy! It’s important to prevent tooth decay from sugar in drinks. We can choose drinks such as milk or water, brush teeth twice a day for two minutes each time (and read for 20 minutes), see the dentist, and eat fruit instead of drinking fruit juice.

Steps:
1. Use a marker to label three cups with the three different drink names. Use the teaspoon to measure the sugar in the soda pop, energy drink, and apple juice into the three labeled plastic cups. To determine the number of teaspoons of sugar in each drink, divide the total grams of sugar in the container by 4.2 (most dark soda pop will have 42 grams of sugar or 10 teaspoons of sugar, most energy drinks are about 62 grams of sugar or nearly 15 teaspoons of sugar, and the apple juice at 49 grams of sugar will have nearly 12 teaspoons of sugar).
2. Place the cups with the sugar aside.
3. Label the remaining three cups with the drink names and put each cup in front of the corresponding drink containers. Place the large bowl of sugar and the teaspoon beside the drinks.
4. One at a time, have your child use the teaspoon to spoon the amount of sugar they think is in the drink into the corresponding cup.
5. Bring out the three cups with the correct amount of sugar and place them by the cups your child filled with sugar.
6. Discuss together if your child guessed the correct amount of sugar, or more or less sugar than was actually in the drink. Was he/she surprised at the amount of sugar in any of the drinks? Point out the number of servings in each of the containers and ask if they would stop drinking after one serving or if they would drink the whole container.
7. Brainstorm together how he/she can make healthier drink choices and encourage others in the family to make healthier drink choices.
Overview:
This activity will demonstrate how fluoride helps to strengthen and protect teeth.

Parents, make sure to help kids with this activity!

Supplies:
- Two hard-boiled eggs
- Fluoride gel or solution, 4 oz. to 6 oz. (available from your dentist, local dental supply co. and some pharmacies)
- Two clean plastic containers
- Several cans/bottles of dark soda pop
**Key takeaway from this activity:**

As with the egg, fluoride helps to strengthen teeth and protect them. To protect your teeth and keep your smile bright, brush two times a day for two minutes with fluoridated toothpaste (and read for 20 minutes) and drink fluoridated water or milk in place of soda pop or sugary drinks.

**Steps:**

1. Place a hard-boiled egg in one of the plastic containers and cover it with the fluoride gel or solution. Let it soak for 24 hours.

2. Place the “treated” egg in one of the clean containers and the “untreated” egg in the other.

3. Cover both eggs with soda pop and let soak. Change the soda pop every twelve hours for two days.

4. Discuss observations each time the soda pop is changed. The untreated egg will begin to dissolve slightly, and the shell will become stained by the dark soda pop. The treated egg should not show a reaction until much later.
Overview:

In this activity, kids will find out that a toothbrush alone cannot reach all of the places between teeth and that using dental floss is really important.

Parents, make sure to help kids with this activity!

Supplies:

- Jar of smooth peanut butter
- Rubber glove
- Spreader/butter knife
- Container of dental floss
- Toothbrush
- Toothpaste
Steps:

1. Put the rubber glove on one hand and hold your hand with the fingers extended but tightly together pointing upward (your hand should look like how a policeman holds his hand up to stop traffic).

2. Spread your fingers apart and have someone spread peanut butter between your fingers—make sure to get peanut butter deep between your fingers.

3. Tighten your fingers together again.

4. With your fingers together and hand held up, use the toothpaste and toothbrush to try to scrub the peanut butter away (keep fingers tightly together).

5. Now, have someone try to remove the peanut butter using the dental floss. It should become clear pretty quickly that you need both a toothbrush and dental floss to remove all food particles and bacteria from teeth and mouth.

Key takeaway from this activity:

Dental floss can do a much better job of removing food from between your teeth than a toothbrush alone can do. It’s important to brush your teeth two times a day for two minutes (and read for 20 minutes) and floss at least once per day to ensure that all food particles are removed from between your teeth.
EGG-CITING EXPERIMENT

Overview:
In this experiment, kids will see how teeth can be stained by what they eat and drink, especially if they aren’t brushing their teeth correctly and regularly!

Parents, make sure to help kids with this activity!

Supplies:
- Two clear disposable plastic cups
- One can of dark soda pop
- Small carton of milk or water
- Two hard-boiled eggs
- Toothpaste
- One toothbrush
**Steps:**

1. Have a parent hard-boil two eggs. Did you know the outside of the egg is made up much like the enamel of our teeth? The hard shell protects the soft egg on the inside, just like enamel protects teeth!

2. Fill one plastic cup with dark soda pop and one plastic cup with milk or water.

3. Now you will observe what happens when you place one egg in the cup of soda pop and one in the milk/water. Place one egg in each cup and let them sit overnight. What do you think will happen to the egg in the soda and the egg in the milk/water?

4. The next day, observe the eggs in the different liquids by gently holding up the eggs. You should notice that the egg in the soda is darker in color and the one in milk or water has not changed.

5. Brainstorm/consider why you think the color change of one egg, or lack of color change in the other egg, occurred.

6. Discuss together that soda pop is full of sugar and acid and is very bad for our teeth. If it were to stay on our teeth we could get cavities and discolored teeth, like the eggs in this experiment demonstrated!

7. Demonstrate proper brushing by using the toothbrush and toothpaste to brush the discolored egg in a circular motion to show stain removal.

---

**Key takeaway from this activity:**

Notice how milk and water are the best drinks for our teeth. It is good to limit sugary drinks like pop and juices. Remember to brush twice a day, for two minutes each time (and read for 20 minutes), to remove things that may stain or hurt teeth!
ACID ATTACK!

Overview:
This activity simulates an acid attack on bones (which are rich in calcium, just like teeth) and can help kids to visualize what happens to their teeth when they consume sugary foods and beverages.

Parents, make sure to help kids with this activity!

Supplies:
- 2 clean chicken bones
- 1 container
- 1 bottle of white vinegar
Steps:

1. Place the bones in the container and cover with white vinegar. Leave overnight.
2. Remove the bones from the container.
3. Are they softer or harder than they were before they soaked in the vinegar?
4. The acid dissolves the calcium and other minerals out of the bones to make them soft. This is similar to the way that acid attacks on teeth can remove minerals from the enamel and allow decay to occur.
5. Discuss foods and beverages that contain acids and sugar—soda pop, fruit juice, fruit—and the things that can be done to prevent the effects of acid erosion on teeth such as reducing consumption of sugary foods and beverages and rinsing with water and brushing after eating and drinking.

Key takeaway from this activity:

Your teeth are covered with a sticky film of bacteria called plaque. Every time you eat or drink sugary foods and beverages, the sugars and plaque mix together to make an acid. This acid attacks your teeth. Repeated attacks can cause the tooth enamel to break down (soften) which can lead to cavities. Avoid eating too much candy or foods containing sugar or drinking sugary beverages including soda pop and sweetened juice drinks.