Making Neuroscience Fun

A Brain Awareness Program for All Ages

Brain Health: It's SPECtacular

Your Tummy Helps Your Brain-REALLY? (A Physical Health Story)
(Kindergarten – 5-6 yrs.)
Experiment: Fats Help Our Bodies

STORY CONNECTION-SLIDE 6 (Approx Time: 25-30 mins)

To eat food, we need to get food, or ask for food. Then we must put the food into our mouth. That means we need lots of body parts to work together. Our tummy does not talk to our body, so our tummy cannot make our arms and legs move to get food and put it in our mouth. Your brain tells your body to get food or ask for food. Various parts of your body do different things to get food. Similarly, different foods do different things for our bodies. Fats allow our body to absorb vitamins that we need to be healthy.

Materials needed:

- A variety of foods such as blueberries, broccoli, pumpkin seeds, dark chocolate, nuts, oranges, etc. or other foods that are available *Note – you are using foods to test for fat – student(s) will NOT be eating foods
- Paper plates
- Recording sheet provided below or plain paper could be used with boxes drawn on it
- pencils

Preparation needed:

- Decide how to group the student(s) either individually, with a partner, or in small groups. Divide the student(s) into groups depending on how many helpers/adults are assisting. This will also determine how many food plates need to be prepared.
- Prior to this experiment, place one piece or a small amount of each food on the paper plates. Prepare as many plates as there are groups.
- Copy enough recording sheets or draw boxes on plain paper so that each person or group has one. This will be determined by how the student(s) were grouped. The recording sheet is included.
- Gather pencils for each group.

Instructions:

1. The activity will start with the student(s) in a whole group setting. Tell the student(s) that according to the American Heart Association (a group of doctors, scientists, and other people who know a lot about the heart, body, and being heathy), dietary fats are essential to give your body energy and to support cell function. They also help protect your organs and help keep your body warm. Fats help your body absorb some nutrients and produce important hormones, too. Remind the student(s) that they also learned some of this in the story.
2. Just like in previous activities, reiterate to student(s) that all food gives us energy, but some foods give us other things that our bodies can use to be healthy. Fats are no exception.
3. Before having the student(s) move to their group with their helper, explain to them that they will be doing an experiment – so they will be being "scientists". Explain to the student(s) that they will test various foods to

see if they have fat in them based on whether they leave an oil spot. Student(s) will follow the procedures in steps 6-8 to test several different foods. These directions are also included on the student recording sheet for the facilitator to reference throughout the experiment.

4. After this brief description of what they will be doing, have the student(s) move to their designated area with their helper or to their desk if doing the activity independently.
5. Pass out the recording sheets or paper with boxes drawn on it and pencils. Have the student(s) write their name on their paper.
6. Decide which food to test first and have each student write the name of the food on the line in the first box. They can use their best inventive spelling, or the facilitators/helpers can spell the name of the food for them.
7. Allow each student to rub the food in the box. Make sure they do not smash the food, but make sure they have left a mark in the box with the food.
8. Once each student has rubbed the food in the box, put the food back on the plate or discard.
9. Repeat the process with the remaining foods:
    a. Pick another food to test.
    b. Write the name of the food on the line in the next box.
    c. Rub the food in the box so that it leaves a mark.
    d. Put the food back on the plate or discard.
10. Once all the foods are tested, allow the papers to dry a bit. This might take a few minutes.
11. Have the student(s) hold their paper up to the light and discuss what they see.
12. Explain to them that foods that are high in fat will leave an oily spot on the paper. Based on the foods they tested, ask them to tell what they know about the foods. For example, the orange made a wet spot, but it dried and did not leave an oily spot. That means there is no fat in an orange. However, the nuts did leave an oily spot. This means there is fat in nuts.
13. Discuss the results of the experiment with questions such as
    a. What foods did you test?
    b. What foods were high in fat?
    c. How do you know they were high in fat?
    d. What other foods would you like to test?
    e. What other foods do you predict might be high in fat?
    f. Why does our body need some fat?
14. In closing, review that all foods will give us energy, but some foods give our bodies other things they need too. Fats allow our body to absorb vitamins that make our body and brain healthy and happy.

American Heart Association: https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/fats/dietary-fats#:~:text=Dietary%20fats%20are%20essential%20to,and%20produce%20important%20hormones%2C%20too.
Experiment Idea Credit: BrainPOP Jr.

Name: Foods that are high in fats often have a lot of oil in them. In this experiment, you will test several foods to see how oily they are.	Directions: 1. Choose a food. 2. Write the name of the food on the line. 3. Rub the food in the box. 4. Discard the food. 5. Allow the food mark to dry. 6. Hold the paper up to the light. 7. What do you notice?
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_____	_____
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