Salt, To Use or Not To Use

Summary

Salt is important to human life. Potassium, added to salt, helps the kidneys regulate the body's fluid levels. Salt, made from sodium and chloride, is found in many beverages and foods we eat. Some people consume 10 times more salt than required daily. What are the real risks connected to our salt intake?

Time Frame

2 class periods of 45 minutes each

Group Size

Small Groups

Life Skills

Thinking & Reasoning, Social & Civic Responsibility

Materials

- Pencil and paper
- Internet access
- 2 Leaves of lettuce
- Salt
- 2 Sheets of paper towel
- Various food labels (optional)

Background for Teachers

"Salt is made up of sodium and chloride. Sodium makes up approximately 40% of salt. One teaspoon of salt contains 2000 milligrams of sodium. A safe and adequate amount of sodium is 1000-3000 milligrams intake daily. Americans consume much more sodium than their bodies require." Encarta 99

Student Prior Knowledge

Students should be familiar with the Food Pyramid, food label information, and what salt is. They should also be familiar with the concept of chemical compounds.

Intended Learning Outcomes

Students will develop a deeper understanding of chemical and physical changes. Students will be able to explain how salt is made, used, and the affects it has on the body. Students will understand that salt in moderation is important to our health.

Instructional Procedures

Clarify the meaning of moderation. Explain that moderation is important in the use of salt in our diet.

Introduce the background material on salt to the students.

3. Activity

: Take two pieces of lettuce and place each on a separate paper towel. Sprinkle about 1/8 teaspoon of salt on one piece of lettuce. Allow the lettuce to sit for about ten minutes. When you return to the lettuce, you will find that the piece of lettuce with salt has changed.

Students are to write down if a chemical or physical change has occurred.
Ask them to write down their observations of the change.
The salt has pulled all the water out of the lettuce and the paper towel will be wet. The other piece of lettuce will not change. This is what salt does to our bodies. It pulls the water out of the tissues and places it in the bloodstream. This creates a lot of pressure on the blood vessel walls, much like the pressure on a balloon when it is filled with water. When the pressure is at a dangerous level, it is called high blood pressure.
Some people, including children, are more likely to have trouble with salt causing high blood pressure than others. Since there is no way to identify these people, it is much safer for all people to limit their sodium intake.

Discuss ways of reducing sodium intake with the class. They might include:
Use less table salt.
Limit foods high in sodium (potato chips, pretzels, salted nuts, cheese, pickled foods, cured meats).
Learn to enjoy unsalted flavors of food.
Read food labels carefully to determine the amount of sodium present.

Divide the class into groups of 3-5 students. Using research materials, including the Internet, have each group find 3 reasons for and against reducing salt intake. (www.kidshealth.org is another site that answers students' questions on health.)
Have each group present their findings. Have someone in each group take general notes on the presentations. Using the notes, allow the groups to have an open discussion on the pros and cons of salt use.
Summarize general class conclusions. Moderation should be emphasized here.

Strategies for Diverse Learners

Some students will feel more comfortable researching by themselves. Most students will want to work in pairs or a small group.
Have food labels available for studens to look at.

Extensions

Research and write a short report about a disease associated with too much sodium in the diet.
Make a chart on the various salts. State how they are manufactured and shipped.
Find at least eight food labels that show a percentage of sodium in the food. Determine which would be the best to eat and why.

Rubrics

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Bibliography

- www.saltinfo.com
WebMD www.webmd.com
Search: "salt"

Authors

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