

What Are Vitamins and Minerals?

Teacher Background Information:

Students should be able to define medicine. Students should know that improper use of medicines could be dangerous.

Vitamin and mineral supplements have been classified by the FDA as dietary supplements. However, because they can be dangerous, caution should be used when taking them as when taking medicine.

Objectives:

Students will:

1. Define vitamins and minerals.
2. Explain the importance of vitamins and minerals to the body.
3. Describe how the body obtains vitamins and minerals.
4. Recognize why vitamins and mineral supplements should be treated like medicine.
5. Create *What We Know About Vitamins and Minerals* signs.

Materials:

- Poster board
- Art supplies
- Optional: candy that resembles children's vitamin supplements (e.g. Pez®)

Language Development:

- vitamin: substances found in food that the body needs to grow, develop, and repair itself properly.
- mineral: substances found in food that the body needs to grow, develop, and repair itself properly.
- deficiency: when there is too little of something that is needed.
- supplement: something that supplies what is needed or makes an addition to what is already present.

Assessment:

Teacher will assess:

1. Students' ability to define vitamins and minerals.
2. Students' ability to explain the importance of vitamins and minerals and how the body obtains them.
3. Students' ability to recognize the reason why vitamins and mineral supplements should be treated like medicine.
4. Students' ability to work cooperatively to create a *What We Know About Vitamins and Minerals* sign.

Activity:

Full Group

1. Ask students what they had for dinner the night before. Allow for several of the students to respond.

2. Ask students why it is important that we eat. (Food gives us energy. Food also helps our bodies grow and stay healthy.)
 - a. Remind students that it is important to eat healthy foods and not a lot of foods that contain high levels of sugar, salt, or fat.
 - b. Have students give examples of healthy foods. Have students give examples of foods that they should eat in moderation.
3. Ask students, "Has anyone ever heard of vitamins and minerals? Can anyone describe what vitamins and minerals are?"
 - a. Vitamins and minerals are substances found in the food that we eat. They are very important because they help the body to grow and to repair itself when injured.
 - b. The body can't make vitamins or minerals on its own. It needs to get these substances from food.
4. Give students examples of vitamins and minerals, what foods they come from and what purpose they serve in the body.
 - a. Vitamin A is found in carrots, spinach, cantaloupe, and other fruits and vegetables. It helps people to have good eyesight, including seeing in color! It also helps keep skin healthy and helps the body to grow.
 - b. Vitamin C is found in citrus fruits like oranges as well as watermelon, strawberries, broccoli, tomatoes, and green peppers. Vitamin C makes bones and muscles strong. It helps the body to heal when it has been injured and helps to resist infections.
 - c. Calcium is a mineral that is found in dairy products such as milk and cheese. It can also be found in some leafy green vegetables. It helps strengthen the bones and teeth.
 - d. Iron is a mineral found in meats, dried beans and other vegetables. Iron is very important to the body because it helps the red blood cells carry oxygen to all the parts of the body. Every body part needs oxygen to survive.
5. Ask students what they think might happen if the body does not get enough of a particular vitamin or mineral.
 - a. The body may not work the way that it needs to.
 - b. Sometimes getting too little of a vitamin or mineral can cause an illness. These are called deficiency diseases. For example, if the body doesn't get enough of a mineral called iron, anemia can develop. Anemia is a disease where the blood is not able to bring the right amount of oxygen to all parts of the body. Anemia can make people very tired and weak.
 - Tell students that if a variety of healthy foods are eaten, deficiency diseases will not develop.
 - Tell students that there was a time when these diseases were common. Today, they are still common in areas where people do not have healthy food to eat.
6. Explain to students that sometimes people don't get all of the vitamins and minerals they need even if they eat healthy food. In these cases, people may take a vitamin or mineral supplement.
 - A supplement is something that supplies what is needed or makes an addition to what is already present.
 - Vitamin and mineral supplements can be pills, powders, or liquids.
 - A supplement can contain one vitamin or mineral or it may contain a mix of several vitamins and minerals.

- Often, people refer to vitamin and mineral supplements simply as vitamins (e.g. "I take a vitamin every morning.")
7. Tell students that people who take supplements include babies, children, pregnant women, older people, people who are sick, and others.
 8. Ask students if they have ever taken a vitamin and mineral supplement. Ask, "What did it look like?" (Students may reply that it was shaped like a cartoon character or other such shape. Students may also reply with the many colors that vitamin supplements have.)
 9. Tell students that vitamin and mineral supplements should be treated like medicines. Like medicines, these supplements can be very dangerous if they are not used properly. Taking too much of certain vitamins and minerals can damage the body and could even cause death.
 - a. Tell students that all vitamin and mineral supplements have labels that tell people how to take the supplements.
 - b. Some supplements are made for adults; therefore children should never take them. Some supplements are for children over a certain age; therefore younger children and babies should never take them.
 10. Ask students to describe children's vitamin and mineral supplements again. Tell students that some children may think that these supplements look like candy. Ask, "Do you think that they may look like candy to some children?" If possible, show children an example of candy, such as Pez®, that looks like a vitamin supplement.
 11. Ask students what might happen if a child mistook vitamin and mineral supplements for candy. (the child may eat more than one and could get sick).

Small Groups

12. Divide students into small groups.
13. Tell students that they will be working in groups to create *What We Know About Vitamins and Minerals* signs.
14. Give each group one of the following topics. Give more than one group the same topic or develop other topics if necessary.
 - a. How The Body Gets Vitamins and Minerals
 - b. What Vitamins and Minerals Do For The Body
 - c. Vitamins Are Not Candy.
15. Tell students they will draw whatever they want to get their message across to other students. Give examples of what they can draw such as a picture of a person eating healthy food or vitamins helping a child to grow.
16. Have each of the groups present their *What We Know About Vitamins and Minerals* sign to the class. If possible, have the students present their signs and what they have learned to other classes in the school. Hang the signs around the school.

Additional Classroom Props:

- Pictures of vitamin and mineral supplements including children's vitamins.

Dear Family:

We have been discussing the importance of vitamins and minerals for the body. Vitamins and minerals are important substances because they help the body to grow and develop properly. They also support the body's immune system and assist in repairing the body after infection or injury.

Vitamins and minerals are found naturally in the foods that we eat. In most cases, when a healthy diet is followed, the body receives enough of each of the 13 vitamins and at least 15 minerals that it needs. The students heard examples of vitamins and minerals, what foods they come from, and what purpose they serve. For example, vitamin A is found in carrots, spinach, cantaloupe, and other fruits and vegetables. It helps people to have good eyesight, including seeing in color! It also helps keep skin healthy and helps the body to grow.

The students learned that sometimes, when people do not have healthy food to eat, they may not satisfy the body's need for vitamins and minerals. When the body does not get the amount that it needs, it may not function well. Deficiency diseases may also develop. A deficiency disease is a disease caused by low levels of a particular vitamin or mineral. For example, if the body doesn't get enough of a mineral called iron, anemia can develop. Anemia is a disease where the blood is not able to bring the right amount of oxygen to all parts of the body. Anemia can make people very tired and weak. In these cases or when people don't get all of the vitamins and minerals they need even if they eat healthy food, people may take a vitamin or mineral supplement. These supplements, which are found as pills, powders or liquids, are commonly referred to simply as vitamins (or multivitamins).

Many different groups of people may take supplements including pregnant women, babies and children, elderly people, people with other diseases, etc. While supplements are meant to maintain health, it is important to remember that supplements can be dangerous if they are not used properly. For this reason, the students learned that they should treat vitamin and mineral supplements as they would treat medicine. Taking too much of a vitamin or mineral can cause damage to the body and even death. The students recognized the resemblance of children's vitamin supplements to candy. They discussed the danger of a child mistaking supplements for candy. Combining everything they learned and discussed, the students worked, in groups, to create *What We Know About Vitamins and Minerals* signs. They shared these signs and their knowledge with each other and with other classes throughout the school.

Please discuss this topic with your child. Look for vitamin and mineral information on nutrition labels on foods. Read the safety warnings on the labels of vitamin and mineral supplements together. Finally, as with medicines, keep vitamin and mineral supplements in your home out of reach of children. For more information, please visit www.kidshealth.org and search for vitamins or minerals.

Sincerely,

Your Child's Teacher