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You are What You Eat: Healthy Practice for Young Children

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Abstract

All young children can benefit from proper nutrition and physical activity. Because children spend so much time in schools, teachers can play important roles in educating children about nutrition, dietary behavior, and physical activity to foster their optimal growth and health. Eating healthy, nourishing food fosters physical growth, enhances emotional stability, and improves school performance. By planning and implementing developmentally appropriate integrated lessons, teachers can help promote healthy practice for young children.

Most young children love to eat. They enjoy exploring the different textures, tastes, colors, and odors of food. Eating healthy, nourishing food fosters physical growth, enhances emotional stability, and improves school performance (Parlakian & Lerner, 2007). Unfortunately, the diets of an increasing number of American children are filled with fats, sweetened beverages, and junk food. Because of unhealthy diets and the trend of less active play and decreased physical activity, the number of overweight and obese children has increased dramatically (Wiseman, Knight, & Cooner, 2005). From 1976 to 1980, approximately 7% of children were overweight or obese (Stegelin, 2008). Based on a National Health and Nutrition Examination Survey for the combined years of 2003-2006, 16.3% of children were considered obese (Ogden, Carroll, & Flegal, 2008). As a result, overweight and obese children develop risk

factors for heart disease, diabetes, and some forms of cancer (Haschke, 2004).

All young children can benefit from proper nutrition and physical activity. Because children spend so much time in schools, teachers can play important roles in combating overweight and obesity in their students. Teachers can help educate children about nutrition, dietary behavior, and physical activity through the implementation of developmentally appropriate lesson plans to foster their optimal growth and health.

Nutrition and Dietary Behavior

After age two, a child needs a variety of fruits, vegetables, and whole grains. The 2005 Dietary Guidelines for Americans (Parlakian & Lerner, 2007) offer science-based advice for a healthy diet and emphasize fruits, vegetables, whole grains, and fat-free or low-fat milk and milk

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products. The guidelines also suggest diets with lean meats, poultry, fish, beans, and eggs.

The Food Guide Pyramid for young children was designed by the U. S. Department of Agriculture (2005) to promote healthy nutrition in children ages six to eleven years. Recommendations from the pyramid propose that young children eat a variety of foods including grain products, vegetables, and fruits. It is also suggested that a young child's diet contain enough calcium and iron to meet the requirements of a growing body. The intake of fat, saturated fat, and cholesterol should be limited; a moderate use of sugars and salt is recommended for young children (Haschke, 2004).

A child needs a nutritious breakfast for energy throughout the day. Research indicates that children who eat breakfast daily have better attitudes, better school results, and better memories than children who do not eat breakfast (International Reading Association, 2002). Nutritious breakfast foods include dry or cooked whole-grain cereal with low-fat milk, sliced fresh fruits, finger food vegetables, whole-wheat muffins or toast, and low-fat yogurt (Child Development Institute, 1998-2005).

A healthy lunch should furnish about one-third of a child's daily calories. For a child in school, lunches should include meat or meat substitutes, fruits and vegetables, and grains. A nutritious lunch could include a tuna salad or chicken sandwich on multigrain bread with raw vegetables and low-fat yogurt (International Reading Association, 2002). Children should drink water, milk, or 100% fruit juice with lunch; sugary beverages and fruit punch should not be consumed. After school snacks of fruits, cheese, and whole-wheat or graham crackers serve as healthy energy boosters before a well-balanced evening meal (U. S.

Department of Health and Human Services, 2004).

Some foods are not beneficial for a young child. Beverages containing caffeine, for example cola drinks, may interfere with concentration and lead to over stimulated behavior. Excess sugar in a child's diet can reduce ability to concentrate and impair short-term memory. Artificial colorings in some foods and food allergies can make a child uncomfortable and unable to concentrate (International Reading Association, 2002). It may be necessary to consult a doctor or nutritionist to help determine causes of attention or behavior problems (Garcia, Garcia, Floyd, & Lawson, 2004). In addition to teaching children about nutrition and dietary behavior, the classroom teacher can emphasize the need for adequate physical activity to ensure children's optimal growth and development.

Physical Activity

Research supports the premise that physical activity helps build and maintain healthy bones, helps reduce the risk of developing obesity and chronic diseases such as diabetes and cardiovascular disease, reduces feelings of depression and anxiety, and promotes psychological well-being (Center for Disease Control, 1996; U.S. Department of Health and Human Services, 2000). However, according to a report to the President from the Secretary of Health and Human Services and the Secretary of Education, "Physical inactivity has contributed to an unprecedented epidemic of childhood obesity that is currently plaguing the United States" (U. S. Department of Health and Human Services, 2000, p.1).

There is no single cause for the reported decrease in physical activity among today's youth; rather, there are several environmental conditions that discourage physical activity and make it easy for children to live a sedentary lifestyle. The

developments in our society and culture that have facilitated this sedentary lifestyle include riding instead of walking or bicycling and increased safety concerns about playing outside (Lumeng, 2007). The prevalence of modern technology, such as computers, videos, and cable television, has conditioned children to become less active. School districts have reduced the amount of time students are required to spend in physical education classes. Many elementary schools are eliminating recess time and playgrounds.

To counter trends of decreasing physical activity among school age children, creating a school environment that supports healthy behaviors and promoting regular physical activity are essential. A supervised recess time in elementary schools should be offered three to four times a week for 45-60 minute sessions. The supervised recess time does not need to be highly structured but should offer many opportunities for physical activity and address different developmental stages (Kern & Wakeford, 2007).

Research indicates that it is critical that physical activity become an integral part of children's lives and be incorporated into their normal routines (Wallinga, Coleman, & Bales, 2007). To assist in reducing the problem of childhood obesity, classroom teachers can integrate physical activity lessons. Teachers can utilize hands-on and concrete learning activities adapted to young children's interests and skills. Integrating concepts concerning nutrition, dietary behavior, and physical activity into all curricular areas can foster healthy practices in the classroom.

Best Practices in Lesson Planning

Constructing an appropriate, integrated lesson plan is supported by the Early Childhood Education Program Standards (National Association for the Education of Young Children, 2005). The

health standards promote the nutrition and health of children and seek to protect them from illness and injury.

In an appropriate integrated lesson, inclusion and authentic assessment must be incorporated. By using adaptations in movement or materials, the lesson can be designed to meet the needs of all learners. Children with disabilities may be assisted by partners or may be required to demonstrate limited movements. Materials for the integrated lesson may be adapted by the use of protective equipment such as pads and helmets. Assistive technology, including wheelchairs, scooters, and communication boards, could be made accessible to those students with disabilities. To furnish authentic assessment strategies for the integrated lesson, teacher-made checklists and rubrics could be generated. Videotapes of the activities may be created and reviewed by the teachers and children. Completed work samples may be collected, and anecdotal notes by teachers can record students' achievements. All of the adapted, authentic assessment procedures would be suitable for documenting cognitive, social, emotional, and physical development. Therefore, an integrated lesson furnishes strategies for inclusion and authentic assessment while offering content-area activities for children.

Sample Integrated Plan

The adapted sample integrated lesson plan (Table 1) is adapted from *The Little Red Hen* (Arroyo, n.d.) and is designed to teach students about nutrition, dietary behavior, and physical activity. The lesson offers hands-on and concrete learning activities. By integrating the different curricular areas, the lesson involves young children's interests and skills as they learn to classify foods into food groups and measure foods in a recipe.

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Table 1

Integrated Lesson Plan

Suggested Grade Level	Prekindergarten through third grade
Materials	Felt story of <i>The Little Red Hen</i> ; small felt board; <i>Bread Comes to Life: A Grain of Wheat and a Loaf to Eat</i> by Levenson (2004) (or similar books); bread chart; recipe for hand washing; food pyramid poster; ingredients for cheese pretzels. Each child will need a helper badge, yarn, wheat mosaic picture, wheat kernels or brown rice, glue, and hen house picture copies.
Physical Education Activity	The integrated activity includes locomotor skills in The Little Red Hen Relay. Divide the children into two teams. Have the teams run back and forth to the mill carrying sacks of flour. Congratulate teams as all members deliver sacks of flour to the mill whether by running or by use of wheelchairs or other equipment.
Language and Literacy Activity	The flannel board will be used to tell the story of the Little Red Hen. Discuss the story. Read the book. Make a concept map using wheat words. Have students assist in organizing a chart titled "How to Make Bread." List the sequence of steps in making bread/pretzels by referring to the simple recipe below. Furnish each child a copy of the hen house picture and encourage him/her to draw or write the steps required to make the pretzels.
Music Activity	Using the concept map, have students create a simple song or chant that tells the story of the little red hen. As a starter, the teacher might sing, "We eat wheat! What a treat!" Have students role play actions and/or vocabulary relevant to the concept map.
Mathematics Activity	Post the simple Recipe for Cheese Pretzels found below. Divide the students into groups and have each group locate and measure one of the required ingredients.
Social Studies Activity	Help the children realize that just as it takes many jobs for a city or town to work as a community, it takes the same interdependence among students in the classroom to successfully complete certain tasks. To have students work together, give each child a helper badge and let him/her choose a job; for example, classify ingredients into food groups, measure ingredients, etc. The teacher will write the children's jobs on the badges.

Health Activity	Discuss the importance of eating 6-11 servings of bread each day. The bread group is found at the base of the pyramid and is the foundation of a healthy diet. The bread group provides many B vitamins and fiber. Refer children to the food group poster.
Art Activity	Encourage creativity by the children as they spread glue on the stalk of the wheat mosaic picture and sprinkle on whole wheat kernels or brown rice to craft unique designs.
Science Activity	Review the chart titled "How To Make Bread." Show un-ground wheat and ground flour as well as the other previously measured ingredients from the recipe. Discuss the steps to making bread/pretzels. Begin by washing hands. After students help prepare the recipe, bake and serve. Students will enjoy eating the warm, homemade cheese pretzels.

Recipe for Pretzels

Ingredients	1 pkg active dry yeast 1 ½ cups warm water 3 ½ cups flour 1 cup grated cheddar cheese 1 egg, beaten
Directions	Dissolve yeast in water. Stir in flour and cheese. Knead dough until smooth. (If the dough is too sticky, add more flour a teaspoon at a time). Break off walnut sized pieces and roll into 12-inch long ropes. Twist into pretzel shapes. Place shapes on a cookie sheet sprayed with cooking oil and brush with egg. Bake at 425 degrees for 15-20 minutes. Serve warm. Makes about 30.

Other lesson activities related to nutrition that may be used during play and recess include potato sack races, carrot hops, and strawberry relay races. A daily game of "Grape, Grape, Raisin!" rather than "Duck, Duck, Goose!" would remind children of the need for play and physical exercise and proper nutrition (Nutrition Adventures, n.d.). A class field trip to a nearby supermarket to examine meat and dairy products or a visit from a local grocer could help make the food pyramid and healthy eating habits even more meaningful to children.

Summary

Since you are what you eat, young children can benefit from learning about and implementing healthy eating habits and activities. Classroom teachers can play important roles in educating children about nutrition, dietary behavior, and physical activity. By planning and implementing developmentally appropriate integrated lessons, teachers can help promote healthy practice for young children.

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