LESSON 6

Snack Attack

Background

Children in the United States consume around three snacks each day, contributing to roughly 27% of their daily calorie intake. Unfortunately, many popular snack foods are high in unhealthy fat (saturated and trans fat), refined grains, added sugar, and salt. Ideally, these "sometimes" foods should be eaten rarely, if ever, and we should regularly eat more nutrient-rich foods such as fruits, vegetables, and whole grains at snack time.

This lesson helps students make healthier snack choices, primarily by choosing snack foods with more healthy fat and less unhealthy fat. Healthy fat, meaning monounsaturated and polyunsaturated fat, may decrease the risk of heart disease; most plant-based oils are excellent sources of healthy fat, as are nuts, seeds, and fish. Unhealthy fat, meaning saturated and trans fat, can increase the risk of heart disease. Saturated fat is found mainly in animal-based foods (such as dairy products, red meat, and lard) and in tropical oils (palm oil and coconut oil). Trans fat is formed when polyunsaturated vegetable oils are partially hydrogenated, a process that turns the normally liquid oils into solid or semisolid fat. (For more details on healthy and unhealthy fat, see lesson 5, Fast-Food Frenzy.)

Reading food labels is a good way to compare the fat and nutrient content of snack foods. The place to find out whether a food is relatively high or low in a nutrient is the % Daily Value (% DV) column on the nutrition facts label. The daily value (DV) is a guideline for how much of each nutrient we should consume each day. The % DV is based on a diet of 2,000 calories per day; for each nutrient, it tells us what percentage of the recommended Daily Value is found in one serving of food.

The % DV for saturated fat is particularly important when selecting snack or other foods. If a food's % DV for saturated fat is 5 or less, the food is considered low in saturated fat. Foods that have a % DV of 20 or more are considered high in saturated fat. (To learn how to calculate % DV for saturated fat, see How Is % Daily Value for Saturated Fat Calculated? in lesson 5.) The more foods chosen that have a % DV of 5 or less for saturated fat, the easier it is to stay within the healthy fat limits. The overall daily goal is to select foods that together contain less than 100% of the DV for saturated fat. For vitamins, fiber, calcium, and iron, however, the goal is to get 100% of the DV.

**At the time of publication, the FDA banned the use of partially hydrogenated oils in food products, giving manufacturers three years to comply with the decision. This edition's messaging on avoiding trans fat from partially hydrogenated oils remains important guidance during the transitional period.*

There is no % DV for trans fat because it is unclear whether there is any safe level of intake; the consumption of trans fat is strongly associated with increased risk of coronary heart disease, sudden death, and possibly diabetes. The *Dietary Guidelines for Americans* advises keeping trans fat consumption as low as possible. For practical purposes, that means avoiding trans fat from partially hydrogenated oils. Food labels list the number of grams of trans fat per serving. Keep in mind that products made with partially hydrogenated oils can still claim "0 grams trans fat" if the product contains less than 0.5 grams of trans fat per serving. These small amounts of trans fat can add up over the day. So make sure to watch out for the words *partially hydrogenated vegetable oil* in the ingredients list.* Switch to an alternative product that does not contain partially hydrogenated oil, especially if it is a product you consume regularly.

Fast-food chains, sit-down restaurants, bakeries, and other commercial food establishments are not required to give nutrition information on the foods they serve. Many large chains offer this information on their websites. In addition to providing nutrition facts information, some chains provide their ingredients lists, so you can check to make sure that foods don't contain any partially hydrogenated oil. Consumers can also become advocates and ask their favorite restaurants to switch from partially hydrogenated oils to healthy oils.

Estimated Teaching Time and Related Subject Areas

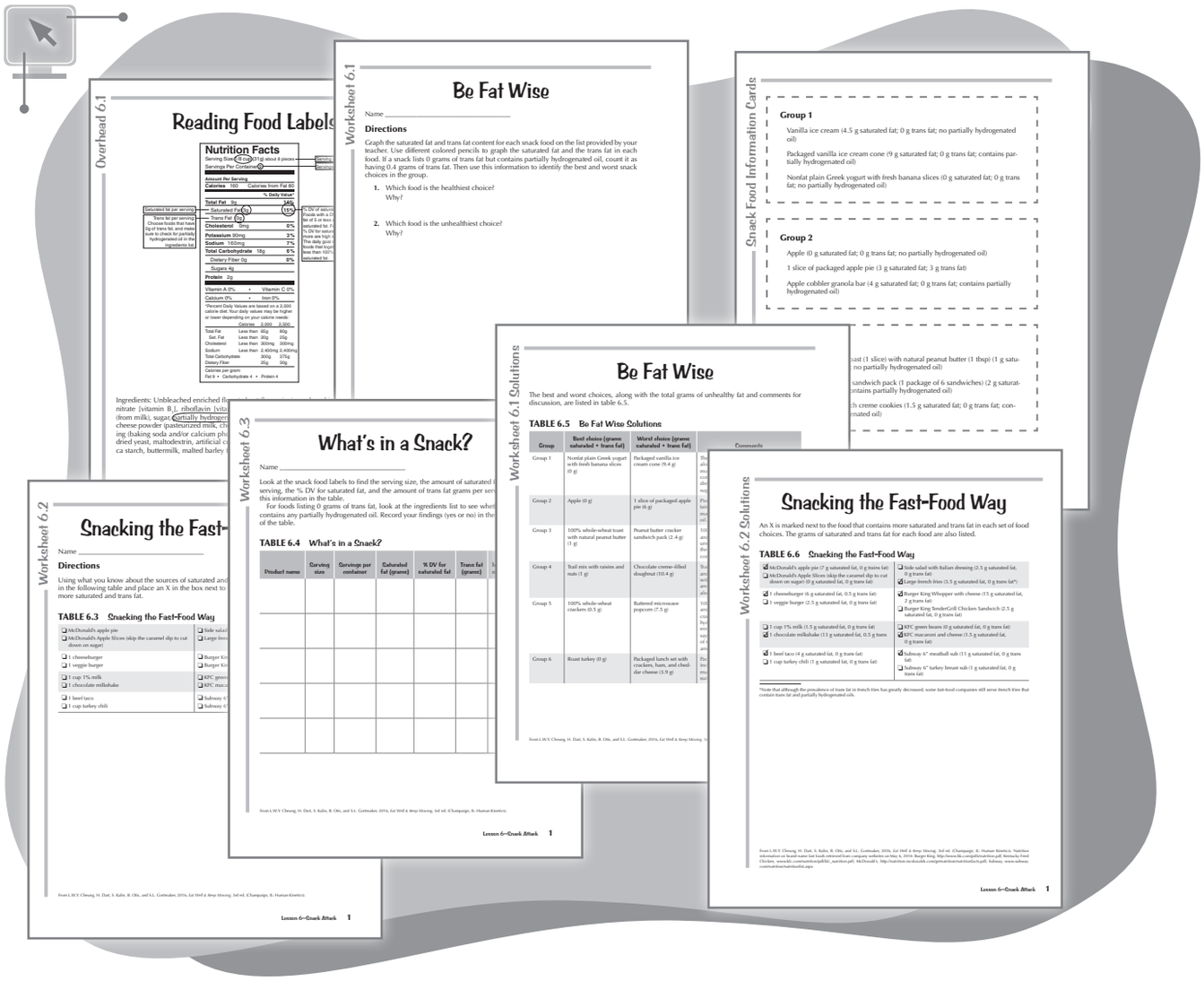
Estimated teaching time: 1 hour, 30 minutes
Related subject areas: science, math, art

Objectives

- Learn why it's important to select healthy snacks.
- Learn how to choose healthier snacks by analyzing food labels to locate information on unhealthy fat content.

Materials

- Overhead 6.1, Reading Food Labels
- Worksheet 6.1, Be Fat Wise
- Snack Food Information Cards (for use with Worksheet 6.1)
- Worksheet 6.2, Snacking the Fast-Food Way
- Worksheet 6.3, What's in a Snack?
- Solutions to Worksheet 6.1
- Solutions to Worksheet 6.2 (create an overhead of Worksheet 6.2)
- A variety of empty snack food packages (students may bring these in)



Procedure

1. Have students make a list of their 10 favorite snack foods or beverages, and then have them identify items that meet the Principles of Healthy Living (you may display Overhead 1.1 from lesson 1; focus on the guidelines related to choosing foods with healthy fat, whole grains, fruits, and vegetables, and limiting added sugars). Discuss the importance of regularly choosing foods that are low in saturated fat and the importance of avoiding trans fat.
2. Have students complete Be Fat Wise (Worksheet 6.1) individually, in pairs, or in groups of three. Distribute one Snack Food Information Card to each student, pair, or group of three students, and instruct students to graph the unhealthy fat content (saturated plus trans fat) in each of the three food choices. If a snack lists "0 grams trans fat" but contains partially hydrogenated oil, instruct students to count the product as having 0.4 grams of trans fat (remember, products with partially hydrogenated oils can still claim 0 grams of trans fat if the product contains less than 0.5 grams of trans fat per serving). Have them identify the healthiest and unhealthiest snack choices and explain their selections. Review the answers (see worksheet solutions). Discuss what the healthy snack options have in common and what the unhealthy snack options have in common.
3. Distribute Worksheet 6.2, Snacking the Fast-Food Way, and have students work in pairs to make an educated guess about which food of the two choices has the lower amount of saturated and trans fat. Display the solutions as an overhead and discuss them.
4. Show the Reading Food Labels overhead and explain the labeled information. Highlight that reading labels is the way to determine the saturated fat content of the foods we eat and also to determine whether a food is high in saturated fat (20% or more of DV) or low in saturated fat (5% or less of DV). Food labels also tell us about trans fat content.
5. Distribute food packages of popular snack foods. Have students locate and record on the What's in a Snack? worksheet (Worksheet 6.3) the serving size, the amount of saturated fat (grams) per serving, the % DV for saturated fat, and the amount of trans fat grams listed on the food label. For those foods listing 0 grams of trans fat, have students also look at the ingredients list for partially hydrogenated vegetable oils (this ingredient indicates that there is a small amount of trans fat in the product). Remind students that small amounts of trans fat can add up throughout the day, so it is best to choose snacks that do not contain any trans fat or partially hydrogenated oils.
6. Ask students to determine which snacks can be combined to add up to 100% of the recommended daily maximum of saturated fat (the % DVs of the various snacks add up to 100%). (Students can do this individually or in groups, or this may be done as a class.) It may take only three to five snacks, depending on their saturated fat content. Explain that just those snacks alone contain a person's daily maximum allowance of saturated fat. (See table 6.1 for an example.) Remind students of the following: "The % Daily Value (based on a 2,000-calorie diet) can help you follow nutrition experts' advice not to eat more than 10% of your calories from saturated fat. All you need to do is add up the % DV for saturated fat in all the foods you eat in a day. Your goal is to eat less than 100% of the DV for saturated fat."
7. Explain that snacks that have a lot of saturated fat should be considered "sometimes" foods and eaten rarely, if at all. Most of the time, however, students should choose foods that contain plant-based sources of healthy (unsaturated) fat (such as peanut butter, nuts, avocados, and olive oil) or whole grains, fruits, and vegetables. Remind students that they should avoid foods that have trans fat or partially hydrogenated oils.

TABLE 6.1 Examples of Foods That Total to 100% DV for Saturated Fat

Snack foods	% DV for saturated fat
Potato sticks (2/3 cup)	15%
Chocolate creme–filled donut	45%
Chocolate peanut butter cups	23%
Reduced-fat string cheese (1 stick)	8%
Peanut butter and cracker sandwiches	9%
Total	100%

Extension Activities

1. Have students create an Eat Well Snack List (see table 6.2) that shows healthy snack choices (based on the type of fat and considering other aspects such as being low in added sugars) in each of the food groups. Display or copy and distribute Overhead 1.2 from lesson 1, the Kid's Healthy Eating Plate, to illustrate the best choices from each food group (optional).
2. Have students design a snack food label for a snack food that is low in saturated fat and has 0 grams of trans fat and that would appeal to their peers.
3. Have students research the link between saturated and trans fat and heart disease.
4. Have students identify snack foods that are high in added sugar (e.g., cupcakes, candy bars, sugary drinks) or salt (e.g., chips, cheese curls). Explain that the amount of sugar (in grams) is listed on the label and that the types of added sugar are found in the ingredients list* (see lesson 7 for a list of commonly added sugars). Sodium has a % DV that follows the rules for saturated fat: If a product has 20% or more of the DV for sodium, it is considered high in salt. Have students think of healthier snack alternatives (e.g., combine slices of four favorite fruits in a bowl, toast 100% whole-wheat pita bread strips, or dip tortilla chips free of partially hydrogenated oils in homemade veggie salsa).
5. Have students write a formal letter to the school food service director or the manager of their favorite restaurant asking him or her to stop cooking with partially hydrogenated oils and to use healthy vegetable oils (such as olive or canola oil) instead.

**At the time of publication, the FDA proposed the addition of "added sugars" to the Nutrition Facts label with the recommendation that daily intake of calories from added sugars not exceed 10% of total calories (10% DV). If finalized, this change will be reflected in the web resource materials.*

TABLE 6.2 Example of Eat Well Snack List

Best choices in each food group	Eat Well examples
Whole grains	100% whole-wheat pretzels, whole-grain rye crispbread, 100% whole-wheat crackers, tabouleh (bulgur salad)
Vegetables	Baby carrots, pepper slices, broccoli trees, celery sticks, cherry tomatoes, edamame, zucchini spears
Fruits	Apples, grapes, orange slices, strawberries, melon wedges, dried apricots, raisins
Healthy protein	Bean spread (such as hummus), almonds, walnuts, sunflower seeds, peanut butter, tahini, sliced roasted turkey
Dairy	Plain yogurt, cheese sticks