

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Components of Fitness—Lesson 1

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1

Student Resource Activator Sheet



Activator

American teenagers are not getting the necessary amount of exercise. With the convenience of fast food, computers, video games and issues surrounding safety, more and more people are opting to sit rather than move. The components of fitness are a measurement of how fit someone is in the five categories: flexibility, muscular strength, muscular endurance, cardiorespiratory endurance, and body composition.

Directions: Respond to the following. **Student responses will vary. The responses should not be graded; teacher should provide feedback.**

1. I meet or exceed the American Dietary Guidelines for exercise. That is, I get 30-60 minutes of exercise *most* days of the week. **Yes** **No**

2. The activity that I participate in that elevates my heart rate and makes me sweat is:

3. The activity I choose to build strong muscles is: _____

4. I could do 20 push-ups and 50 crunches right now without resting. **Yes** **No**

5. I make it a priority to be active in my life. **Yes** **No**

If you answered “yes” to most of these or provided examples, then you are on the path to lifelong fitness.

Why does it matter? Obesity, heart disease, diabetes, etc.—most of the deadly life style illnesses can be directly linked to lack of a healthy diet and regular exercise. If you want to move into adult life in good health, you will need to eat nutritious food and exercise to get there. These are known as “controllable” risk factors—that is something that *you* have control over. You can control whether or not you choose to eat healthy food and exercise. They are choices; ones that you are encouraged to participate in now and to continue into adulthood. Doing so reduces the risk for major chronic disease and promotes your health and wellness.

Continue on page 4, *Student Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Personal Workout Plan to Achieve High Level Physical Fitness

My fitness goal: _____ Option: _____

Directions: Create a plan based on developing the components of physical fitness. Include at least 60 minutes of activity each day.

Student plans will vary. Goals should be realistic based on the option selected. Plans should address four components of fitness and demonstrate progression.

| Week | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|------|--------|---------|-----------|----------|--------|----------|--------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |

Continue on page 8, *Student Resource Checking for Understanding Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1 B
Student Resource Checking for Understanding Sheet

Provide an example of how you would know you were “fit” for each component of fitness:

Example: I would know that I am fit in body composition if I am not storing a lot of extra fat around my mid section and I can see the definition in my bicep when I make a muscle.

Student answers will vary. Sample answers may include the following:

Cardiorespiratory endurance: I am able to run a mile in under 8 minutes.

Muscular strength: I am able to do 50 push-ups; I can bench press my own weight.

Muscular endurance: I can do 50 crunches in under two minutes; I can run 3 miles without stopping; etc.

Flexibility: I can bend over and touch my toes for 30 seconds.

Body Composition: My body composition falls within the range established in the *Dietary Guidelines for Americans 2005*.

Reflection: What health benefits might you see if you were engaging in an exercise program that meets or exceeds the Dietary Guidelines for Americans 2005?

Student answers will vary. Sample answer: I feel really good about myself. My self-esteem and body image have improved as a result of losing 25 pounds. I have more energy to deal with the tasks of daily life and have met a whole new group of people as a result of joining a gym. Overall, I feel much healthier. I am sure that losing weight and keeping it off will help me avoid developing lifestyle diseases associated with obesity.

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Lifestyle Disease Obesity—Lesson 2

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Lifestyle Disease Obesity—Lesson 2

Student Resource Activator Sheet



Activator

The rate of obesity is increasing rather than decreasing in our nation. Eating and exercising habits are the reason obesity is rising. Americans rely more on fast food and lead more sedentary lives. Obesity leads to a variety of chronic conditions, such as the body's inability to produce insulin and/or process glucose (diabetes) or heart malfunction due to blockages. Children who are obese are being diagnosed with signs of these illnesses in record numbers.

Directions: Review the statistics on obesity problems and solutions in Maryland. Respond to the questions that follow.

The Epidemic in Maryland

- 59 percent of Maryland adults are overweight or obese. (CDC Behavioral Risk Factor Surveillance System, 2004 [CDC BRFSS])
- 22 percent of non-Hispanic white adults, 31 percent of non-Hispanic black adults, and 19 percent of Hispanic adults in Maryland are obese. (CDC BRFSS, 2004)
- 29 percent of low-income children between 2 and 5 years of age in Maryland are overweight or at risk of becoming overweight. (CDC Pediatric and Pregnancy Nutrition Surveillance System, 2002)

Maryland in Action

Maryland's Nutrition and Physical Activity Program aims to:

- Expand its infrastructure to include internal departments such as Women, Infants and Children (WIC), Cardiovascular Health, and Diabetes.
- Identify surveillance systems that monitor the risks and prevalence of overweight and obesity.
- Provide training/education to nutrition and physical activity coalition partnerships.
- Develop the *Nutrition and Physical Activity to Prevent Obesity State Plan*. Six committees—Business and Industry, Environmental Change, Families and Communities, Healthcare, Schools, and Surveillance and Evaluation—are working to complete the plan.

Question: When you read the information about obesity in Maryland in the preceding passage, what comes to your mind? Respond with a BCR. You should have a minimum of five sentences; a topic sentence, three supporting sentences, and a concluding sentence.

Student answers will vary. Do not grade for content, but provide feedback on conclusions drawn and on writing quality.

Answers should address the following concepts:

Obesity is a major problem in Maryland that is affecting all segments of the population.

Education is needed now to try and stop this epidemic.

Continue on page 5, *Student Reading and Processing Sheet*.

Student answers will vary but may include the following:

List three contributing factors to obesity:

- **Unhealthy food choices**
- **Eating too much food**
- **Genetic disposition**
- **Lack of or not enough exercise**

List three diseases/conditions that obesity can lead to if not prevented or treated:

- **Heart disease**
- **High blood pressure**
- **Stroke**
- **Type 2 diabetes**
- **Certain forms of cancer, including prostate, colon, and breast**
- **Sleeping problems, such as sleep apnea**

OBESITY

Define: —“the state of having a significant amount of excess body fat; the state of weighing more than 20% above one’s recommended body weight” (Holt)

Provide three strategies parents can use to prevent or treat their child’s obesity:

- **Provide nutritious food at each meal**
- **Limit the amount of empty calories you allow your child to eat**
- **Develop an exercise plan and exercise with your child**
- **Be a role model in the foods that you eat**

Other than BMI, what factors should parents be aware of as predictors to potential health risks associated with overweight and obesity?

- **Portion size**
- **Weight beginning in infancy**
- **Lack of/ or little exercise**
- **Sugar and fat laden foods**

Name _____ Period _____ Date _____

Lifestyle Disease Obesity—Lesson 2
Student Resource Checking for Understanding Sheet

Directions: Circle the correct answer (s).

1. Obesity is **increasing** **decreasing** in our Nation.
2. There are approximately **30** **60** million obese people in the USA over the age of 20.
3. There are approximately **9** **16** million overweight youth in our Nation.
4. Obesity **increases** **decreases** the likelihood of other negative health issues.

5. Serious diseases associated with obesity include

diabetes

heart disease

stroke

hypertension

6. A BMI of **25** **30** is considered obese.

7. Another predictor of disease related to obesity is **waist size** **appetite**.

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Risk Factors for Obesity—Lesson 3

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Risk Factors for Obesity—Lesson 3

Student Resource Activator Sheet



Activator

Computer use, television viewing, and the popularity of video games are linked to Americans moving less. Fast food establishments and convenience foods replace home-cooked meals. Obesity is one side effect of our changing society, and the results may be deadly. Although the government calls for Americans to maintain balanced diets and exercise 30–60 minutes most days of the week, many do not.

Directions: Read the quoted passages taken verbatim from the U.S. Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity, 2001. Respond as directed.

- “ Overweight and obesity result from an energy imbalance. This involves eating too many calories and not getting enough physical activity.”

Respond: How could someone track his or her energy use to correct an imbalance? **Keep a log or journal of exercise, intensity, and duration. Compare to calorie intake. Evaluate balance or imbalance and plan corrective action.**

- “ Body weight is the result of genes, metabolism, behavior, environment, culture, and socioeconomic status.”

Respond: What factors related to weight are within the control of individuals. **Calorie intake, environment, behavior, and exercise.**

Factors not within the control of individuals: **Genetics and culture**

- “ Behavior and environment play a large role causing people to be overweight and obese. These are the greatest areas for prevention and treatment actions.”

Respond: Why are behavior and environment suggested as the greatest areas for prevention and treatment actions? **Behavior and environment are within the control of the individual.**

Individuals can determine their habits and take responsibility for personal health.

Respond: Describe three actions you consider effective to reduce obesity. **Answers will vary and may include: balance intake and output; control environment; and encourage and support others striving to balance their weight,**

Continue to page 4, *Student Resource Reading and Processing Sheet*.

“ Choosing a variety of healthy foods in the correct portion sizes is helpful for achieving and maintaining a healthy weight. The Dietary Guidelines for Americans is a good resource to help people guide their dietary habits.

Calories Used

“ Our bodies need calories for daily functions such as breathing, digestion, and daily activities. Weight gain occurs when calories consumed exceed this need. Physical activity plays a key role in energy balance because it uses up calories consumed.

“ Regular physical activity is good for overall health. Physical activity decreases the risk for colon cancer, diabetes, and high blood pressure. It also helps to control weight, contributes to healthy bones, muscles, and joints; reduces falls among the elderly; and helps to relieve the pain of arthritis. Physical activity does not have to be strenuous to be beneficial. Moderate physical activity, such as 30 minutes of brisk walking five or more times a week, also has health benefits.

“ Despite all the benefits of being physically active, most Americans are sedentary. Technology has created many time and labor saving products. Some examples include cars, elevators, computers, dishwashers, and televisions. Cars are used to run short distance errands instead of people walking or riding a bicycle. As a result, these recent lifestyle changes have reduced the overall amount of energy expended in our daily lives.” (CDC)

Application

Directions: Imagine you are enjoying some relaxation time and conversation with several friends. Your friends range from underweight to obese. While chatting about school, a program begins on TV about obesity. Everyone becomes quiet and listens to the program. After the program, the conversation focuses on weight, body image, and health. You are asked the following questions. Write your reply below to each and be sure your reply is both factual and empathetic.

Why do people become obese? (Explain the process of becoming obese including energy imbalance.)

Key points should include: energy imbalance, lifestyle habits, individual behaviors, environmental habits, and genetics. Obesity is the result of factors combining to result in an imbalance and generally progresses over time.

Am I going to be obese? (Define obese and explain strategies individuals use to avoid obesity.)

Obesity definition should include: the state of having a significant amount of excess body fat and weighing more than 20 percent above one’s recommended weight.

Strategies:

- **balance intake by controlling portion size, including more fruits and vegetables,**
- **expend more energy through physical activity, daily exercise, choosing the stairs over the elevator, walking whenever possible.**

Do I have to go on a diet to lose weight? (Explain the importance of exercise and healthy diet and maintaining a healthy weight.)

Exercise and healthy diet are critical factors in controlling weight.

Diet should be referred to as a healthy eating plan, not food restriction.

Drastic calorie restriction is not effective for long term weight loss.

Quality of food intake is important.

My family is overweight. What can I do to change the cycle?

Encourage family to work as a team to change.

Reduce high calorie and high fat foods from the family diet gradually.

Exercise as a family.

Support and encourage each other.

I hate to exercise. What can I do to balance my calorie intake and calories used?

Start slow with a simple plan, increase daily movement such as more walking, and increase formal exercise.

Why would a thin person care about obesity?

General health expenses to society.

As individuals mature, metabolism changes and weight may become a concern.

Quality of nutrition is important to everyone.

Continue to page 7, *Student Resource Checking for Understanding Sheet.*

Name _____ Period _____ Date _____

Risk Factors for Obesity—Lesson 3
Student Resource Checking for Understanding Sheet

Directions: Match the word on the left with the statement on the right.

- | | |
|---|--|
| d _____ Obesity | a. cause of much of the change in the amount of exercise we get (example cars, computers...) |
| f _____ Energy imbalance | b. causes increase in calorie consumption...without eating more times/meals—has increased over the years |
| b _____ Portion size | c. decisions made surrounding food/activity |
| e _____ Sedentary | d. chronic condition caused by consuming more calories than used over time |
| g _____ Moderate physical activity | e. lack of movement |
| a _____ Technology | f. when calories consumed exceed or do not meet the calories burned in a day |
| c _____ Personal choice | g. level of activity necessary to gain health benefits |

Montgomery County Public Schools
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Consequences and Prevention of Obesity—Lesson 4

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Consequences and Prevention of Obesity—Lesson 4

Student Resource Activator Sheet



Activator

A variety of medical issues are directly related to obesity. As a consequence, medical costs associated with obesity and the resulting illnesses are extensive. The cost to the United States medical system for obesity-related medical issues amounts to billions of dollars.

According to *The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity*, the cost of obesity in the United States in 2000 was more than \$117 billion (\$61 billion in direct costs and \$56 billion in indirect costs).

If obesity related disease and conditions might be reduced or eliminated, what programs supported by tax dollars do you feel would benefit from an additional \$117 billion? How would Americans benefit from your listed programs if they gained the added financial support?

Answers will vary and may include education, family health care, recreation

programs for adolescents, environmental issues programs, prevention programs

for health, research to find cures.

“ Left unabated, overweight and obesity may soon cause as much preventable disease and death as cigarette smoking.” Surgeon General David Satcher. Currently 300,000 deaths are linked to obesity and 400,000 deaths are linked to smoking.

What do this statement and data mean to you and your future as a tax payer? **More tax dollars**

supplied by individuals will be needed to support health programs, and less

money will be for personal use.

Application

Directions: Create an informative flyer about obesity. Include information from all three obesity lessons. Outline the content of your flyer and develop a rough draft on another sheet of paper. You may create your flyer on the computer or by hand. Include your name, period, and date on the back of the flyer as stated in the directions.

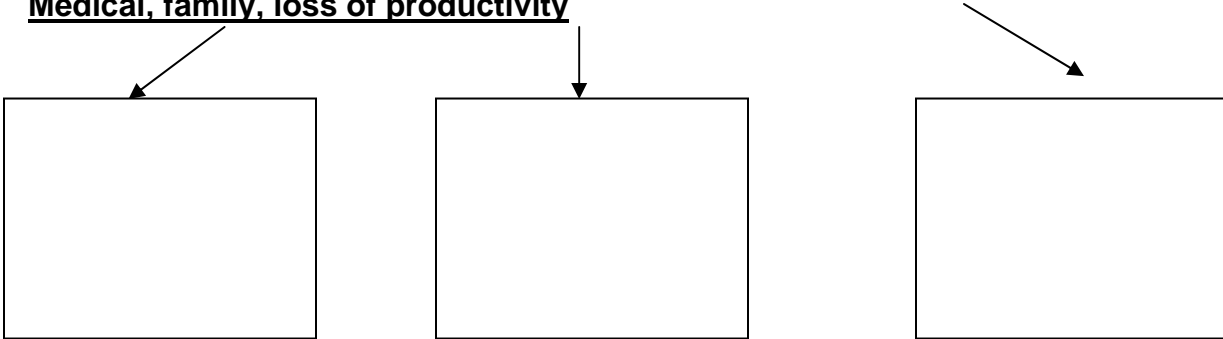
| Content Criteria: Complete key information to organize your thoughts | Check: |
|--|---------------|
| Define obesity (include BMI) <u>Obesity is having excess body fat and body mass index is used to determine percentage</u> | |
| Explain how people become obese <u>More calories in and fewer calories used on a daily basis and over time.</u> | |
| Explain how to avoid becoming obese <u>Exercise regularly, consume a healthy diet, and work toward balance</u> | |
| Explain how to reduce weight/obesity <u>Increase exercise to increase energy use while reducing caloric intake</u> | |
| List diseases/conditions that increase with obesity <u>Hypertension, dyslipidemia, type 2 diabetes, coronary heart disease, stroke, gallbladder disease, osteoarthritis, sleep apnea, respiratory problems, cancers (endometrial, breast, and colon)</u> | |
| Discuss problems associated with/related to these diseases/conditions <u>Add conditions to those diseases noted from the list above</u> | |
| Examine the “ costs” (including financial) associated with obesity <u>May include: medical, social, environmental (larger spaces and furniture)</u> | |
| Develop a plan to reduce obesity nationwide <u>Education programs, exercise initiatives, and social support</u> | |
| Creativity Criteria: | |
| Tri-fold design | |
| Catchy title | |
| Include at least one chart, bulleted list, or graphic | |
| Place your name, period, and date on the back of the flyer | |

Name _____ Period _____ Date _____

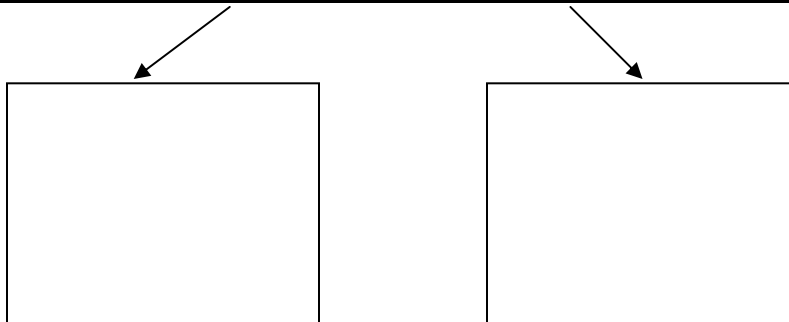
Consequences and Prevention of Obesity—Lesson 4
Student Resource Checking for Understanding Sheet

Directions: Complete the chart below:

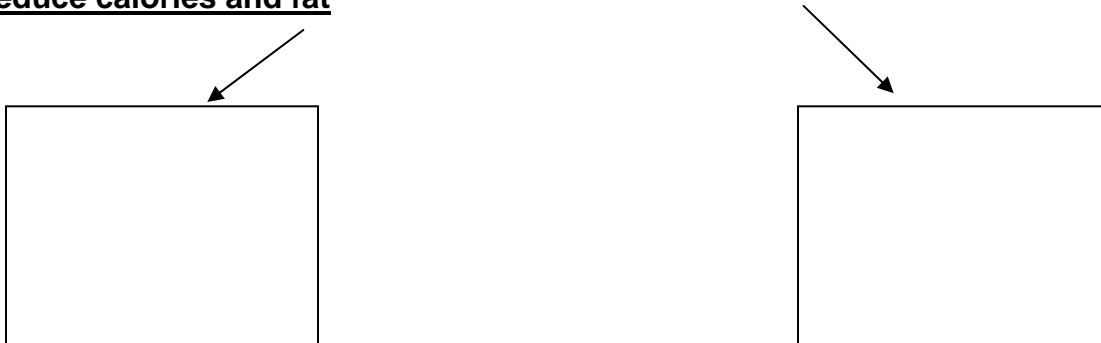
Three main categories of “ costs” of obesity include:
Medical, family, loss of productivity



Financial costs can be broken down into the following categories:
Those paid by the individual and those paid by government agencies



List two “ musts” in a plan for reducing/preventing obesity:
May include: education, changes in eating habits, changes in processed foods to reduce calories and fat



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Eating Disorders—Lesson 5

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Eating Disorders—Lesson 5
Student Resource Activator Sheet



Activator

Teenagers make decisions about food choices, exercise habits, clothing purchases, jobs, school work and leisure time. Intense media influence can make this a difficult time to be a teenager. Some teenagers cope by over eating and others avoid eating to deal with insecurities or feelings of failure to reach the ideals portrayed in media. Controlling eating is a way to gain power while attempting to meet unrealistic expectations or to manage seemingly unmanageable schedules. These eating habits may lead to eating disorders that result in a loss of control and can leave teenagers feeling powerless

Directions: Complete the chart below. **Student answers will vary. Responses should be complete.**

My physical description of the “ perfect“ person:

| | |
|---------------|--|
| Height | |
| Weight | |
| Hair | |
| Skin | |
| Size | |
| Eyes | |

Why do you feel these are “ perfect” characteristics? _____

How many people do you currently know who meet all the criteria?

How many of these descriptions do you meet?

Continue to page 5, *Student Resource Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Radio Commercial PSA

Student responses will vary. All criteria established for this activity should be included.

Name _____ Period _____ Date _____

Eating Disorders—Lesson 5
Student Resource Checking for Understanding Sheet

Directions: Fill in the missing word(s) so that the statement is correct.

1. A distorted **body image** is a main cause of eating disorders.
2. Anorexia and bulimia have been recognized as **psychological** disorders.

What other mental disorders might someone suffer from along with an eating disorder?
depression, substance abuse, or anxiety disorder.

3. The body of someone with anorexia would most likely be very **thin**.
4. Someone suffering from bulimia would most likely have a **normal** body weight.
5. Someone suffering from binge-eating disorder would most likely have a substantial weight **gain**.
6. Common treatments for individuals suffering from any of the eating disorders mentioned would include **medical attention along with psychological treatment.**

Directions: Sort the facts listed in the word bank into the correct column. Some may belong in more than one category; there are just the right numbers to fill the table.

| Eating disorders: | Anorexia: | Bulimia: | Binge-eating: |
|--------------------------|---------------------------------|-----------------------------|----------------------------|
| treatable | starvation | tooth decay | diabetes |
| adolescence | lanugo | chronic constipation | binging |
| females | abnormal menstrual cycle | irregular heart beat | high blood pressure |

| |
|---|
| Word Bank: * abnormal menstrual cycle* starvation * treatable * diabetes * adolescence * chronic constipation * high blood pressure * irregular heart beat * binging * tooth decay * lanugo * females |
|---|

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Addiction and Recovery—Lesson 6

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Spending Habits—Lesson 6

Student Resource Activator Sheet



Activator

One problem with money is that not everyone (adults included) manages money well. Everyone likes to spend money. But what about saving some of it for college, your first car, or other future needs? When you earn money at a job or receive money as a gift, what happens to it? Do you save it? Spend it? Save some? spend some? These are some of the questions you will answer in this lesson.

Perhaps you have a certain item that you would like to purchase, how are you going to make sure you have the money to pay for it? Are you a good spender? Are you a good saver? You will have the opportunity to evaluate your personal spending habits, and make some improvements so you will be financially ready for your future.

Directions: Take the quiz below to assess your personal spending and saving habits. You will self-check to evaluate how you are doing with your financial decision making. Read each statement below and assign a score that reflects your habits.

1 = I do this almost always.

3 = I do this sometimes.

5 = I do this rarely or never.

Spending habits quiz: **Do not grade. Check for completion. Student should have assigned points to each item and totaled the points.**

_____ 1. When I receive or earn money, I put some or all of it in my savings.

_____ 2. I keep my savings in a bank account.

_____ 3. I keep an account, log, or journal of all money I receive and earn.

_____ 4. I have a predetermined budget for my regular weekly expenses.

_____ 5. I keep all receipts and account for all of my cash spending.

_____ 6. I manage my spending with a written budget.

_____ 7. I budget in advance for food and entertainment spending each week.

_____ 8. I regulate how often I eat out or buy snacks at a convenience store.

_____ 9. I wait for sales and bargains on items I want to purchase.

_____ 10. I compare prices and quality at different stores for items I want to purchase.

_____ My Total Points

After totaling your points, how did you do? Check your results, using the chart below.

| | |
|-------|---|
| 10-19 | You’ve got it...share your knowledge with others! |
| 20-29 | You’re off to a good start—you could apply just a few savings ideas. |
| 30-39 | You need to make some changes in your current spending habits. |
| 40-50 | Your spending habits need significant improvement. |

Using the point total from page 3, student should identify level of spending habit.

Reflection:

What did you learn from your performance on the quiz? **Look for personal views related to responsible behavior. The intent is to examine self-awareness of behavior, emotions, and motivations.**

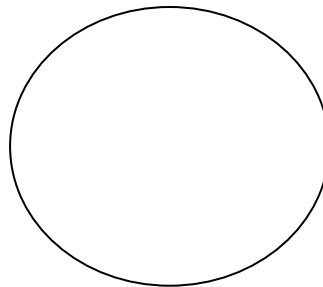
Identify five of your current spending habits

1. May include fast-food expenditures, use of credit cards to purchase wants, budgets, saving, purchases to make one feel happy, spending with friends, and buying items for others.

- 2. _____
- 3. _____
- 4. _____
- 5. _____

Divide this circle into sections to represent your typical spending.

Pie chart should include food, clothing, entertainment, and education expenses. Additionally, expenses may include auto, pet, and other personal categories.



Continue to page 5, *Student Resource Reading and Processing Sheet*

Name _____ Period _____ Date _____

Spending Habits—Lesson 6
Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, use an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Teen Spending

“ Teenagers earn, save, spend and borrow billions of dollars each year in the marketplace. They have more money to spend than previous generations and develop spending patterns at a younger age. Teenagers’ attitudes about money are influenced by their parents, the media, their peers, and their own successes and failures in spending money. The buying habits of teenagers are learning experiences.

“ Teenagers in the U.S. spend over \$84 billion a year. The money, which averages to about \$3,200 per teen comes primarily from parents and jobs; and covered spending on clothing, food, entertainment, personal-appearance products, recorded music, and transportation. Money management skills develop from the ideas, attitudes, and spending habits learned at home, school, and in the marketplace. Those who learn good money management skills are more likely to become adults who can make sound financial decisions, avoid excessive debt, and manage income and expenses to reach their financial goals.”

Quick write: What does this information mean to you? Concepts may include teenagers have spending power, teenagers need skills to manage money, and teenagers are responsible for their spending habits.

How to Develop Sound Spending Skills

1. Write down all of the poor spending practices that you want to change. Responses may include overspending on credit card, not saving, buying name brands at high prices.

2. Write down how you plan to accomplish the changes in each area. Should identify the problem, set goals and follow decision-making strategies.

3. Construct a cash-flow sheet showing income and outgo, using this model: Look for items and costs listed in each column.

| | | |
|--------|--|-------|
| Income | | Outgo |
| | | |

4. Set up a spending plan or budget and discuss your plan with parents or guardians. **Students may add a budget in this location or may write a simple income and expense statement of their plan.**
5. Begin collecting and making notes on your cash purchase receipts. Decide where you will save your receipts. **Box, file system, or computer finance program**

Other strategies to consider

- Begin saving \$1 a day or all pocket change, every day.
- Look for alternatives and substitutes to spending.
- Start utilizing cents-off coupons and mail in for rebates.
- Wait for the sales. Comparison shopping can save more than 50 percent.
- Take advantage of factory seconds, rebuilt, and used items where practical.
- Start doing things for yourself that others were paid to do previously.
- Separate comparison-shopping trips from spending trips when you plan to make purchases.
- Avoid carrying much cash on the shopping trips.
- List your own ideas. **Student ideas should show application of information presented in the reading source.**

Ask yourself the following questions when considering a purchase:

- Do I really need the item?
- Is the price reasonable enough to justify buying it?
- Is this the best time to buy the item?
- If this is a bargain, is it a current model?
- Is the “On Sale,” price a true bargain?
- Can a less-expensive item be substituted?
- Am I sure there are no major disadvantages?
- Will it truly satisfy a need?
- Have I checked and researched the item?
- Do I know the retailer’s reputation?
- Does this retailer offer any special services with the item?

That Sale Item May not Be a Bargain

“ Many people who are generally smart with their money buy items at sales because they think they will be saving lots of money. But these people buy things not because they need them, but because they are a ‘bargain.’ This isn’t very smart. Often these bargains are not as good as they seem. Before you buy an item on sale, it is important to look at prices and carefully determine if it is a good deal or not.” (Indiana Department of Financial Services)

Application

Directions: Review the graph of your current spending habits from page 4. Once you have assessed your spending and saving habits, make changes that support more saving and less spending. For example, do you really need that fast food every afternoon?

Current spending habits

Where is my money going? Answers will vary but all sections should be addressed.

Step 1: What is your current weekly income?

| | | | | |
|----------------------|---|--|---|--|
| \$ from allowance: | + | | = | |
| \$ from a job | + | | | |
| \$ from other source | + | | | |
| (not regular income) | | | | |

Step 2: List your current weekly fixed expenses (those you must spend, such as insurance).

| | | | | |
|---|--|---|---|--|
| | | : | = | |
| + | | : | | |
| + | | : | | |
| + | | : | | |

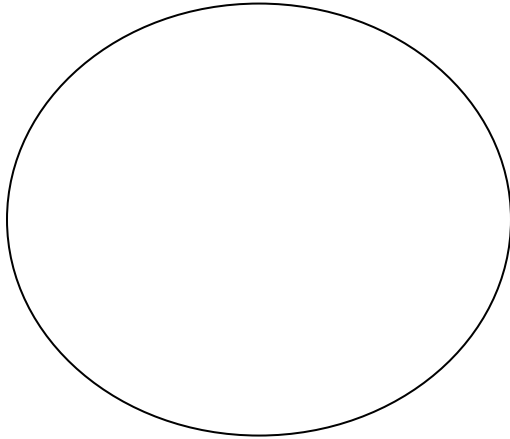
Step 3: List your flexible weekly expenses (those you may be able to eliminate or reduce, such as clothing, food, entertainment).

| | | | | |
|---|--|---|---|--|
| | | : | = | |
| + | | : | | |
| + | | : | | |
| + | | : | | |

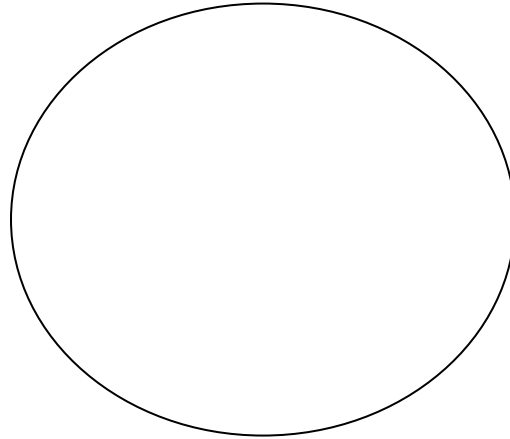
Determine what you are saving each week—add your fixed and flexible expenses and subtract from your income. Are you happy with the result? Do you have money left over to save? Show your current spending below, as a circle graph. Show your desired spending—the spending you realistically could achieve by reducing your flexible expenses—as a second circle graph.

Answers will vary. Graphs should reflect student’s current and desired spending.

Current Spending



Desired Spending



If you are having trouble finding money to save, consider the following questions:

- Am I paying myself first? Am I saving some of my money before I spend it all?
- Am I paying too much for any fixed expense? Can I shop for a lower insurance payment?
- Do I have spending habits that can be changed?
- Am I earning enough money to support my spending?
- Could I earn more money?

Create a plan for getting to your desired spending/saving (commonly called a budget):

Do not grade. Check for completion. Provide feedback using these points to guide your comments: questions are designed to practice self-thinking skills and self-management; answers should represent strategies to generate income and control spending.

1. I will provide income by _____

2. I will reduce/maintain my fixed spending by _____

3. I will reduce/maintain my flexible spending by _____

4. I will save money each week by _____

Name _____ Period _____ Date _____

Spending Habits—Lesson 6
Student Resource Checking for Understanding Sheet

Read the case study below and provide your suggestions for Phil.

Case Study

Phil is 16 years old and a sophomore in high school. He is getting his driver's license next month. He decided in sixth grade that he wanted to buy a car when he received his license. Phil started saving before then—he saved birthday money, any holiday money, and if he did any small jobs around the house, he saved that too. As a matter of fact, Phil has more than \$7,000 in the bank. Last year Phil got a job at the local pizza place, where he earns an average of \$90 each week. He saves most of that too, but occasionally spurges on items he wants, like CDs and clothes. His dilemma is this: He wants to buy a car with the money he has saved and his parents want him to save it for college expenses such as books and spending money. He won't be able to take his car to college, at least not the first year. His parents are providing him with a vehicle (it is an old minivan that they kept for him to use). Although not new, it does run. Phil will have to pay for the gas, but his parents will pay for the insurance and upkeep on the van. If he buys his own car, he will have to pay not only for the gas, but also the maintenance and insurance.

What would you advise Phil to do?

Responses will vary but may include save money and use parent provided auto, think about the long run and the importance of savings, or don't buy another car because you can't take it to college.

Why?

Saving for important expenses is a wiser decision.

If you were Phil, how would you feel about this decision?

Happy parents are supportive and providing an opportunity for saving; proud of making an adult decision based on "needs" instead of a "wants" decision

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Consequences of Alcohol Consumption—Lesson 7

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Consequences of Alcohol Consumption—Lesson 7

Student Resource Activator Sheet



Activator

Fetal Alcohol Syndrome (FAS) is one of many consequences of irresponsible alcohol consumption where more than the drinker is directly affected by the alcohol. Additionally, alcohol consumption claims the lives of many innocent people each year in car crashes and unintentional injuries or incidents.

Directions: Read and respond to the following case studies.

Case Study #1

Beth went to visit several friends from her college days. Beth had graduated the previous year and was working in another state. Four of them went out—Beth, Amy, Bryan, and Tim. They closed the bar, even though they didn't consume alcohol. They just wanted to spend time together. When it was time to leave, the men got in one car, and the women followed them in another. They were about halfway home when the men noticed a driver coming toward them who was swerving. They managed to miss the obviously impaired driver but the women were not so lucky. They crashed head on killing Amy instantly. Beth survived, but faced many surgeries and years of pain. The impaired driver was a 17-year-old male who had been drinking heavily that night. He also died in the crash.

1. How did irresponsible drinking affect Amy, Beth, Bryan, and Tim?

Amy: **killed, unable to complete life dreams**

Beth: **survived, faced many surgeries and years of pain, income reduced and expenses increased**

Bryan: **loss of a friend, guilt**

Tim: **loss of a friend, guilt**

Who else was affected? **families of those involved, emergency crew dealing with the deaths at the scene**

How? **financially, physically, emotionally**

Case Study #2

Greg, his son Mark, and his wife Lisa (who was four months pregnant) were on their way home at 6 p.m. one Friday evening. They had spent the day downtown playing at the park, walking around, and having a late lunch and ice cream. As Greg traveled around a sharp bend in the road, he encountered a car heading toward them in his lane. Greg swerved to avoid the car, but the other car swerved in a direction that caused them to crash side to side. Lisa was sitting on the side of the car receiving the most impact and damage. Lisa and her unborn baby were killed instantly. Mark was protected by the car seat and survived the crash. Greg and the other adult male driver survived but spent days in the hospital recovering from injuries. Mark stayed with relatives until his father was released from the hospital and he still cries for his mommy. The other driver reported he had been returning home from happy hour.

2. How did irresponsible drinking affect Greg, Mark, and Lisa?

Greg: **loss of his wife, medical expenses, recovery, sole care giver for son, guilt, financial**

Mark: **loss of his mother, disruption of family**

Lisa: **died, could not fulfill her dreams as a mother and wife.**

Who else was affected? **all families and relatives, emergency personnel responding to the scene, friends and associates of the victims**

How? **financially, physically, emotionally**

Case Study #3

Melissa was drinking and knew the possible consequences of driving while intoxicated. A police officer pulled up behind her with his lights on to stop her for speeding. She speeded up in an effort to outrun the officer. A few miles down the road she crashed into a motorcyclist, a young man out for a leisurely drive on his motorcycle. He suffered fatal injuries. His parents described him to the local paper as “ a wonderful son.”

3. How did irresponsible drinking affect the motorcyclist?

Motorcyclist: **killed, unable to fulfill life dreams**

Who else was affected? **All families, emergency personnel**

How? **financially, physically, emotionally**

Case Study #4

Martin was a small baby whose mother consumed alcohol while she was pregnant. His mother stopped consuming alcohol in any form once her family convinced her she should not drink while she was pregnant. Martin was born with FAS and his mother's life raising Martin was much different from what she had expected

4. How did irresponsible drinking affect Martin?

Martin: **cognitive and physical impairment, pain as a result of FAS**

Who else was affected? **His mother, family members, friends, medical personnel, society**

How? **financially, physically, emotionally**

Continue to page 5, *Student Resource Reading and Processing Sheet*

| Content Criteria: | Check: |
|--|--------|
| Define FAS. <u>Fetal Alcohol Syndrome—physical and mental defects caused by exposure to alcohol during fetal development.</u> | |
| Discuss the cause of FAS and how to avoid FAS. <u>Caused by alcohol use, do not use alcohol if any possibility of pregnancy.</u> | |
| Tell whether or not FAS is curable. <u>Not curable, only treatable.</u> | |
| Describe/show via illustration at least one of the physical characteristics of FAS. <u>Abnormal facial features, growth deficiency, central.</u> | |
| Describe/list at least two of the mental/intellectual characteristics of FAS. <u>Problems in school, reduced mental/intellectual function.</u> | |
| Include at least three other pieces of information/facts about FAS. <u>Additional medical costs, avoidable, not curable.</u> | |
| Creativity Criteria: | |
| Newsletter format including a title and article headlines. | |
| Clear, accurate, concise, and interesting presentation. | |
| A minimum of four articles/headlines. | |
| Design on one piece of paper 8.5" x 11" (computer paper/attached template). | |

Name _____ Period _____ Date _____

Consequences of Alcohol Consumption—Lesson 7
 Student Resource Checking for Understanding Sheet

Directions: Answer the following questions.

- T F 1. Alcohol consumption affects only the drinker.
- T F 2. Those who drive safely and obey laws do not have to worry about getting involved in a car crash involving alcohol.
- T F 3. FAS is not curable.
- T F 4. FAS is hereditary.
- T F 5. Alcohol consumption is a leading cause of mental retardation.

Create a list of three reasons people should not use alcohol irresponsibly.

breaking the law

mental/emotional, social and physical consequences

addiction

Create a list of three consequences FAS can have on a family.

mental/emotional, social and physical consequences

financial, long-term care, medical factors

guilt and regret

If you had one statement to say to someone who has affected another through his/her alcohol use, what would it be?

Student responses will vary, but should include empathetic messages.

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Synthesis—Lesson 8

TEACHER ANSWER KEY

Name _____ Period _____ Date _____

Alternative Unit B Synthesis—Lesson 8
Student Resource Activator Sheet



Activator

Directions: Complete the following charts to collect data you will use when evaluating your learning during this unit. Your teacher used the prepared answer key to evaluate your learning but that is only one component in this process. What you view as most important and effective will be valued by your brain and remembered.

| | | |
|---|--|---|
| Lesson | My self-assessment (grade, quality of my responses and products, and overall value of content). | My teacher’s comments (grade, remarks about quality of responses and products created). |
| 1B Components of Fitness | Example: I give myself a B+ because... <u>Students will review each packet to collect data to complete this chart.</u> | Example: I earned an A. The teacher wrote: |
| 2B Lifestyle Disease Obesity | <u>Student should identify characteristics within the control and responsibility of the learner.</u> | <u>Student should create a summary, based on comments from teacher to generate a meaningful list of items needing improvement. Characteristics of successful products should also be identified.</u> |
| 3B Risk Factors for Obesity | | |
| 4B Consequences and prevention of Obesity | | |
| 5B Eating Disorders | | |
| 6B Addiction and Recovery | | |
| 7B Consequences of Alcohol Use | | |

Complete this grid **to plot your projected grade (Me)** and the **assigned teacher grade (T)**. Connect your *Me* grade to **construct a line graph**. Connect your *T* grades to create a line graph. **Circle the lessons you most enjoyed**. You will use this chart to answer questions as you complete this lesson.

| Grade | Me | T | Me | T | Me | T | Me | T | Me | T | Me | T | Me | T |
|---------------|-----------------------|---|---------------------------|---|--------------------------|---|--|---|------------------|---|------------------------|---|-----------------------------|---|
| A | | | | | | | | | | | | | | |
| B | | | | | | | | | | | | | | |
| C | | | | | | | | | | | | | | |
| D | | | | | | | | | | | | | | |
| Lesson | Components of Fitness | | Lifestyle Disease Obesity | | Risk Factors for Obesity | | Consequences and Prevention of Obesity | | Eating Disorders | | Addiction and Recovery | | Consequences of Alcohol use | |

Look for a grade plot and line graph, used to generate a visual for self-assessing effort.

Continue to page 4, *Student Resource Reading and Processing Sheet*

Name _____ Period _____ Date _____

Alternative Unit B Synthesis—Lesson 8
Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Learning theory suggests students are most effective as learners when they have a system to direct, manage, and assess learning. The theory refers to these strategies as self-direction, self-regulation, or self-management.

The theory refers to self-direction, self-management, or self regulation by using the following strategies to promote learning:

- Determining what is important
- setting goals
- Using decision-making models to define steps to achieve goals
- Creating formal action plans with objectives, time lines, and characteristics of the expected outcomes
- Organizing materials and activities to support decision making
- Keeping daily logs of key information and records of new strategies to promote long-term memory and help synthesize content
- Assessing oneself with daily checks of task completion, quality of responses

Activity

Evaluate and synthesize lesson content. In your own words, identify the most important content in lessons 1, 2, and 3 with respect to skills and strategies you will use to manage and direct your learning

Students will review copies of their graded packets. Look for evidence of that review and consideration of content to determine most important information. Look for retrieval, comprehension, and analysis of content.

Components of Fitness: **five components of fitness, criteria for a fitness plan**

Lifestyle Disease Obesity: **Preventing obesity promotes lifelong wellness, lifestyle risk factors, including type, quality of food intake and exercise can be controlled by the individual.**

Risk Factors for Obesity: **energy imbalance, lifestyle, exercise, attitude, genetics, and environmental**

Consequences and Prevention of Obesity: **Financial costs will increase if current statistics continue, medical, emotional and social consequences affect every individual**
Measures taken to prevent obesity should include reducing caloric intake, improving nutrient content, reducing fats and sugars.

Eating Disorders: **anorexia nervosa, bulimia, and binge eating defined, and relationship discussed**

Addiction and Recovery: **path of addition and steps to recovery, including choices based on the decision-making model**

Consequences of Alcohol Use: **Include emotional, physical, and financial costs to the user and nonuser. Effective avoidance strategies may be discussed.**

Continue to page 6, *Student Resource Checking for Understanding Sheet.*

Name _____ Period _____ Date _____

Alternative Unit B Synthesis—Lesson 8
 Student Resource Checking for Understanding Sheet

Based on the data you created in the activator and the value you determined for each lesson, assess your learning during this unit. Did the grade you earned reflect the value to you of the lesson? Did the grade you earned match the level of your effort, quality of your responses, and extent of the skills and concepts you feel you learned? Why or why not? Explain strategies for planning and organizing your learning environment and materials that led to your results. Explain the degree of significant content provided to you by this unit . You may write your response in paragraph form or you may develop a graphic organizer.

Response should include responsibility for learning, understanding that the grade may correlate to the effort expended and the skills/strategies used by the student to complete the original task(s).

Learning environment analyzed and improvement suggestions included.

Graphic organizer may be selected and should group responsibility/effort, content, and organization strategies.

Knowing you are responsible for your learning, what would you have changed? What strategies will you continue to use?

Strategies to improve

- **Management of study environment and time**
- **Study skills**
- **Effort**
- **Seeking clarification**

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Introduction

Welcome to the Grade 10 Alternative Unit B, in Health Education. This unit contains a total of eight independent lessons for students who are not participating in the Disease Prevention and Control unit. The lessons in this unit address the indicators and objectives in five of the seven content standards in the Montgomery County Health Education Curriculum Framework, which is aligned with the Maryland Voluntary State Curriculum. Each lesson addresses one of the following content standards in health education:

- Mental health
- Tobacco, alcohol, and other drugs
- Personal and consumer health
- Safety and injury prevention
- Nutrition and fitness

You will be extending your learning of selected concepts and processes that have been introduced to you previously in these standards.

The Grade 10 Alternative Unit B is a self-directed unit. Each lesson includes all of the material you need to complete the lesson. Prior to starting each lesson, check the *Materials* section on page 1 of the lesson and check your packet to be sure you have what you need.

Your teacher will provide you with a lesson each day, and will let you know in advance the grading criteria and due dates for each task. If you have questions about a lesson, ask your teacher for clarification.

At the end of the school day, take the lesson home so that you can review it with your parents/guardians. Ask your parents/guardians to sign your work and then submit the lesson to your teacher the next day. Your teacher will evaluate your learning and subsequently inform you of your grade.

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Table of Contents

Student Resource Assessment Sheet

Student Lessons—Unit B

| | |
|----------|--|
| Lesson 1 | Components of Fitness |
| Lesson 2 | Lifestyle Disease Obesity |
| Lesson 3 | Risk Factors for Obesity |
| Lesson 4 | Consequences and Prevention of Obesity |
| Lesson 5 | Eating Disorders |
| Lesson 6 | Addiction and Recovery |
| Lesson 7 | Consequences of Alcohol Consumption |
| Lesson 8 | Synthesis |

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit A

Student Resource Assessment Sheet

| Lesson two class period per lesson. | Lesson Title | Type of Assessment | Due Date | Grade |
|---|--|--------------------|----------|-------|
| 1 | Components of Fitness | | | |
| 2 | Lifestyle Disease Obesity | | | |
| 3 | Risk Factors for Obesity | | | |
| 4 | Consequences and Prevention of Obesity | | | |
| 5 | Eating Disorders | | | |
| 6 | Addiction and Recovery | | | |
| 7 | Consequences of Alcohol Consumption | | | |
| 8 one class period | Synthesis | | | |

This sheet is to be completed in consultation with your teacher.

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Components of Fitness—Lesson 1

Overview

In this lesson you will review the five components of fitness and assess your current level in each component. You will have the opportunity to set a path toward improvement or maintenance, depending on your existing level of fitness.

Materials

Student Resource Sheets—Lesson 1,
pages 1–8
Pen or pencil
Highlighter (optional)

Vocabulary

- **Body Composition**—the ratio of lean body tissue (muscle and bone) to body-fat tissue (Holt)*
- **Cardiorespiratory Endurance**—the ability of your heart, blood vessels, lungs, and blood to deliver oxygen and nutrients to all of your body’s cells while you are being physically active (Holt)*
- **Flexibility**—the ability of the joints to move through their full range of motion (Holt)*
- **Muscular Endurance**—the amount of force that a muscle can apply in a given contraction (Holt)*
- **Muscular Strength**—the ability of the muscles to keep working (contract) over a period of time (Holt)*
- **Sedentary**—a lifestyle that includes only the light physical activity associated with typical day-to-day life (*Dietary Guidelines*, USDA, 2005)

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of Day 2 for grading.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

Enduring Understanding

Fitness promotes health.

Essential Questions

How does fitness promote health?

Mastery Objectives

Students will be able to do

- Explain the five components of fitness and provide examples of each.
- Apply the components of fitness to a personal plan.

Addressed Indicators/Objectives

6.3 Analyze influences on eating and activity behaviors

c. Determine strategies to maximize positive influences and minimize negative influences.

6.4 Analyze eating and activity behaviors that need improvement.

- b. Assess personal fitness and identify areas of personal physical activity behaviors that need improvement.
- c. Determine a plan of action plan to address areas targeted for improvement.
- d. Develop specific exercise and weight control strategies.

Table of Contents

Student Resource Sheets (pages 1–8)

- *Student Resource Lesson Overview* (pages 1–2)
- *Student Resource Activator Sheet* (page 3)
- *Student Resource Reading and Processing Sheet* (pages 4–7)
- *Student Resource Checking for Understanding Sheet* (page 8)

Lesson Sequence

1. *Introduction*

Answer the following questions silently:

1. Can you stand with your legs straight and touch your toes (without bending or locking the knees)?
2. Can you do a pull-up?
3. Can you do 10 push-ups—with proper form (back straight, no arch in the back, down to parallel, head looking straight ahead, not down)?
4. Can you do 30 crunches?
5. Can you jog a mile in under 12 minutes? Under 10 minutes? Under 8 minutes?
6. Do you maintain a healthy weight for your height and structure (not too heavy or thin)?

These questions represent the components of fitness. They are examples of activities accomplished comfortably to maintain physical fitness. Too many Americans ignore the dietary guidelines established by the U.S. Department of Agriculture in 2005 for exercise—“Americans should be getting 30–60 minutes of exercise most days of the week.” Many of us are not meeting this standard, and the result is obvious...obesity levels for our youth as well as adults have steadily increased over the past decades.

In this lesson you will assess your personal fitness level, review the five components of fitness, and design a realistic exercise plan, according to the components of fitness.

2. **Activate Current Knowledge:** Read the directions for the *Activator* exercise on your *Student Resource Activator Sheet*; fill in the chart, and answer the questions (page 3).

3. **Read and Process:** Read about the five components of fitness (pages 4–5). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or highlight the main points. Using the information on the components of fitness reading, complete the *Student Resource Application Sheet* (page 6).

4. **Checking for Understanding:** Complete the *Student Resource Checking for Understanding Sheet* (page 8). This is an assessment, so do your best. Submit the lesson packet to your teacher to evaluate your learning.

- **Extend by** implementing a fitness plan.

Continue on page 3, *Student Resource Activator Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1

Student Resource Activator Sheet



Activator

American teenagers are not getting the necessary amount of exercise. With the convenience of fast food, computers, and video games and with issues related to safety, more and more people are opting to sit rather than move. The components of fitness are a measurement of how fit someone is in the five categories: flexibility, muscular strength, muscular endurance, cardiorespiratory endurance, and body composition.

Directions: Respond to the following.

1. I meet or exceed the American Dietary Guidelines for exercise. That is, I get 30–60 minutes of exercise *most* days of the week. **Yes** **No**

The activity that I participate in that elevates my heart rate and makes me sweat is _____

2. The activity I choose to build strong muscles is _____
3. I could do 20 push-ups and 50 crunches right now without resting. **Yes** **No**
4. I make it a priority to be active in my life. **Yes** **No**

If you answered *Yes* to most of these or provided examples, then you are on the path to lifelong fitness.

Why does it matter? Obesity, heart disease, diabetes, etc.—most of the deadly lifestyle illnesses can be directly linked to lack of a healthy diet and regular exercise. If you want to move into adult life in good health, you will need to eat nutritious food and exercise to get there. These are known as “controllable” risk factors—that is something that *you* have control over. You can control whether or not you choose to eat healthy food and exercise. They are choices; ones that you are encouraged to participate in now and to continue into adulthood. Doing so reduces the risk for major chronic disease and promotes your health and wellness.

Continue on page 4, *Student Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or highlight the main points.

Components of Fitness**What does it mean to be physically fit?**

According to the Centers for Disease Control and Prevention (CDC), being physically fit involves “a set of attributes that people have or achieve that relates to the ability to perform physical activity” (retrieved from U.S. Department of Health and Human Services, 1996). This means the ability to show intensity in a variety of forms. For example, someone is not necessarily physically fit if he/she can run only long distances or lift heavy weights—there are five components that make up fitness (cardiorespiratory endurance, muscular strength, muscular endurance, body composition, and flexibility), and they all need to be taken into consideration when assessing one’s level of fitness.

Cardiorespiratory endurance

Cardiorespiratory endurance is the ability of the body’s circulatory system (including the heart flow of blood) and the respiratory system (including the lungs and oxygen/carbon dioxide exchange at the cellular level) to provide energy for prolonged periods of time. An example of someone with excellent Cardiorespiratory endurance is a marathon runner. Examples of exercises to improve cardiorespiratory endurance include the following:

- Walking
- Running
- Skiing
- Swimming
- Playing basketball
- Playing soccer
- Any activity that makes you breathe harder and sweat more, which you can do for 10 minutes or longer, will improve your cardiorespiratory endurance.

Muscular strength

Muscular strength is the ability of a muscle or muscle group to exert force for a short period of time. An example of someone with excellent muscular strength is a power lifter in the summer Olympic games (these athletes lift very heavy weights through three events: bench press, dead lift, and squat). Examples of exercises to improve muscular strength include the following:

- Bench press
- Squats
- Bicep curls
- Triceps kickbacks
- Shoulder raise
- Upright rows
- Any exercise that makes you exert heavy weight on your muscles

Muscular endurance

Muscular endurance, like muscular strength, is the ability of the muscles to exert force. The difference between muscular strength and muscular endurance is that muscular endurance is defined as exerting force more than once or twice. Muscular endurance is the ability of a muscle or muscle group to exert force repeatedly over time without fatigue. An example of muscular endurance is someone who can do 100 crunches. Examples of exercises to improve muscular endurance include:

- Push-ups
- Crunches/sit-ups
- Pull-ups/chin-ups
- Bicep curls
- Squats
- Bicep curls
- Triceps kickbacks
- Any exercise that you can do repeatedly

Body composition

Body composition refers to the percentage of the body make-up (or composition) of muscle, fat, and other categories. While two people may weigh the same on a scale, one may have a better body composition than the other; one may have excess fat yet weigh the same as the muscular individual. You can improve your body composition in the following ways:

- Find out whether or not your body composition is in need of improvement. It is very important to know if a change is needed. Trying to change body composition can lead to eating disorders if it is not done for the right reason.
- If you want to improve your body composition, follow the *Dietary Guidelines for Americans*, published by the U. S. Department of Agriculture in 2005
- Incorporate each of the other four areas of fitness, including 30–60 minutes of exercise most days of the week. These will help improve your body composition.

Flexibility

Flexibility is the ability of the body to move through a range of motion. This is important for incorporating the other components of fitness—cardiorespiratory endurance, muscular strength, and muscular endurance—safely and with optimal physical benefits. Imagine you run regularly, but never stretch your muscles. Injury is more likely to occur, which can decrease your ability to continue gaining fitness. It is important not to ignore flexibility. The following are examples of exercises to improve flexibility:

- Sit down on the floor with feet straight out in front and touch toes; do not bounce—this may cause ligaments to tear or strained muscles.
- Stand up and touch your toes.
- Stand tall or lie prone and reach over your head with both hands.
- Stand tall and reach over your head with both hands, then lean left and lean right.

Putting it all together

As you age, your body changes. Metabolism slows down, predisposing you to weight gain. To maintain a healthy weight throughout your lifetime, you will have to incorporate good eating and fitness habits. The time to start is now. It takes about a month to establish a habit—start today and by the end of next month you will feel and look better. You are the only one who can make this happen. Start and continue the process now. It is much too important to ignore.

Continue on page 6, *Application* section of the *Student Reading and Processing Sheet*.

Application

Personal Workout Plan

Directions: Select option A or option B. Select option A if you are currently exercising at or above the recommended level (30–60 minutes of activity most days of the week). You may be a competitive athlete, or have a comprehensive workout routine that you do regularly. Select option B if you are currently sedentary or do not meet the recommended amount of exercise. Use the Personal Workout Plan template on the page 7 or create a similar plan on the computer. Be sure to include a similar heading if you choose this option.

Option A: Create a fitness plan that you could follow once you start *working full time*. This could be in a few years or after college. The age at which you would start this program is not as important as the fact that you will be working full time when you start the program. You should incorporate activities that address each of the components of fitness, with the exception of body composition. You should meet or exceed the dietary guidelines for physical activity.

Option B: Create a fitness plan that you could start *now*! It should be *realistic*, and show a gradual progression toward more challenging exercises. You should incorporate activities that address each of the components of fitness, with the exception of body composition. You should meet or exceed the dietary guidelines for physical activity.

I am selecting Option: _____

Name _____ Period _____ Date _____

Personal Workout Plan to Achieve High Level of Physical Fitness

My fitness goal: _____ Option: _____

Directions: Create a plan based on developing the components of physical fitness. Include at least 60 minutes of activity each day.

| Week | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|------|--------|---------|-----------|----------|--------|----------|--------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |

Continue on page 8, *Student Resource Checking for Understanding Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1
Student Resource Checking for Understanding Sheet

Provide an example of how you would know you are “fit” for each component of fitness:

Example: I would know that I am fit in body composition if I am not storing a lot of extra fat around my midsection and I can see the definition in my bicep when I make a muscle.

Cardiorespiratory endurance: _____

Muscular strength: _____

Muscular endurance: _____

Flexibility: _____

Body composition: _____

Reflection: What health benefits might you see if you were engaging in an exercise program that meets or exceeds the Dietary Guidelines for Americans 2005?

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Components of Fitness—Lesson 1

Overview

In this lesson you will review the five components of fitness and assess your current level in each component. You will have the opportunity to set a path toward improvement or maintenance, depending on your existing level of fitness.

Materials

Student Resource Sheets—Lesson 1,
pages 1–8
Pen or pencil
Highlighter (optional)

Vocabulary

- **Body Composition**—the ratio of lean body tissue (muscle and bone) to body-fat tissue (Holt)*
- **Cardiorespiratory Endurance**—the ability of your heart, blood vessels, lungs, and blood to deliver oxygen and nutrients to all of your body’s cells while you are being physically active (Holt)*
- **Flexibility**—the ability of the joints to move through their full range of motion (Holt)*
- **Muscular Endurance**—the amount of force that a muscle can apply in a given contraction (Holt)*
- **Muscular Strength**—the ability of the muscles to keep working (contract) over a period of time (Holt)*
- **Sedentary**—“a lifestyle that includes only the light physical activity associated with typical day-to-day life” (*Dietary Guidelines*, USDA, 2005)

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of day two for grading.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

Enduring Understanding

Fitness promotes health.

Essential Questions

How does fitness promote health?

Mastery Objectives

Students will be able to do the following:

- Explain the five components of fitness and provide examples of each.
- Apply the components of fitness to a personal plan.

Addressed Indicators/Objectives

6.3 Analyze influences on eating and activity behaviors

c. Determine strategies to maximize positive influences and minimize negative influences.

6.4 Analyze eating and activity behaviors that need improvement.

- b. Assess personal fitness and identify areas of personal physical activity behaviors that need improvement.
- c. Determine a plan of action plan to address areas targeted for improvement.
- d. Develop specific exercise and weight control strategies.

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- *Student Resource Activator Sheet* (page 3)
- *Student Resource Reading and Processing Sheet* (pages 4–7)
- *Student Resource Checking for Understanding Sheet* (page 8)

Lesson Sequence

1. *Introduction*

Answer the following questions silently:

7. Can you stand with your legs straight and touch your toes (without bending or locking the knees)?
8. Can you do a pull-up?
9. Can you do ten push-ups—with proper form (back straight, no arch in the back, down to parallel, head looking straight ahead, not down)?
10. Can you do 30 crunches?
11. Can you jog a mile in under 12 minutes? Under 10 minutes? Under 8 minutes?
12. Do you maintain a healthy weight for your height and structure (not too heavy or thin)?

These questions represent the components of fitness. They are examples of activities accomplished comfortably to maintain physical fitness. Too many Americans ignore the dietary guidelines established by the US Department of Agriculture in 2005 for exercise—” Americans should be getting 30–60 minutes of exercise most days of the week.” Many of us are not meeting this standard, and the result is obvious—obesity levels for our youth as well as adults have steadily increased over the past decades.

In this lesson you will assess your personal fitness level, review the five components of fitness, and design a realistic exercise plan according to the components of fitness.

2. ***Activate Current Knowledge:*** Read the directions for the *Activator* exercise on your *Student Resource Activator Sheet*; fill in the chart, and answer the questions (page 3).

3. ***Read and Process:*** Read about the five components of fitness (pages 4–5). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or highlight the main points. Using the information on the components of fitness reading, complete the *Student Resource Application Sheet* (page 6).

4. ***Checking for Understanding:*** Complete the *Student Resource Checking for Understanding Sheet* (page 8). This is an assessment, so do your best. Submit the lesson packet to your teacher to evaluate your learning.

- ***Extend by*** implementing a fitness plan.

Continue on page 3, *Student Resource Activator Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1

Student Resource Activator Sheet



Activator

American teenagers are not getting the necessary amount of exercise. With the convenience of fast food, computers, and video games and with issues related to safety, more and more people are opting to sit rather than move. The components of fitness are a measurement of how fit someone is in the five categories: flexibility, muscular strength, muscular endurance, cardiorespiratory endurance, and body composition.

Directions: Respond to the following.

6. I meet or exceed the American Dietary Guidelines for exercise. That is, I get 30-60 minutes of exercise *most* days of the week. **Yes** **No**

The activity that I participate in that elevates my heart rate and makes me sweat is: _____

7. The activity I choose to build strong muscles is: _____

8. I could do 20 push-ups and 50 crunches right now without resting. **Yes** **No**

9. I make it a priority to be active in my life. **Yes** **No**

If you answered “yes” to most of these or provided examples, then you are on the path to lifelong fitness.

Why does it matter? Obesity, heart disease, diabetes, etc.—most of the deadly lifestyle illnesses can be directly linked to lack of a healthy diet and regular exercise. If you want to move into adult life in good health, you will need to eat nutritious food and exercise to get there. These are known as “controllable” risk factors—that is something that *you* have control over. You can control whether or not you choose to eat healthy food and exercise. They are choices; ones that you are encouraged to participate in now and to continue into adulthood. Doing so reduces the risk for major chronic disease and promotes your health and wellness.

Continue on page 4, *Student Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or highlight the main points.

Components of Fitness**What does it mean to be physically fit?**

According to the Centers for Disease Control and Prevention (CDC), being physically fit involves “a set of attributes that people have or achieve that relates to the ability to perform physical activity” (retrieved from U.S. Department of Health and Human Services, 1996). This means the ability to show intensity in a variety of forms. For example, someone is not necessarily physically fit if s/he can run only long distances...or lift heavy weights—there are five components that make up fitness (cardiorespiratory endurance, muscular strength, muscular endurance, body composition, and flexibility), and they all need to be taken into consideration when assessing one’s level of fitness.

Cardiorespiratory endurance

Cardiorespiratory endurance is the ability of the body’s circulatory system (including the heart flow of blood) and the respiratory system (including the lungs and oxygen/carbon dioxide exchange at the cellular level) to provide energy for prolonged periods of time. An example of someone with excellent Cardiorespiratory endurance is a marathon runner. Examples of exercises to improve Cardiorespiratory endurance include the following:

- Walking
- Running
- Skiing
- Swimming
- Playing basketball
- Playing soccer
- Any activity that makes you breathe harder and sweat more, which you can do for ten minutes or longer, will improve your Cardiorespiratory endurance.

Muscular strength

Muscular strength is the ability of a muscle or muscle group to exert force for a short period of time. An example of someone with excellent muscular strength is a power lifter in the summer Olympic games (these athletes lift very heavy weights through three events: bench press, dead lift, and squat). Examples of exercises to improve muscular strength include the following:

- Bench press
- Squats
- Bicep curls
- Triceps kickbacks
- Shoulder raise
- Upright rows
- Any exercise that makes you exert heavy weight on your muscles

Muscular endurance

Muscular endurance, like muscular strength, is the ability of the muscles to exert force. The difference between muscular strength and muscular endurance is that muscular endurance is defined as exerting force more than once or twice. Muscular endurance is the ability of a muscle or muscle group to exert force repeatedly over time without fatigue. An example of muscular endurance is someone who can do 100 crunches. Examples of exercises to improve muscular endurance include:

- Push ups
- Crunches/sit-ups
- Pull-ups/chin-ups
- Bicep curls
- Squats
- Bicep curls
- Triceps kickbacks
- Any exercise that you can do repeatedly

Body composition

Body composition refers to the percentage of the body make-up (or composition) of muscle, fat, and other categories. While two people may weigh the same on a scale, one may have a better body composition than the other; one may have excess fat yet weigh the same as the muscular individual. You can improve your body composition in the following ways:

- Find out whether or not your body composition is in need of improvement. It is very important to know if a change is needed. Trying to change body composition can lead to eating disorders if it is not done for the right reason.
- If you want to improve your body composition, follow the *Dietary Guidelines for Americans* published by the U. S. Department of Agriculture in 2005
- Incorporate each of the other four areas of fitness, including 30–60 minutes of exercise most days of the week. These will help improve your body composition.

Flexibility

Flexibility is the ability of the body to move through a range of motion. This is important for incorporating the other components of fitness—Cardiorespiratory endurance, muscular strength, and muscular endurance—safely and with optimal physical benefits. Imagine you run regularly, but never stretch your muscles. Injury is more likely to occur, which can decrease your ability to continue gaining fitness. It is important not to ignore flexibility. The following are examples of exercises to improve flexibility:

- Sit down on the floor with feet straight out in front and touch toes; do not bounce—this may cause ligaments to tear or strained muscles.
- Stand up and touch your toes.
- Stand tall or lie prone and reach over your head with both hands.
- Stand tall and reach over your head with both hands, then lean left and lean right.

Putting it all together

As you age, your body changes. Metabolism slows down, predisposing you to weight gain. To maintain a healthy weight throughout your life time, you will have to incorporate good eating and fitness habits. The time to start is now. It takes about a month to establish a habit—start today and by the end of next month you will feel and look better. You are the only one who can make this happen. Start and continue the process now. It is much too important to ignore.

Continue on page 6, *Application* section of the *Student Reading and Processing Sheet*.

Application

Personal Workout Plan

Directions: Select option A or option B. Select option A if you are currently exercising at or above the recommended level (30–60 minutes of activity most days of the week). You may be a competitive athlete, or have a comprehensive workout routine that you do regularly. Select option B if you are currently sedentary or do not meet the recommended amount of exercise. Use the Personal Workout Plan template on the page 7 or create a similar plan on the computer. Be sure to include a similar heading if you choose this option.

Option A: Create a fitness plan that you could follow once you start *working full time*. This could be in a few years or after college. The age at which you would start this program is not as important as the fact that you will be working full time when you start the program. You should incorporate activities that address each of the components of fitness, with the exception of body composition. You should meet or exceed the dietary guidelines for physical activity.

Option B: Create a fitness plan that you could start *now*! It should be *realistic*, and show a gradual progression toward more challenging exercises. You should incorporate activities that address each of the components of fitness, with the exception of body composition. You should meet or exceed the dietary guidelines for physical activity.

I am selecting Option: _____

Name _____ Period _____ Date _____

Personal Workout Plan to Achieve High Level of Physical Fitness

My fitness goal: _____ Option: _____

Directions: Create a plan based on developing the components of physical fitness. Include at least 60 minutes of activity each day.

| Week | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|------|--------|---------|-----------|----------|--------|----------|--------|
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |

Continue on page 8, *Student Resource Checking for Understanding Sheet*.

Name _____ Period _____ Date _____

Components of Fitness—Lesson 1
Student Resource Checking for Understanding Sheet

Provide an example of how you would know you are “fit” for each component of fitness:

Example: I would know that I am fit in body composition if I am not storing a lot of extra fat around my mid section and I can see the definition in my bicep when I make a muscle.

Cardiorespiratory endurance: _____

Muscular strength: _____

Muscular endurance: _____

Flexibility: _____

Body Composition: _____

Reflection: What health benefits might you see if you were engaging in an exercise program that meets or exceeds the Dietary Guidelines for Americans 2005?

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Lifestyle Disease Obesity—Lesson 2

Overview

This is the first of a three lesson series on obesity. In this lesson you will examine the definition of obesity and common diseases and conditions that can result from or intensify with obesity.

Materials

Student Resource Sheets—Lesson 2,
pages 1–8
Pen or pencil
Highlighter (optional)

Vocabulary

- **Obesity**—the state of having a significant amount of excess body fat; the state of weighing more than 20 percent above one’s recommended body weight (Holt)*

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of day two for grading.

Enduring Understanding

Preventing or reducing obesity promotes wellness.

Essential Questions

- What is obesity?
- What diseases or conditions may result from obesity?

Mastery Objectives

Students will be able to do the following:

- Identify risk factors for obesity.
- Identify diseases/conditions associated with obesity.

Addressed Indicators/Objectives

6.2 Identify and analyze the benefits of maintaining a healthy weight.

- Define and discuss what constitutes a healthful weight based on the Body Mass Index (BMI).
- Identify and describe common factors that contribute to excess weight gain.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

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- › *Student Resource Activator Sheet* (pages 3–4)
- › *Student Resource Reading and Processing Sheet* (pages 5–7)
- › *Student Resource Checking for Understanding Sheet* (page 8)

Lesson Sequence

1. *Introduction*

Obesity is a problem for many people, young and old. The term morbid obesity refers to patients who are 50–100 percent or 100 lbs above their ideal body weight. (NIH) Individuals dealing with excessive weight, can experience physical, emotional, and social consequences. Think about the difficulties someone who is morbidly obese may face.

In this lesson you will examine data on obesity in Maryland and what the state is doing to reduce the obesity epidemic. You will read general data on obesity and create a handout to share this information with others. As a culminating activity you will assess your knowledge by taking a short quiz.

2. **Activate Current Knowledge:** Read the directions for the activator exercise on your *Student Resource Activator Sheet* and answer the questions (pages 3–4).

3. **Read and Process:** Read about obesity (pages 5–6). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. After you have read the background information on obesity, complete the *Student Resource Application Sheet* (page 7).

4. **Checking for Understanding:** Complete the *Student Resource Checking for Understanding Sheet* (page 8). This is an assessment. Submit the lesson packet to your teacher to evaluate your learning.

Extend by doing the following:

- Reviewing more information about obesity.
- Investigating further diseases/conditions intensified by obesity.

Continue on page 3, *Student Resource Activator Sheet*.

Name _____ Period _____ Date _____

Lifestyle Disease Obesity—Lesson 2
Student Resource Activator Sheet



Activator

The rate of obesity is increasing rather than decreasing in our nation. Eating and exercising habits are the reason obesity is rising. Americans rely more on fast food and lead more sedentary lives. Obesity leads to a variety of chronic conditions such as the body’s inability to produce insulin and/or process glucose (diabetes) or heart malfunction due to blockages. Children who are obese are being diagnosed with signs of these illnesses in record numbers.

Directions: Review the statistics on obesity problems and solutions in Maryland. Respond to the questions that follow.

The Epidemic in Maryland

- 59 percent of Maryland adults are overweight or obese. (CDC Behavioral Risk Factor Surveillance System, 2004)
- 22 percent of non-Hispanic White adults, 31 percent of non-Hispanic Black adults, and 19 percent of Hispanic adults in Maryland are obese. (CDC, 2004)
- 29 percent of low-income children between 2 and 5 years of age in Maryland are overweight or at risk of becoming overweight. (CDC Pediatric and Pregnancy Nutrition Surveillance System, 2002)

Maryland in Action

Maryland’s Nutrition and Physical Activity Program aims to do the following:

- Expand its infrastructure to include internal departments such as Women, Infants and Children (WIC), Cardiovascular Health, and Diabetes.
- Identify surveillance systems that monitor the risks and prevalence of overweight and obesity.
- Provide training/education to nutrition and physical activity coalition partnerships.
- Develop the *Nutrition and Physical Activity to Prevent Obesity State Plan*. Six committees—Business and Industry, Environmental Change, Families and Communities, Healthcare, Schools, and Surveillance and Evaluation—are working to complete the plan.

Question: When you read the information about obesity in Maryland in the preceding passage, what comes to your mind? Respond in paragraph form. You should have a minimum of five sentences—a topic sentence, three supporting sentences, and a concluding sentence.

Name _____ Period _____ Date _____

Lifestyle Disease Obesity—Lesson 2

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Obesity information from Centers for Disease and Control and Prevention

“ During the past 20 years, obesity among adults has risen significantly in the United States. The latest data from the National Center for Health Statistics show that 30 percent of U.S. adults 20 years of age and older—over 60 million people—are obese. This increase is not limited to adults. The percentage of young people who are overweight has more than tripled since 1980. Among children and teens age 6–19 years, 16 percent (over 9 million young people) are considered overweight.”

These increasing rates raise concern because of their implications for Americans’ health. Being overweight or obese increases the risk of many diseases and health conditions, including the following:

- Hypertension
- Dyslipidemia (for example, high total cholesterol or high levels of triglycerides)
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Gallbladder disease
- Osteoarthritis
- Sleep apnea and respiratory problems
- Some cancers (endometrial, breast, and colon)

Although one of the national health objectives for the year 2010 is to reduce the prevalence of obesity among adults to less than 15 percent, current data indicate that the situation is worsening rather than improving.

Defining Obesity

Overweight and obesity are both labels for ranges of weight that are greater than what is generally considered healthy for a given height. The terms also identify ranges of weight that have been shown to increase the likelihood of certain diseases and other health problems.

Definitions for Adults

For adults, overweight and obesity ranges are determined by using weight and height to calculate a number called the *body mass index* (BMI). BMI is used because, for most people, it correlates with their amount of body fat.

- **BMI = weight in pounds ÷ (height in inches) x (height in inches) x 703**
 - An adult who has a BMI between 25 and 29.9 is considered overweight.
 - An adult who has a BMI of 30 or higher is considered obese.

Definitions for Children and Teenagers

For children and teenagers, BMI ranges above a normal weight have different labels (at risk of overweight and overweight). Additionally, BMI ranges for children and teenagers are defined so that they take into account normal differences in body fat between boys and girls and differences in body fat at various ages.

Assessing Health Risks Associated with Overweight and Obesity

BMI is just one indicator of potential health risks associated with being overweight or obese. For assessing someone's likelihood of developing overweight- or obesity-related diseases, the National Heart, Lung, and Blood Institute guidelines recommend looking at two other predictors:

- The individual's waist circumference (because abdominal fat is a predictor of risk for obesity-related diseases).
- Other risk factors the individual has for diseases and conditions associated with obesity, such as high blood pressure or physical inactivity." (CDC)

Application

Directions: Imagine you have volunteered at a clinic for obese children to fulfill your student service learning hours. Your task is to lead education groups for the parents of these children. You need an outline of what information you will provide. Complete the outline on the page 7.

Obesity Presentation

List three contributing factors to obesity:

1. _____

2. _____

3. _____

List three diseases/conditions that obesity can lead to if not prevented or treated:

1. _____

2. _____

3. _____

OBESITY

Define:

Provide three strategies parents can use to prevent or treat their child's obesity:

1. _____

2. _____

3. _____

Other than BMI, what factors should parents be aware of as predictors to potential health risks associated with overweight and obesity?

1. _____

2. _____

Name _____ Period _____ Date _____

Lifestyle Disease Obesity—Lesson 2
Student Resource Checking for Understanding Sheet

Directions: Circle the correct answer(s).

1. Obesity is **increasing** **decreasing** in our nation.
2. There are approximately **30** **60** million obese people in the United States over the age of 20.
3. There are approximately **9** **16** million overweight youth in our nation.
4. Obesity **increases** **decreases** the likelihood of other negative health issues.
5. Serious diseases associated with obesity include:
hypertension **diabetes** **heart disease** **stroke**.
6. A BMI of **25** **30** is considered obese.
7. Another predictor of disease related to obesity is **waist size** **appetite**.

Montgomery County Public Schools
Health Education
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Risk Factors for Obesity—Lesson 3

Overview

This is the second of a series of three lessons on obesity. In this lesson you will identify the most common causes of obesity and investigate means of reducing/eliminating obesity. Choices that people make about their food and exercise are part of this cycle. In our society the need for healthier food choices and making time for daily exercise is growing.

Materials

Student Resource Sheets—Lesson 3
pages 1–7
Pen or pencil
Highlighter (optional)

Vocabulary

- **Obesity**—the state of having a significant amount of excess body fat; the state of weighing more than 20 percent above one’s recommended body weight (Holt)*
- **Chronic**—something that develops gradually and continues over a long period of time (Holt)*

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of Day 2 for grading.

Enduring Understanding

Preventing or reducing obesity promotes wellness.

Essential Questions

- What is the cycle that leads to obesity?
- What factors contribute to obesity?

Mastery Objectives

Students will be able to do the following

- Explain the food/exercise pattern that leads to obesity.
- Identify factors that contribute to obesity.

Addressed Indicators/Objectives

6.6 Examine the relationship among food intake, physical activity, and weight management.

c. Investigate how nutritional intake and adequate exercise can affect weight control.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

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Lesson Sequence

1. *Introduction*

In this lesson you will examine more data on obesity, concentrating on causes of the condition. You will answer related questions and match the main vocabulary terms with their definitions to ensure you are familiar with the language used to describe obesity and its related conditions.

2. ***Activate Current Knowledge:*** Read the directions for the activator exercise on your *Student Resource Activator Sheet* and answer the questions (page 3).

3. ***Read and Process:*** Read obesity background information (pages 4–5). As you read, put a question mark (?) next to statements that you question, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. After reading the background information on obesity, complete the *Student Resource Application Sheet* (pages 5–6).

4. ***Checking for Understanding:*** Complete the *Student Resource Checking for Understanding Sheet* (page 7). This is an assessment. Submit the lesson packet to your teacher to evaluate your learning.

Extend by doing the following:

- Reviewing more information about obesity.
- Investigating other diseases/conditions intensified by obesity.

Name _____ Period _____ Date _____

Risk Factors for Obesity—Lesson 3
Student Resource Activator Sheet



Activator

Computer use, television viewing, and the popularity of video games are linked to Americans moving less. Fast food establishments and convenience foods replace home-cooked meals. Obesity is one side effect of our changing society, and the results may be deadly. Although the government calls for Americans to maintain balanced diets and exercise 30–60 minutes most days of the week, many do not.

Directions: Read the quoted passages taken verbatim from the U.S. Surgeon General’s *Call to Action to Prevent and Decrease Overweight and Obesity*, 2001. Respond as directed.

- “Overweight and obesity result from an energy imbalance. This involves eating too many calories and not getting enough physical activity.”

Respond: How could someone track his or her energy use to correct an imbalance? _____

- “Body weight is the result of genes, metabolism, behavior, environment, culture, and socioeconomic status.”

Respond: What factors related to weight are within the control of individuals? _____

Respond: What factors are not within the control of individuals? _____

- “Behavior and environment play a large role causing people to be overweight and obese. These are the greatest areas for prevention and treatment actions.”

Respond: Why are behavior and environment suggested as the greatest areas for prevention and treatment actions? _____

Respond: Describe three actions you consider effective to reduce obesity: _____

Continue to page 4, *Student Resource Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Risk Factors for Obesity—Lesson 3

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) statements that you question, an exclamation mark (!) to mark interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Obesity information from Centers for Disease Control and Prevention

Overweight and Obesity: An Overview

“ The obesity epidemic covered on TV and in the newspapers did not occur overnight. Obesity and overweight are chronic conditions. Overall there are a variety of factors that play a role in obesity. This makes it a complex health issue to address. This section will address how behavior, environment, and genetic factors may have an effect in causing people to be overweight and obese.

“ Overweight and obesity are a result of energy imbalance over a long period of time. The cause of energy imbalance for each individual may be due to a combination of several factors. Individual behaviors, environmental factors, and genetics all contribute to the complexity of the obesity epidemic.

Energy imbalance – “ When the number of calories consumed is not equal to the number of calories used.

Weight Gain:

Calories Consumed are *greater than* Calories Used

Weight Loss:

Calories Consumed are *less than* Calories Used

No Weight Change:

Calories Consumed *equal* Calories Used

Genetics and the environment may increase the risk of personal weight gain. However, the choices a person makes in eating and physical activity also contributes to overweight and obesity. Behavior can increase a person’s risk for gaining weight.

Calorie Consumption

In the United States, a changing environment has broadened food options and eating habits. Grocery stores stock their shelves with a greater selection of products. Prepackaged foods, fast food restaurants, and soft drinks are also more accessible. While such foods are fast and convenient they also tend to be high in fat, sugar, and calories. Choosing many foods from these areas may contribute to an excessive calorie intake. Some foods are marketed as healthy, low fat, or fat-free, but may contain more calories than the fat-containing food they are designed to replace. It is important to read food labels for nutritional information and to eat in moderation.”

“ Despite obesity having strong genetic determinants, the genetic composition of the population does not change rapidly. Therefore, the large increase in . . . [obesity] must reflect major changes in non-genetic factors.”

Hill, James O., and Trowbridge, Frederick L. Childhood obesity: future directions and research priorities. *Pediatrics*. 1998; Supplement: 571.

Portion size has also increased. People may be eating more during a meal or snack because of larger portion sizes. This results in increased calorie consumption. If the body does not burn off the extra calories consumed from larger portions, fast food, or soft drinks, weight gain can occur.

Choosing a variety of healthy foods in the correct portion sizes is helpful for achieving and maintaining a healthy weight. The Dietary Guidelines for Americans is a good resource to help people guide their dietary habits.

Calories Used

“ Our bodies need calories for daily functions such as breathing, digestion, and daily activities. Weight gain occurs when calories consumed exceed this need. Physical activity plays a key role in energy balance because it uses up calories consumed.

Regular physical activity is good for overall health. Physical activity decreases the risk for colon cancer, diabetes, and high blood pressure. It also helps to control weight, contributes to healthy bones, muscles, and joints; reduces falls among the elderly; and helps to relieve the pain of arthritis. Physical activity does not have to be strenuous to be beneficial. Moderate physical activity, such as 30 minutes of brisk walking five or more times a week, also has health benefits.

“ Despite all the benefits of being physically active, most Americans are sedentary. Technology has created many time and labor saving products. Some examples include cars, elevators, computers, dishwashers, and televisions. Cars are used to run short distance errands instead of people walking or riding a bicycle. As a result, these recent lifestyle changes have reduced the overall amount of energy expended in our daily lives” (CDC).

Application

Directions: Imagine you are enjoying some relaxation time and conversation with several friends. Your friends range from underweight to obese. While chatting about school, a program begins on TV about obesity. Everyone becomes quiet and listens to the program. After the program, the conversation focuses on weight, body image, and health. You are asked the following questions. Write your reply below to each and be sure your reply is both factual and empathetic.

Why do people become obese? (Explain the process of becoming obese, including energy imbalance.)

Am I going to be obese? (Define obese and explain strategies individuals use to avoid obesity.)

Do I have to go on a diet to lose weight? (Explain the importance of exercise and healthy diet and maintaining a healthy weight.)

My family is overweight. What can I do to change the cycle? _____

I hate to exercise. What can I do to balance my calorie intake and calories used? _____

Why would a thin person care about obesity? _____

Continue to page 7, *Student Resource Checking for Understanding Sheet*.

Name _____ Period _____ Date _____

Risk Factors for Obesity—Lesson 3
Student Resource Checking for Understanding Sheet

Directions: Match the word on the left with the statement on the right.

- | | |
|----------------------------------|--|
| _____ Obesity | a. cause of much of the change in the amount of exercise we get (e.g., cars, computers) |
| _____ Energy imbalance | b. causes increase in calorie consumption, without eating more often; has increased over the years |
| _____ Portion size | c. decisions made surrounding food and activity |
| _____ Sedentary | d. chronic condition caused by consuming more calories than used over time |
| _____ Moderate physical activity | e. lack of movement |
| _____ Technology | f. when calories consumed exceed or do not meet the calories burned in a day |
| _____ Personal choice | g. level of activity necessary to gain health benefits |

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Consequences and Prevention of Obesity—Lesson 4

Overview

This is the final lesson in the series of three obesity lessons. In this lesson you will examine the financial and health consequences of obesity and identify strategies to eliminate obesity from our society.

Materials

Student Resource Sheets—Lesson 4,
pages 1–7
Pen or pencil
Highlighter (optional)

Vocabulary

- **Obesity**—the state of having a significant amount of excess body fat; the state of weighing more than 20 percent above one’s recommended body weight (Holt)*
- **Chronic**—something that develops gradually and continues over a long period of time (Holt)*
- **Preventable**—“taking advance measures against something possible or probable” (Merriam Webster’s)

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of Day 2 for grading.

Enduring Understanding

Preventing obesity can decrease disease and related costs.

Essential Questions

- What are the financial consequences of obesity?
- How can preventing or reducing obesity save lives and money?

Mastery Objectives

Students will be able to do the following

- Explain the financial costs of obesity to society.
- Create a plan for reducing or preventing obesity.

Addressed Indicators/Objectives

6.4 Analyze eating and activity behaviors that need improvement.

d. Develop specific exercise and weight control strategies.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

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Lesson Sequence

1. *Introduction*

As a society we are spending more than \$100 billion on obesity related diseases and conditions. If we could eliminate or reduce obesity, how might that money be better spent?

In this lesson you will review and comment on information from the Surgeon General’s report on obesity. You will create a comprehensive brochure on obesity to include the information from all three lessons.

2. ***Activate Current Knowledge:*** Read the directions for the activator exercise on your *Student Resource Activator Sheet*; fill in the chart, and answer the questions (page 3).

3. ***Read and Process:*** Read about the costs of obesity (page 4). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. Complete the *Student Resource Application Sheet* (pages 5–6).

4. ***Checking for Understanding:*** Complete the *Student Resource Checking for Understanding Sheet* (page 8). This is an assessment. Submit the lesson packet to your teacher to evaluate your learning.

Extend by doing the following:

- Reading other sources of information about obesity.
- Investigating further those diseases and conditions intensified by obesity.
- Reading more from the Surgeon General’s report.

Continue to page 3, *Student Resource Activator Sheet*.

Name _____ Period _____ Date _____

Consequences and Prevention of Obesity—Lesson 4
Student Resource Activator Sheet



Activator

A variety of medical issues are directly related to obesity. As a consequence, medical costs associated with obesity and the resulting illnesses are extensive. The cost to the United States medical system for obesity-related medical issues amounts to billions of dollars.

According to *The Surgeon General’s Call to Action to Prevent and Decrease Overweight and Obesity*, the cost of obesity in the United States in 2000 was more than \$117 billion (\$61 billion in direct costs and \$56 billion in indirect costs).

If obesity-related disease and conditions might be reduced or eliminated, what programs supported by tax dollars do you feel would benefit from an additional \$117 billion? How would Americans benefit from your listed programs if they gained the added financial support?

“ Left unabated, overweight and obesity may soon cause as much preventable disease and death as cigarette smoking” (Surgeon General David Satcher). Currently, 300,000 deaths are linked to obesity and 400,000 deaths are linked to smoking.

What do this statement and data mean to you and your future as a tax payer? _____

Continue to page 4, *Student Resource Reading Sheet*

Name _____ Period _____ Date _____

Consequences and Prevention of Obesity—Lesson 15

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Information taken verbatim from the Surgeon General’s *Call to Action to Prevent and Decrease Overweight and Obesity*.

“ Problems related to overweight and obesity will reverse many of the health gains achieved in the U.S. in recent decades unless communities help address those problems, according to a “ call to action,” issued by the Surgeon General on December 13, 2001.

“ Overweight and obesity are among the most important new health challenges we face today,” HHS Secretary Tommy G. Thompson said. “ Our modern environment has allowed these conditions to increase at alarming rates and become highly pressing health problems for our nation.” By confronting these conditions, we have tremendous opportunities to prevent the unnecessary disease and disability they portend for our future.

Surgeon General David Satcher said, “ Left unabated, overweight and obesity may soon cause as much preventable disease and death as cigarette smoking. People tend to think of overweight and obesity as strictly a personal matter, but there is much that communities can and should do to address these problems.

Approximately 300,000 U.S. deaths a year are currently associated with obesity and overweight, compared with more than 400,000 deaths a year associated with cigarette smoking. The total direct and indirect costs attributable to overweight and obesity amounted to \$117 billion in 2000.” (Direct costs include medical care while indirect costs include missed days of work, reduced productivity...)

In 1999, an estimated 61 percent of U.S. adults were overweight, along with 13 percent of children and adolescents. Only 3 percent of all Americans meet at least four of the five federal Food Guide Pyramid recommendations for the in- take of grains, fruits, vegetables, dairy products, and meats. And less than one-third of Americans meet the federal recommendations to engage in at least 30 minutes of moderate physical activity at least five days a week, while 40 percent of adults engage in no leisure-time physical activity at all.

Families and Communities Call to Action

Families and communities lie at the foundation of the solution to the problems of overweight and obesity. Family members can share their own knowledge and habits regarding a healthy diet and physical activity with their children, friends, and other community members. Emphasis should be placed on family and community opportunities for communication, education, and peer support surrounding the maintenance of healthy dietary choices and physical activity patterns.

Continue to page 5.

Communication

1. Raise consumer awareness about the effect of being overweight on overall health.
2. Inform community leaders about the importance of developing healthy communities.
3. Highlight programs that support healthful food and physical activity choices to community decision makers.
4. Raise policy makers' awareness of the need to develop social and environmental policy that would help communities and families be more physically active and consume a healthier diet.
5. Educate individuals, families, and communities about healthy dietary patterns and regular physical activity, based on the Dietary Guidelines for Americans.
6. Educate parents about the need to serve as good role models by practicing healthy eating habits and engaging in regular physical activity in order to instill lifelong healthy habits in their children.
7. Raise consumer awareness about reasonable food and beverage portion sizes.
8. Educate expectant parents and other community members about the potentially protective effect of breastfeeding against the development of obesity.

Action

1. Form community coalitions to support the development of increased opportunities to engage in leisure time physical activity and to encourage food outlets to increase availability of low-calorie, nutritious food items.
2. Encourage the food industry to provide reasonable food and beverage portion sizes.
3. Increase availability of nutrition information for foods eaten and prepared away from home.
4. Create more community-based obesity prevention and treatment programs for children and adults.
5. Empower families to manage weight and health through skill building in parenting, meal planning, and behavioral management.
6. Expand efforts to encourage healthy eating patterns, consistent with the Dietary Guidelines for Americans, by nutrition assistance recipients.
7. Provide demonstration grants to address the lack of access to and availability of healthy affordable foods in inner cities.
8. Promote healthful dietary patterns, including consumption of at least five servings of fruits and vegetables a day.
9. Create community environments that promote and support breastfeeding.
10. Decrease time spent watching television and in similar sedentary behaviors by children and their families.
11. Provide demonstration grants to address the lack of public access to safe and supervised physical activity.
12. Create and implement public policy related to the provision of safe and accessible sidewalks, walking and bicycle paths, and stairs.”

Continue to page 6.

Application

Directions: Create an informative flyer about obesity. Include information from all three obesity lessons. Outline the content of your flyer and develop a rough draft on another sheet of paper. You may create your flyer on the computer or by hand. Include your name, period, and date on the back of the flyer as stated in the directions.

| Content Criteria: Complete key information to organize your thoughts | Check: |
|---|---------------|
| Define obesity (include BMI) | |
| Explain how people become obese | |
| Explain how to avoid becoming obese | |
| Explain how to reduce weight/obesity | |
| List diseases/conditions that increase with obesity | |
| Discuss problems associated with/related to these diseases/conditions | |
| Examine the “ costs” (including financial) associated with obesity | |
| Develop a plan to reduce obesity nationwide | |
| Creativity Criteria: | |
| Trifold design | |
| Catchy title | |
| Include at least one chart, bulleted list, or graphic | |
| Neat, visually appealing; formatted consistently | |
| Organized, detailed, clear, and accurate | |

Place your name, period, and date on the back of the flyer

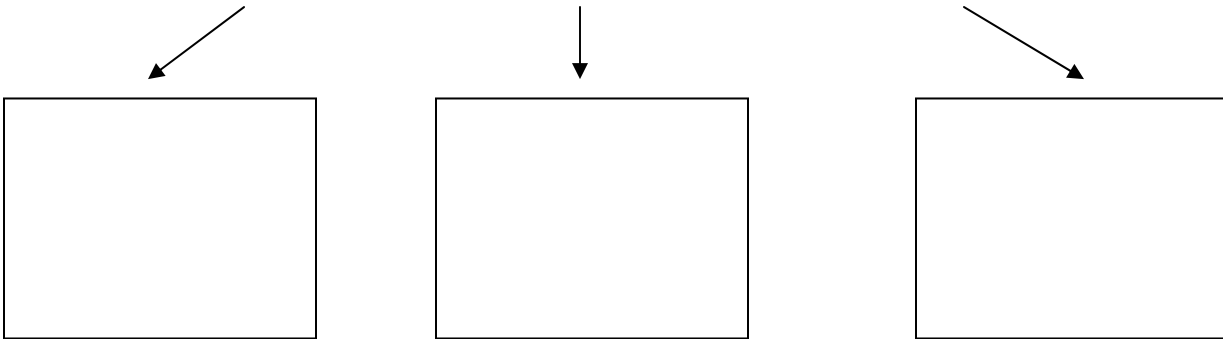
Continue to page 7, *Student Resource Checking for Understanding Sheet*

Name _____ Period _____ Date _____

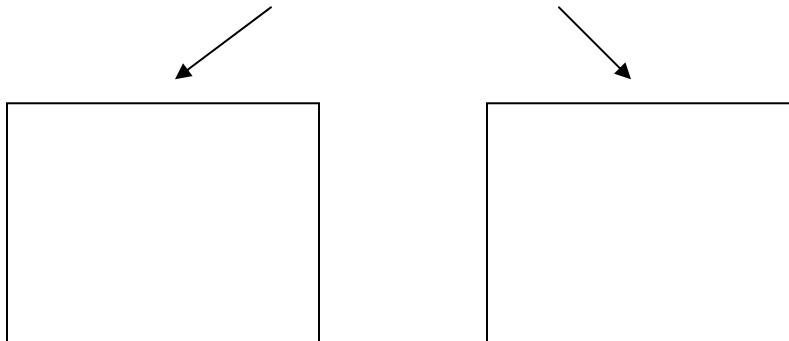
Consequences and Prevention of Obesity—Lesson 4
Student Resource Checking for Understanding Sheet

Directions: Complete the chart below:

Three main categories of “costs” of obesity include:



Financial costs can be broken down into the following categories:



List two “musts” in a plan for reducing/preventing obesity:



Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Eating Disorders—Lesson 5

Overview

In this lesson you will review the three primary eating disorders: anorexia nervosa, bulimia, and binge eating/compulsive overeating. You will compare and contrast the causes, symptoms, and treatments involved for each disorder.

Materials

Student Resource Sheets—Lesson 5,
pages 1–9
Pen or pencil
Highlighter (optional)

Vocabulary

- **Anorexia nervosa**—an eating disorder that involves self-starvation, a distorted body image, and low body weight (Holt)*
- **Bulimia**—an eating disorder in which the individual repeatedly eats large amounts of food and then uses behaviors such as vomiting or using laxatives to rid the body of the food (Holt)*
- **Binge eating disorder/compulsive overeating**—eating a large amount of food in one sitting; usually accompanied by a feeling of being out of control (Holt)*

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of Day 2 for grading.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

Enduring Understanding

Eating disorders can result in death.

Essential Questions

- How are eating disorders diagnosed?
- What treatments are available for individuals with eating disorders?

Mastery Objectives

Students will be able to do the following:

- Compare causes, symptoms, and treatments for the three categories of eating disorders.

Addressed Indicators/Objectives

6.1 Demonstrate an understanding of body image, how it is developed, and how it is influenced.

b. Describe a variety of eating disorders and the relationship to eating and the body.

Table of Contents

Student Resource Sheets (pages 1–9)

- *Student Resource Lesson Overview* (pages 1–3)
- *Student Resource Activator Sheet* (page 4)
- *Student Resource Reading and Processing Sheet* (pages 5–8)
- *Student Resource Checking for Understanding Sheet* (page 9)

Lesson Sequence

1. Introduction

Review the Dietary Guidelines for Americans, 2005, listed here:

| 2005 Dietary Guidelines: | What they mean to a teenager: |
|--|--|
| ⇒ Adequate nutrients within calorie needs | Each person has a specific daily calorie need; all necessary nutrients should be obtained within those calories (such as protein, vitamins, minerals etc...) |
| ⇒ Manage weight by balancing calories consumed with calories expended | Monitor calories eaten with calories burned; each person has a certain calorie need, and if too many calories are eaten and not used, they are stored in the body as fat. |
| ⇒ Engage in regular physical activity | Teenagers should engage in 60 minutes on most days of the week in moderate to vigorous activity in order to prevent gradual, unhealthy body weight gain in adulthood. |
| ⇒ Follow the food guide pyramid recommendations for quantity and types of food consumed | Teenagers need to get enough fruits and vegetables (and variety) in their diet [two cups of fruit and two and a half cups of vegetables daily]. Also, whole grains and calcium-rich foods should be consumed daily. |
| ⇒ Keep total fat intake to between 20 and 35 percent of daily calories | Be sure to limit saturated and trans-fatty acids. Most fats should come from polyunsaturated and monounsaturated fatty acids like fish, nuts, and vegetable oil. |
| ⇒ Keep carbohydrates complex | Sugar is a carbohydrate, but it is not the type of carbohydrate you want a majority of your calories coming from! Choose fiber-rich fruits, vegetables, and whole grains often. Be sure to practice good oral hygiene; floss and brush your teeth daily. |
| ⇒ Limit salt intake, encourage potassium | Keep salt consumption to about one teaspoon each day—select foods that are low in salt. Be sure to get enough potassium each day, from fruits and vegetables. |
| ⇒ Practice food safety | In an effort to minimize the risk of food borne illness, clean hands and surfaces before food preparation. Separate raw meats from other foods, cook meats to recommended temperatures, and refrigerate foods immediately. Follow all suggested safety measures on food label. |

How many of these standards do you currently meet or exceed out of the eight listed?

In this lesson you will research the three main eating disorders, concentrating on the causes, symptoms, and treatments, and how someone suffering from an eating disorder can be helped. You will develop a Public Service Announcement (PSA) to share information on one or more of the three eating disorders.

2. **Activate Current Knowledge:** Read the directions for the activator exercise on your *Student Resource Activator Sheet*; fill in the body image charts, and answer the related questions (page 4).

3. **Read and Process:** Read about eating disorders (pages 5–7). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. After you have researched the three most common eating disorders, you will organize the information about one, two, or all three of them. Complete the *Student Resource Application Sheet* (page 8).

4. **Checking for Understanding:** Complete the *Student Resource Checking for Understanding Sheet* (page 9). This is an assessment. Submit the lesson packet to your teacher to evaluate your learning.

Extend by continuing to research the Dietary Guidelines for Americans, 2005.

Continue to page 4, *Student Resource Activator Sheet*

Name _____ Period _____ Date _____

Eating Disorders—Lesson 5

Student Resource Activator Sheet



Activator

Teenagers make decisions about food choices, exercise habits, clothing purchases, jobs, school, work and leisure time. Intense media influence can make this a difficult time to be a teenager. Some teenagers cope by over eating and others avoid eating to deal with insecurities or feelings of failure to reach the ideals portrayed in media. Controlling eating is a way to gain power while attempting to meet unrealistic expectations or to manage seemingly unmanageable schedules. These eating habits may lead to eating disorders that result in a loss of control and can leave teenagers feeling powerless.

Directions: Complete the chart below.

My physical description of the “ perfect” person:

| | |
|---------------|--|
| Height | |
| Weight | |
| Hair | |
| Skin | |
| Size | |
| Eyes | |

Why do you feel these are “ perfect” characteristics? _____

How many people do you currently know who meet all the criteria?

How many of these descriptions do you meet?

Continue to page 5, *Student Resource Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Eating Disorders—Lesson 5

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Introduction:

“ I felt fat from the day someone called me ‘fatty’ in sixth grade. I don’t remember why it struck me at the time. Maybe it was my hormones, maybe it was true, but whatever it was, it led me to where I am today, and that is with an eating disorder that is out of control. I am better—at least I know that I have a problem—but I still cannot stop myself. Once I went to my grandma’s house for dinner and ate a lettuce leaf and drank a glass of water, which still made me feel fat. I had to exercise for two hours before I felt ‘flat’ again. All I wanted was to be flat, with no stomach sticking out, and I could be, as long as I didn’t eat.”
-Beth

“ I would be so stressed out after work that I would stop at any store and buy every fattening food I could find. Sometimes I would spend an entire day’s pay on my food. I would buy cake, ice cream, pizza, chips, whatever I could get my hands on that was sweet or salty—nothing healthy, that is for sure. So many times I ate so much I threw up, and after that, I ate some more. This happened often, at least weekly; until I had gained over 100 pounds. Once I got to that point, it didn’t matter, and I just ate more and more. I now weigh over 300 pounds. I am not happy, but I cannot stop eating.”
-Max

Background: Why do we eat? We are supposed to eat when we are hungry, but there are so many other factors that go into our eating habits, including appetite, food availability, family, peers, cultural practices, and even the media. Have you ever seen a TV commercial when you were *not* hungry, and after the commercial you went to the kitchen for something to eat? That is the power of advertising. It works in reverse too. When we are exposed to the images of “ perfect” people in magazines, movies and on TV, we are tempted to try to be like those people. How many times have you thought to yourself that you would like to have someone else’s features? Maybe just a little more bicep muscle or a little less around the waistline? Those thoughts are completely normal. What is *not* normal is when these thoughts get out of control and end up controlling how people view themselves, and how they eat and exercise.

Body Image: Body image is how you see yourself and feel about your appearance—how comfortable you are with you. With the media bombarding us with the message that thin is perfect, we are faced with trying to “ measure up” every day. Did you know that the average American woman is 5’4” tall and weighs 140 pounds, the average American model is 5’11” tall and weighs 117 pounds, and that most fashion models are thinner than 98 percent of American women? What we see is not realistic, yet some people get caught by this ideal and develop an unrealistic body image, which in turn can result in an eating disorder. Eating disorders can develop for many reasons, but one reason is a distorted body image.

Eating Disorders: There are three main eating disorders that someone may experience. They include anorexia nervosa (which we will refer to as anorexia), bulimia nervosa (which we will refer to as bulimia), and binge-eating disorder/compulsive overeating. The first two are medical illnesses, identified as psychological disorders. The third is not yet recognized as such, but is seen as a problem in our society. The exact reason someone’s eating pattern spins out of control is not completely understood. However, eating disorders are treatable and someone suffering from one should seek medical attention immediately. If you know someone suffering from an eating disorder, you need to let an adult know—keeping it a secret will not help the individual who is suffering.

Most eating disorders develop in adolescence or early adulthood, although other they have been diagnosed at other ages. Eating disorders often co-exist with other psychological disorders including depression, substance abuse, and anxiety disorders. Females suffer from eating disorders more often than males. Females account for between 85 and 95 percent of the cases of anorexia and bulimia. About 65 percent of those with binge-eating disorder are female.

Anorexia: Anorexia is an eating disorder characterized mainly by starvation. Individuals suffering from this disorder see themselves as fat, no matter what their body size. The anorexic is usually abnormally thin—to the point of looking like a skeleton with skin. Anorexic individuals obsess about food and often limit themselves to one or two types of food, restrict meals and food, and/or carefully measure their calorie consumption. They may also engage in extreme exercise in an effort to “work” off the calories consumed. Anorexics may misuse diuretics and/or laxatives, vomit, or use enemas. Symptoms of anorexia include: resistance to maintaining body weight, extreme fear of gaining weight or becoming fat, denial of current [low] body weight, irregular, infrequent, or absence of menstrual cycle.

In younger females suffering from anorexia, the onset of the menstrual cycle could be delayed. Possible side effects of anorexia include lowered heart rate and blood pressure, brittle nails and hair, a fine hair (called *lanugo*) on the body, anemia (low iron), reduced muscle mass, and fainting. Anorexia can lead to death by cardiac arrest, electrolyte imbalance, or suicide. An individual suffering from anorexia needs immediate medical attention. Out-patient and residential courses of treatment are available. The key to successful treatment is getting help before it is too late. If you know someone suffering from anorexia, let an adult know immediately.

Bulimia: bulimia nervosa is an eating disorder characterized mainly by periods of excessive over eating (binging) followed by a period of purging (throwing up, misuse of diuretics, laxatives, enemas, and other medications). Bulimics also may follow the binge with a period of starvation and/or excessive exercise. These behaviors are usually exhibited in secrecy. Because large quantities of calories are initially being ingested, a bulimic often appears to be of normal size and weight. Bulimics have some of the same issues about body weight as anorexics, including being afraid to gain weight, wishing to weigh less, and a basic dissatisfaction with the body. Side effects of bulimia include decayed teeth caused by acid in vomit, inflamed esophagus, stomach damage including ulcers, irregular heartbeat and chronic constipation. bulimia nervosa can lead to death by chemical imbalance and heart failure. Like anorexia, an individual suffering from bulimia needs immediate attention. Out-patient and residential courses of treatment are available. The key to successful treatment is getting help before it is too late. If you know someone suffering from anorexia, let an adult know immediately.

Binge-eating disorder/compulsive overeating: Binge-eating disorder is characterized by periods of out-of-control (binge) eating, usually a few times each week. Binge-eating disorder is very similar to bulimia, except the binge eater does not purge. These behaviors lead to weight gain, sometimes substantial. People suffering from binge-eating disorder are usually secretive in their eating habits and embarrassed about the amount of food they are consuming. They are often depressed or feel guilt after a binge and may repeat the cycle by following one binge with another.

Side effects of binge-eating disorder include excessive weight gain, which can lead to high blood pressure, high cholesterol, the development of type II diabetes, gall bladder disease, and heart disease. Binge-eating disorder does not lead to death in itself; however, the side effects from this disorder can lead to death. For example, high blood pressure and high cholesterol can lead to heart attack and diabetes can lead to complications resulting in death. Individuals suffering from binge-eating disorder need immediate attention; they need to eliminate the binge-eating patterns, incorporate healthy exercise habits, and get back to a healthy weight. This change in behaviors may require psychological treatment as well as medical attention. If you know someone suffering from binge-eating disorder, let an adult know immediately.

Application

Now that you are familiar with eating disorders, you have an opportunity to share this information with others via a radio Public Service Announcement (PSA). Your PSA should address one, two, or all three eating disorders from the reading. It should be approximately 30 seconds in length when read aloud. You may approach the PSA from any angle; however, signs and symptoms as well as how to help someone suspected or identified as having an eating disorder should be addressed within the PSA.

| |
|---|
| Radio Commercial PSA Requirements |
| Approximately 30 seconds in length |
| One, two, or all three eating disorders addressed |
| Signs and symptoms identified |
| How to help someone suffering from an eating disorder |

Use the next page to write your PSA. If you prefer to type the PSA, place the heading from the next page on your typed version. In the space below, use a graphic organizer to collect the information needed to write your PSA.

Continue to page 8. Write your final copy of your Radio Commercial PSA.

Name _____ Period _____ Date _____

Radio Commercial PSA

Name _____ Period _____ Date _____

Eating Disorders—Lesson 5
Student Resource Checking for Understanding Sheet

Directions: Fill in the missing word(s) so that the statement is correct.

1. A distorted _____ is a main cause of eating disorders.
2. Anorexia and bulimia have been recognized as _____ disorders.
3. What other mental disorders might someone suffer from along with an eating disorder?
_____, _____, or _____.
4. The body of someone with anorexia would most likely be very _____.
5. Someone suffering from bulimia would most likely have a _____ body weight.
6. Someone suffering from binge-eating disorder would most likely have a substantial weight _____.
7. Common treatments for individuals suffering from any of the eating disorders mentioned would include: _____.

Directions: Sort the facts listed in the word bank into the correct column. Some may belong in more than one category; there are just the right numbers to fill the table.

| Eating disorders: | Anorexia: | Bulimia: | Binge-eating: |
|--------------------------|------------------|-----------------|----------------------|
| | | | |
| | | | |
| | | | |

Word Bank: * abnormal menstrual cycle * starvation * treatable * diabetes * adolescence
 * chronic constipation * high blood pressure * irregular heart beat * bingeing * tooth decay
 * lanugo * females

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Addiction and Recovery—Lesson 6

Overview

In this lesson you will learn about the progression of drug addiction and the process of recovery.

Materials

Student Resource Sheets—Lesson 6,
pages 1–10
Pen or pencil
Highlighter (optional)

Vocabulary

- **Addiction**—a condition in which a person can no longer control his or her drug use (Holt)*
- **Recovery**—the process of learning to live without drugs (Holt)*

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of Day 2 for grading.

Enduring Understanding

Drug misuse can lead to addiction and difficult recovery.

Essential Questions

What is responsible behavior toward drugs?

Mastery Objectives

Students will be able to do the following:

- Identify the path to drug addiction and the steps for recovery.
- Explain the benefits of remaining drug free.

Addressed Indicators/Objectives

2.3 Identify and examine physical, psychological, social, and legal consequences of the use of tobacco, alcohol, and other drugs.

e. Advocate healthy choices regarding alcohol, tobacco, and other drugs.

2.4 Assess information and services for treatment of addictive behaviors.

b. Apply strategies and skills needed to intervene with dependent and addictive behaviors.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

Table of Contents

Student Resource Sheets (pages 1–10)

- › *Student Resource Lesson Overview* (pages 1–2)
- › *Student Resource Activator Sheet* (page 3)
- › *Student Resource Reading and Processing Sheet* (pages 4–9)
- › *Student Resource Checking for Understanding Sheet* (page 10)

Lesson Sequence

1. *Introduction*

Imagine looking at your neighbor’s house. A car is parked in the driveway, and the family is huddled together outside in dismay. The family car is being repossessed. Now imagine that the husband of that family has an addiction to a drug. The family home is in foreclosure and the wife has filed for divorce. The children are not doing well in school due to the turmoil that is going on within their household.

In this lesson you will assess your understanding of addiction and the path to addiction. You will read about addiction and then provide information for a person who seeks help. You will modify your understanding of addiction by assessing your original thoughts on addiction.

2. ***Activate Current Knowledge:*** Read the directions for the activator exercise on your *Student Resource Activator Sheet* (page 3). For this activity, you will use words and pictures to describe your mental images of an addict. You will then create the path of choices and consequences made by this individual that led to his or her addiction.

3. ***Read and Process:*** Read about addiction and recovery (pages 4–7). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. After reading and processing the information about addiction and recovery, complete the *Application* assignment in which you will write a letter to respond to a teenager caught in the web of addiction on the *Student Resource Reading and Processing Sheet* (pages 7–9). The letter will be your opportunity to write your own responses to a real life situation. Explaining to others is an effective activity to focus your knowledge and clarify your understanding of a topic.

4. ***Checking for Understanding:*** Complete the *Student Resource Checking for Understanding Sheet* (page 10). This is an assessment of your knowledge of addiction and recovery. Submit the lesson packet to your teacher to evaluate your learning.

Extend by doing the following:

- Identifying the financial impact on society as a result of drug addiction
- Researching the long-term impact of addiction on a family and parenting
- Listing topics that will need to be addressed in educational systems as a result of addiction

Continue to page 3, *Student Resource Activator Sheet*.

Name _____ Period _____ Date _____

Addiction and Recovery —Lesson 6 B

Student Resource Activator Sheet



Activator

Addiction can happen to anyone who uses a drug. It is an unpredictable and unfortunate part of being human. Addiction is a condition in which a person can no longer control his or her drug use. Some people have a higher potential for becoming addicted, such as someone with a parent or close relative who is an addict (including alcoholism, which is an addiction to alcohol).

Directions: Describe, in your own words and pictures, the characteristics of a drug addict. You may include how you imagine the addict's clothing, home, family life, education, and/or job. After describing an addict, move to the second box and use words and pictures to describe how you think this person came to be an addict. Clearly record the steps, choices, and consequences of decisions made on the path to addiction.

Description of an addict

Path to addiction

Continue to page 4, *Student Resource Reading and Processing Sheet*.

Name _____ Period _____ Date _____

Addiction and Recovery—Lesson 6 B

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Note: The content of pages 4–7 has been taken verbatim from the National Institute of Drug Abuse in *NIDA's Principles of Drug Addiction Treatment: A Research-Based Guide* NIH Publication No. 00-4180 Printed October 1999, Reprinted July 2000.

What Is Drug Addiction?

Drug addiction is a complex brain disease. It is characterized by compulsive and at times uncontrollable drug craving, seeking, and use that persist even in the face of extremely negative consequences. Drug seeking becomes compulsive, in large part as a result of the effects of prolonged drug use on brain functioning and on behavior. For many people, drug addiction becomes chronic, with relapses possible even after long periods of abstinence.

How Quickly Can I Become Addicted to a Drug?

There is no easy answer to questions about the timeline of addiction. If and how quickly you might become addicted to a drug depends on many factors including your genes (which you inherit from your parents) and the biology of your body. All drugs are potentially harmful and may have life-threatening consequences associated with their use. There also are vast differences among individuals in sensitivity to various drugs. While one person may use a drug one or many times and suffer no ill effects, another person may be particularly vulnerable and overdose with first use. There is no way of knowing in advance how someone may react to drug use.

How Do I Know if Someone Is Addicted to Drugs?

If a person is compulsively seeking and using a drug despite negative consequences, such as loss of job, debt, physical or mental problems brought on by drug abuse, or family problems, then he or she is probably addicted. We don't have a perfect screening tool quite yet, but health care professionals who screen for drug use often ask questions like these to detect substance abuse in their adolescent patients:

1. Have you ever ridden in a car driven by someone (including yourself) who had been using alcohol or drugs?
2. Do you ever use alcohol or drugs to relax, feel better about yourself, or fit in?
3. Do you ever use alcohol or drugs when you are alone?
4. Do you ever forget things you did while using alcohol or drugs?
5. Does your family and/or do your friends ever tell you to cut down on your drinking or drug use?
6. Have you ever gotten into trouble while you were using alcohol or drugs?

What Are the Physical Signs of Abuse or Addiction?

The physical signs of abuse or addiction can vary depending on the person and the drug being abused. In addition, each drug has short-term and long-term physical effects. For example, someone who abuses marijuana may have a chronic cough or worsening of asthmatic conditions. Stimulants like cocaine increase heart rate and blood pressure; drugs like heroin may slow the heart rate and reduce respiration.

Recovery

Are There Effective Treatments for Drug Addiction?

Drug addiction can be treated effectively with behavioral-based therapies and, for addiction to some drugs such as heroin or nicotine, with medications. Treatment may vary for each person depending on the type of drug(s) being used and the individual's specific circumstances. In many cases, multiple courses of treatment may be needed to achieve success. Research has revealed 13 basic principles that underlie effective drug addiction treatment.

Principles of Effective Treatment

1. **No single treatment is appropriate for all individuals.** Matching treatment settings, interventions, and services to each individual's particular problems and needs is critical to his or her ultimate success in returning to productive functioning in the family, workplace, and society.
2. **Treatment needs to be readily available.** Because individuals who are addicted to drugs may be uncertain about entering treatment, taking advantage of opportunities when they are ready for treatment is crucial. Potential treatment applicants can be lost if treatment is not immediately available or is not readily accessible.
3. **Effective treatment attends to multiple needs of the individual, not just his or her drug use.** To be effective, treatment must address the individual's drug use and any associated medical, psychological, social, vocational, and legal problems.
4. **An individual's treatment and services plan must be assessed continually and modified as necessary to ensure that the plan meets the person's changing needs.** A patient may require varying combinations of services and treatment components during the course of treatment and recovery. In addition to counseling or psychotherapy, a patient at times may require medication, other medical services, family therapy, parenting instruction, vocational rehabilitation, and social and legal services. It is critical that the treatment approach be appropriate to the individual's age, gender, ethnicity, and culture.
5. **Remaining in treatment for an adequate period of time is critical for treatment effectiveness.** The appropriate duration for an individual depends on his or her problems and needs (see pages 11-49). Research indicates that for most patients, the threshold of significant improvement is reached at about 3 months in treatment. After this threshold is reached, additional treatment can produce further progress toward recovery. Because people often leave treatment prematurely, programs should include strategies to engage and keep patients in treatment.
6. **Counseling (individual and/or group) and other behavioral therapies are critical components of effective treatment for addiction.** In therapy, patients address issues of motivation, build skills to resist drug use, replace drug-using activities with constructive and rewarding non-drug-using activities, and improve problem-solving abilities. Behavioral therapy also facilitates interpersonal relationships and the individual's ability to function in the family and community. ([*Approaches to Drug Addiction Treatment section discusses details of different treatment components to accomplish these goals.*](#))
7. **Medications are an important element of treatment for many patients, especially when combined with counseling and other behavioral therapies.** Methadone and levo-alpha-acetylmethadol (LAAM) are very effective in helping individuals addicted to heroin or other opiates stabilize their lives and reduce their illicit drug use. Naltrexone is also an effective medication for some opiate addicts and some patients with co-occurring alcohol dependence. For persons addicted to nicotine, a nicotine replacement product (such as patches or gum) or an oral medication (such as bupropion) can be an effective component of treatment. For patients with mental disorders, both behavioral treatments and medications can be critically important.

8. **Addicted or drug-abusing individuals with coexisting mental disorders should have both disorders treated in an integrated way.** Because addictive disorders and mental disorders often occur in the same individual, patients presenting for either condition should be assessed and treated for the co-occurrence of the other type of disorder.
9. **Medical detoxification is only the first stage of addiction treatment and by itself does little to change long-term drug use.** Medical detoxification safely manages the acute physical symptoms of withdrawal associated with stopping drug use. While detoxification alone is rarely sufficient to help addicts achieve long-term abstinence, for some individuals it is a strongly indicated precursor to effective drug addiction treatment (*see Drug Addiction Treatment Section*).
10. **Treatment does not need to be voluntary to be effective.** Strong motivation can facilitate the treatment process. Sanctions or enticements in the family, employment setting, or criminal justice system can increase significantly both treatment entry and retention rates and the success of drug treatment interventions.
11. **Possible drug use during treatment must be monitored continuously.** Lapses to drug use can occur during treatment. The objective monitoring of a patient's drug and alcohol use during treatment, such as through urinalysis or other tests, can help the patient withstand urges to use drugs. Such monitoring also can provide early evidence of drug use so that the individual's treatment plan can be adjusted. Feedback to patients who test positive for illicit drug use is an important element of monitoring.
12. **Treatment programs should provide assessment for HIV/AIDS, hepatitis B and C, tuberculosis and other infectious diseases, and counseling to help patients modify or change behaviors that place themselves or others at risk of infection.** Counseling can help patients avoid high-risk behavior. Counseling also can help people who are already infected manage their illness.
13. **Recovery from drug addiction can be a long-term process and frequently requires multiple episodes of treatment.** As with other chronic illnesses, relapses to drug use can occur during or after successful treatment episodes. Addicted individuals may require prolonged treatment and multiple episodes of treatment to achieve long-term abstinence and fully restored functioning. Participation in self-help support programs during and following treatment often is helpful in maintaining abstinence.

Isn't Drug Addiction a Voluntary Behavior?

A person may start out taking drugs voluntarily. But as times passes, and drug use continues something happens that makes a person go from being a voluntary drug user to a compulsive drug user. Why? Because the continued use of addictive drugs changes your brain—at times in dramatic, toxic ways, at others in more subtle ways, but often in ways that result in compulsive and even uncontrollable drug use.

Isn't Becoming Addicted to a Drug Just a Character Flaw?

Drug addiction is a brain disease. Every type of drug of abuse has its own individual mechanism for changing how the brain functions. But regardless of which drug a person is addicted to, many of the effects it has on the brain are similar: they range from changes in the molecules and cells that make up the brain, to mood changes, to changes in memory processes and thinking, and sometimes changes in motor skills such as walking and talking. And these changes have a huge influence on all aspects of a person's behavior. A drug can become the single most powerful motivator in a drug abuser's existence. He or she will do almost anything for the drug. This comes about because drug use has changed the individual's brain, their behavior, their social and other functioning in critical ways.

For Drug Treatment to Work, Doesn't the Person Have to Really Want It?

Two of the primary reasons people seek drug treatment are because the court ordered them to do so, or because loved ones urged them to seek treatment. Many scientific studies have shown convincingly that those who enter drug treatment programs in which they face “high pressure” to confront and attempt to surmount their addiction can benefit from treatment, regardless of the reason they sought treatment in the first place.

Shouldn't Treatment for Drug Addiction be a One-shot Deal?

Like many other illnesses, drug addiction typically is a chronic disorder. To be sure, some people can quit drug use “cold turkey,” or they can quit after receiving treatment just one time at a rehabilitation facility. But most of those who abuse drugs require longer-term treatment and, in many instances, repeated treatments.

Shouldn't NIDA Strive to Find a “Magic Bullet” to Treat All Forms of Drug Abuse?

There is no “one size fits all” form of drug treatment, much less a magic bullet that suddenly will cure addiction. Different people have different drug abuse-related problems. And they respond very differently to similar forms of treatment, even when they're abusing the same drug. As a result, drug addicts need an array of treatments and services tailored to address their unique needs.”

Note: End of verbatim information) pages 4–7) from the National Institute of Drug Abuse in *NIDA's Principles of Drug Addiction Treatment: A Research-Based Guide* NIH Publication No. 00-4180 Printed October 1999, Reprinted July 2000.

Quick write: Summarize in your own words concepts from the NIDA information:

What is an addiction? _____

What are the physical signs of abuse and addiction? _____

List six basic principles that underlie effective drug addiction treatment.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Continue to page 8.

Application

Using the information from the reading, write a letter in response to the following from *bummed in MD*.

Dear Abby,

I am 16 years old and cannot stop using drugs. I have been using for four years—ever since my older sister gave me a drink. Since the first time I tried alcohol I have been chasing the feeling—but could never recreate that first-time high. Every time I tell myself I am going to stop, I find a reason why I don't need to. At this point, my grades are horrible, I have no friends (except my drugs), and no one in my family trusts me. The reason I am writing to you is I started to remember about how my life was before the drugs—it was not perfect, but it was good. I want to get back to that—to that good life. I really want to stop using the drugs, but am afraid I can't. I have tried some talk groups, but they don't work. Can you help me get clean?

bummed in MD

Complete this chart to focus your notes and prepare to write your letter. Content and creativity criteria will be used as the grading criteria for this assignment:

| Content Criteria: | Check: |
|---|---------------|
| Identify this persons problem (s): | |
| Provide a minimum of five recovery tips/suggestions for help: 1. 2. 3. 4. 5. | |
| Share facts about non-using teenagers that can encourage recovery (think about overall health and how being sober can improve all aspects of this—social, mental, emotional...) Three Facts: * * * | |
| Locate a rehabilitation program (in the telephone directory) for which you can provide the contact information [telephone, address]: | |
| Creativity Criteria: | |
| Letter format , clear, organized, empathetic | |
| No more than one page (use the one attached, or type on the computer) | |
| Directed toward this teen (Dear <i>bummed in MD</i>) | |

Continue to page 9. Write your final copy of your letter to *bummed in MD*.

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Consequences of Alcohol Use—Lesson 7

Overview

In this lesson you will consider the effects of alcohol on people other than the drinker. Particular focus will be placed on infants born with a Fetal Alcohol Syndrome (FAS), which is the leading cause of mental retardation in the United States.

Materials

Student Resource Sheets—Lesson 7,
pages 1–8
Pen or pencil
Highlighter (optional)

Vocabulary

- **Fetal Alcohol Syndrome (FAS)**—a set of physical and mental defects that affect a fetus that has been exposed to alcohol because of the mother’s consumption of alcohol during pregnancy. (Holt)*

Time Line

- Two 45-minute class periods.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of Day 2 for grading.

Enduring Understanding

Alcohol use may affect others as well as the drinker.

Essential Questions

How does alcohol use affect individuals?

Mastery Objectives

Students will be able to do the following:

- Identify how nondrinkers may be damaged by alcohol use.
- List reasons not to drink alcohol irresponsibly.

Addressed Indicators/Objectives

2.3 Identify and examine physical, psychological, social, and legal consequences of the use of tobacco, alcohol, and other drugs.

g. Specify diseases and disorders caused, complicated, or intensified by tobacco, alcohol, and other drug use.

**Lifetime Health*, Holt, Rinehart, and Winston, 2007.

Table of Contents

Student Resource Sheets (pages 1–8)

- ▶ *Student Resource Lesson Overview* (pages 1–2)
- ▶ *Student Resource Activator Sheet* (page 3)
- ▶ *Student Resource Reading and Processing Sheet* (pages 4–7)
- ▶ *Student Resource Checking for Understanding Sheet* (page 8)

Lesson Sequence

1. *Introduction*

According to the U.S. Department of Transportation, in 2004 Maryland had 643 fatalities on the roads and 45 percent of those involved alcohol. Think about this question: How might drinking and driving affect people who do not drink and drive?

Pedestrians, motorcyclists, bicyclists, and other drivers are put at risk when someone gets behind the wheel of a car after drinking alcohol. It does not take several drinks to impair someone’s ability to drive safely—as little as one drink can alter the way a person responds behind the wheel.

In this lesson you will identify other ways that alcohol can affect those who do not consume alcohol. Special attention will be paid to infants born to mothers who drink while pregnant. You will design a newsletter to share information with others about Fetal Alcohol Syndrome (FAS). You will complete a quiz to assess your understanding of alcohol related issues, including reasons individuals consume alcohol irresponsibly.

2. ***Activate Current Knowledge*** :Read the directions for the activator exercise on your *Student Resource Activator Sheets* and answer the questions (pages 3–4).

3. ***Read and Process***: Read about FAS (pages 5–6). As you read, put a question mark (?) next to anything that you have a question about, use an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. Once you have read about FAS, you will have knowledge to apply and share with others. Complete the *Student Resource Application Sheet* (page 7).

4. ***Checking for Understanding***: Complete the *Student Resource Checking for Understanding Sheet* (page 8). This is an assessment. Submit the lesson packet to your teacher to evaluate your learning.

Extend by doing the following:

- Doing further research on FAS
- Writing a proposal to expand or create an alcohol-free club at your school

Continue to page 3, *Student Activator Sheet*

Name _____ Period _____ Date _____

Consequences of Alcohol Consumption—Lesson 5

Student Resource Activator Sheet



Activator

Fetal Alcohol Syndrome (FAS) is one of many consequences of irresponsible alcohol consumption where more than the drinker is directly affected by the alcohol. Additionally, alcohol consumption claims the lives of many innocent people each year in car crashes and unintentional injuries or incidents.

Directions: Read and respond to the following case studies.

Case Study #1

Beth went to visit several friends from her college days. Beth had graduated the previous year and was working in another state. Four of them went out—Beth, Amy, Bryan, and Tim. They closed the bar, even though they didn't consume alcohol. They just wanted to spend time together. When it was time to leave, the men got in one car, and the women followed them in another. They were about halfway home when the men noticed a driver coming toward them who was swerving. They managed to miss the obviously impaired driver but the women were not so lucky. They crashed head on killing Amy instantly. Beth survived, but faced many surgeries and years of pain. The impaired driver was a 17-year-old male who had been drinking heavily that night. He also died in the crash.

1. How did irresponsible drinking affect Amy, Beth, Bryan, and Tim?

Amy: _____

Beth: _____

Bryan: _____

Tim: _____

Who else was affected? _____

How? _____

Case Study #2

Greg, his son Mark, and his wife Lisa (who was four months pregnant) were on their way home at 6 p.m. one Friday evening. They had spent the day downtown playing at the park, walking around, and having a late lunch and ice cream. As Greg traveled around a sharp bend in the road, he encountered a car heading toward them in his lane. Greg swerved to avoid the car, but the other car swerved in a direction that caused them to crash side to side. Lisa was sitting on the side of the car receiving the most impact and damage. Lisa and her unborn baby were killed instantly. Mark was protected by the car seat and survived the crash. Greg and the other adult male driver survived but spent days in the hospital recovering from injuries. Mark stayed with relatives until his father was released from the hospital and he still cries for his mommy. The other driver reported he had been returning home from happy hour.

2. How did irresponsible drinking affect Greg, Mark, and Lisa?

Greg: _____

Mark: _____

Lisa: _____

Who else was affected? _____

How? _____

Case Study #3

Melissa was drinking and knew the possible consequences of driving while intoxicated. A police officer pulled up behind her with his lights on to stop her for speeding. She speeded up in an effort to outrun the officer. A few miles down the road she crashed into a motorcyclist, a young man out for a leisurely drive on his motorcycle. He suffered fatal injuries. His parents described him to the local paper as “ a wonderful son.”

3. How did irresponsible drinking affect the motorcyclist?

Motorcyclist: _____

Who else was affected? _____

How? _____

Case Study #4

Martin was a small baby whose mother consumed alcohol while she was pregnant. His mother stopped consuming alcohol in any form once her family convinced her she should not drink while she was pregnant. Martin was born with FAS and his mother’s life raising Martin was much different from what she had expected.

4. How did irresponsible drinking affect Martin?

Martin: _____

Who else was affected? _____

How? _____

Continue to page 5, *Student Resource Reading and Processing Sheet*

Name _____ Period _____ Date _____

Consequences of Alcohol Consumption—Lesson 5

Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, use an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Recognition and Prevention of Fetal Alcohol Syndrome (FAS)

The following information is taken verbatim from the National Center on Birth Defects and Developmental Disabilities, Centers for Disease Control and Prevention:

Alcohol use among women of childbearing age is prevalent in the United States, with approximately one in five non-pregnant women reporting binge drinking (five or more drinks on any one occasion) and one in 25 pregnant women reporting binge drinking. Alcohol use during pregnancy results in a spectrum of adverse outcomes known as fetal alcohol spectrum disorders. Fetal alcohol syndrome (FAS) is one of these disorders. Fetal alcohol syndrome is characterized by specific facial abnormalities and significant impairments in neurodevelopment and physical growth. Early identification of children with FAS has been shown to enhance their long-term outcomes.

FAS Facts

Q. What is FAS? FAS stands for fetal alcohol syndrome. It is one of the leading known preventable causes of mental retardation and birth defects. FAS represents the severe end of a spectrum of effects that can occur when a woman drinks alcohol during pregnancy. Fetal death is the most extreme outcome. FAS is characterized by abnormal facial features, growth deficiency, and central nervous system (CNS) problems. People with FAS can have problems with learning, memory, attention span, communication, vision, hearing, or a combination of these things. These problems often lead to difficulties in school and problems getting along with others. FAS is a permanent condition. It affects every aspect of an individual's life and the lives of his or her family. However, FAS is 100 percent preventable—if a woman does not drink alcohol while she is pregnant.

Q. How common is fetal alcohol syndrome (FAS)? The reported rates of FAS vary widely. These different rates depend on the population studied and the surveillance methods used. CDC studies show FAS rates ranging from 0.2 to 1.5 cases per 1,000 live births in different areas of the United States.

Q. Can FAS be treated? FAS is a permanent condition. It lasts a lifetime and affects every aspect of a child's life and the lives of his or her family members. There is no cure for the conditions of FAS. However, FAS can be completely prevented—if a woman does not drink alcohol while she is pregnant. With early identification and diagnosis, a child with an FAS can get services that can help him or her lead a more productive life.

Q. What are the economic consequences of FAS? The 10th Special Report to the U.S. Congress on Alcohol and Health estimated the annual cost of FAS in 1998 to be \$2.8 billion. A recent report estimates that the lifetime cost for one individual with FAS in 2002 was \$2 million. This is an average for all people with FAS. People with severe problems, such as profound mental retardation, have much higher costs.

Pregnancy and Alcohol Use

Q. Is there any safe amount of alcohol to drink during pregnancy? Is there a safe time during pregnancy to drink alcohol? When a pregnant woman drinks alcohol, so does her unborn baby. There is no known safe amount of alcohol that a woman can drink during pregnancy. There is also no safe time during pregnancy to drink alcohol. Alcohol can have negative effects on a fetus in every trimester of pregnancy. Therefore, women should not drink if they are pregnant, planning to become pregnant, or could become pregnant.

Q. What is a “drink” ? What if I drink only beer or wine coolers? All drinks containing alcohol can hurt an unborn baby. A standard 12-ounce can of beer has the same amount of alcohol as a 4-ounce glass of wine or a 1-ounce shot of straight liquor. Some alcoholic drinks such as malt beverages, wine coolers, and mixed drinks often contain more alcohol than a 12-ounce can of beer. There is no safe kind of alcohol.

Q. How does alcohol cause these problems? Alcohol in the mother’s blood crosses the placenta freely and enters the embryo or fetus through the umbilical cord. Alcohol exposure in the first three months of pregnancy can cause structural defects (e.g., facial changes). Growth and CNS problems can occur from drinking alcohol any time during pregnancy. The brain is developing throughout pregnancy. It can be damaged at any time. It is unlikely that one mechanism can explain the harmful effects of alcohol on the developing fetus. For example, brain images of some people with FAS show that certain areas have not developed normally. The images show that certain cells are not in their proper place and tissues have died in some areas.

Q. Can a father’s drinking cause FAS? How alcohol affects the male sperm is currently being studied. Whatever the effects are found to be, they are not FAS. FAS is caused specifically by the mother’s alcohol use during pregnancy. However, the father’s role is important. He can help the woman avoid drinking alcohol during pregnancy. He can encourage her abstinence from alcohol by avoiding social situations that involve drinking. He can also help her by avoiding alcohol himself.”

Application

FAS Research Newsletter Assignment

As you read in the previous pages, fetal alcohol syndrome (FAS) is a condition characterized by abnormal facial features, mental retardation, and central nervous system problems. In this assignment you will demonstrate what you have learned about FAS in a newsletter. Remember: a newsletter is a mini newspaper. It is a way to communicate much information in a concise and organized manner. Newsletters generally have two columns with multiple articles. Your newsletter is required to have four informative articles.

Questions that your newsletter should address:

- What is FAS?
- Is FAS hereditary?
- What causes FAS?
- Is FAS curable?
- Describe/show using visuals at least one of the physical characteristics of FAS.
- Describe/list at least two of the mental/intellectual characteristics of FAS.
- Include at least three other pieces of information/facts about FAS.

Continue to page 7.

| Content Criteria: | Check: |
|---|---------------|
| Define FAS. | |
| Discuss the cause of FAS and how to avoid FAS. | |
| Tell whether or not FAS is curable. | |
| Describe/show via illustration at least one of the physical characteristics of FAS. | |
| Describe/list at least two of the mental/intellectual characteristics of FAS. | |
| Include at least three other pieces of information/facts about FAS. | |
| Creativity Criteria: | |
| Newsletter format, including a title and article headlines. | |
| Clear, accurate, concise, and interesting presentation. | |
| A minimum of four articles/headlines. | |
| Design on one piece of paper 8.5" x 11" (computer paper/attached template). | |

Put your newsletter on other sheets of paper. You may complete it by hand or on the computer. Be sure to label your newsletter with your name, class, and period.

Continue to page 8, *Student Resource Checking for Understanding Sheet*.

Name _____ Period _____ Date _____

Consequences of Alcohol Consumption—Lesson 7
Student Resource Checking for Understanding Sheet

Directions: Answer the following questions.

- T F** 1. Alcohol consumption affects only the drinker.
- T F** 2. Those who drive safely and obey laws do not have to worry about getting involved in a car crash involving alcohol.
- T F** 3. FAS is not curable.
- T F** 4. FAS is hereditary.
- T F** 5. Alcohol consumption is a leading cause of mental retardation.

Create a list of three reasons people should not use alcohol irresponsibly.

- 1) _____
- 2) _____
- 3) _____

Create a list of three consequences FAS can have on a family.

- 1) _____
- 2) _____
- 3) _____

If you had one statement to say to someone who has affected another through his/her alcohol use, what would it be?

Montgomery County Public Schools
Health Education
Grade 10 Alternative Unit B

Unit Synthesis—Lesson 8

Overview

In this lesson you will consider the content of lessons in Alternative Unit B. You practiced the skills and strategies necessary for fitness. You analyzed obesity, eating disorders, addiction and recovery, and the consequences of alcohol use. In this lesson you will review your learning and consider how to apply this information to your own behavior now and in the future.

Materials

Student Resource Sheets—Lesson 8,
pages 1–7
Pen or pencil
Highlighter (optional)

Vocabulary

- **Synthesis**—the composition or combination of parts or elements so as to form a whole (Merriam-Webster’s)

Time Line

- One 45-minute class period.
- Independent work in alternative location from classroom.
- Return packet to teacher at the end of one period for grading.

Special Note

Students will need corrected copies of lessons 1–7 to complete this lesson.

Enduring Understanding

Taking responsibility for learning promotes understanding and memory.

Essential Questions

What strategies promote learning?

Mastery Objectives

Students will be able to do the following:

- Self-assess the strategies used to enhance knowledge acquisition.
- Practice self-monitoring and self-assessing learning.
- Use graphic organizers to plot learning.

Addressed Indicators/Objectives

1.6 Implement a strategy and evaluate progress toward achieving personal goals.

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Lesson Sequence

1. *Introduction*

Taking time to combine details, strategies, and meaning of valued information is important to the learning process. *Synthesis* is the term used to explain the process for reviewing concepts and making them into a usable whole. Have you ever finished a unit, passed the test, and then forgotten the content? That is a result of what is termed short-term memory.

You remembered the information in your short-term memory long enough to pass the test. You told your brain, “The information is only important until the test is over.” In order for the brain to move information into permanent long-term memory, it needs to review, reassess, and reorganize to assign value. By synthesizing valued information, you are saying to your brain, “this is important and I will need to access it later.”

The objective in this activity is to practice self-assessing personal effort, strategies used to learn content, and learning experiences most effective to promote understanding.

2. ***Activate Current Knowledge:*** Read the directions for the activator exercise on your *Student Resource Activator Sheet*; and complete your data collection charts (page 3).

3. ***Read and Process:*** Read about learning strategies (page 4). As you read, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points. Complete the *Student Resource Application Sheet* (pages 4–5).

4. ***Checking for Understanding:*** Complete the *Student Resource Checking for Understanding Sheet* (pages 6–7). This is an assessment. Submit the lesson packet to your teacher to evaluate your learning.

Extend by doing the following:

- Researching learning styles and multiple intelligences
- Researching modalities of learning
- Researching self-regulation theory, cognitive load theory, and the adolescent learner

Continue to page 3, *Student Resource Activator Sheet*.

Name _____ Period _____ Date _____

Alternative Unit B Synthesis—Lesson 8
Student Resource Activator Sheet



Activator

Directions: Complete the following charts to collect data you will use when evaluating your learning during this unit. Your teacher used the prepared answer key to evaluate your learning but that is only one component in this process. What your view as most important and effective will be valued by your brain and remembered.

| | | |
|---|---|---|
| Lesson | My self-assessment (grade, quality of my responses and products, and overall value of content). | My teacher’s comments (grade, remarks about quality of responses and products created). |
| 1B Components of Fitness | Example: I give myself a B+ because... | Example: I earned an A. The teacher wrote: |
| 2B Lifestyle Disease Obesity | | |
| 3B Risk Factors for Obesity | | |
| 4B Consequences and prevention of Obesity | | |
| 5B Eating Disorders | | |
| 6B Addiction and Recovery | | |
| 7B Consequences of Alcohol Use | | |

Complete this grid to plot your projected grade (*Me*) and the assigned teacher grade (*T*). Connect your *Me* grade to construct a line graph. Connect your *T* grades to create a line graph. Circle the lessons you most enjoyed. You will use this chart to answer questions as you complete this lesson.

| Grade | Me | T | Me | T | Me | T | Me | T | Me | T | Me | T | Me | T |
|---------------|-----------------------|---|---------------------------|---|--------------------------|---|--|---|------------------|---|------------------------|---|-----------------------------|---|
| A | | | | | | | | | | | | | | |
| B | | | | | | | | | | | | | | |
| C | | | | | | | | | | | | | | |
| D | | | | | | | | | | | | | | |
| Lesson | Components of Fitness | | Lifestyle Disease Obesity | | Risk Factors for Obesity | | Consequences and Prevention of Obesity | | Eating Disorders | | Addiction and Recovery | | Consequences of Alcohol use | |

Continue to page 4, *Student Resource Reading and Processing Sheet*

Name _____ Period _____ Date _____

Alternative Unit B Synthesis—Lesson 8
Student Resource Reading and Processing Sheet

Read and Process

Directions: As you read the information below, put a question mark (?) next to anything that you have a question about, an exclamation mark (!) for any interesting points, an asterisk (*) for confusing points, and underline or **highlight** the main points.

Learning theory suggests students are most effective as learners when they have a system to direct, manage, and assess learning. The theory refers to these strategies as self-direction, self-regulation, or self-management.

The theory refers to self-direction, self-management, or self regulation by using the following strategies to promote learning:

- Determining what is important
- Setting goals
- Using decision-making models to define steps to achieve goals
- Creating formal action plans with objectives, time lines, and characteristics of the expected outcomes
- Organizing materials and activities to support decision making
- Keeping daily logs of key information and records of new strategies to promote long-term memory and help synthesize content
- Assessing oneself with daily checks of task completion, quality of responses

Activity

Evaluate and synthesize lesson content. In your own words, identify the most important content in Lessons 1, 2, and 3 with respect to skills and strategies you will use to manage and direct your learning.

Components of Fitness:

Lifestyle Disease Obesity:

Risk Factors for Obesity:

Consequences and Prevention of Obesity:

Eating Disorders:

Addiction and Recovery:

Consequences of Alcohol Use:

Continue to page 6, *Student Resource Checking for Understanding Sheet*.

Name _____ Period _____ Date _____

Alternative Unit B Synthesis—Lesson 8
Student Resource Checking for Understanding Sheet

Based on the data you created in the activator and the value you determined for each lesson, assess your learning during this unit. Did the grade you earned reflect the value to you of the lesson? Did the grade you earned match the level of your effort, quality of your responses, and extent of the skills and concepts you feel you learned? Why or why not? Explain strategies for planning and organizing your learning environment and materials that led to your results. Explain the degree of significant content provided to you by this unit. Write your response in paragraph form or develop a graphic organizer. Use the space below or another sheet of paper.

Knowing you are responsible for your learning, what would you have changed? What strategies will you continue to use?
