# Lesson 4.1: Understanding Foods and Nutrients

## Vocabulary Review Worksheet

1. calories
2. nutrients
3. fiber
4. proteins
5. water
6. vitamins; minerals
7. nonnutritious drink

## Note-Taking Guide

**Nutrients and Your Health**

1.

Nutrients are the substances found in food that your body needs to survive

The names of the nutrients follow:

1. Carbohydrates
2. Proteins
3. Fats
4. Vitamins
5. Minerals
6. Water

**Energy Nutrients and Foods**

2.

|  |  |  |
| --- | --- | --- |
| Category of Nutrient | Importance | Foods |
| Carbohydrates | Main source of energy for your body. | Fruits, milk, bread, pasta, potatoes, rice |
| Fats | Another source of energy in food. | Avocados, olive oil, bacon |
| Proteins | Substances found in food that provide calories and help build and repair tissues. | Eggs, meat, cheese, vegetables, beans, seeds, grains |
| Vitamins | Small substances found in foods that are essential for life. | Meats, meat products, vegetables, fruits |
| Minerals | Small substances found in foods that are essential for life. | Meats, meat products, vegetables, fruits |
| Water | Tasteless liquid essential for life. Your body needs it to carry nutrients around your body. | Water, but some fluids come from eating fruits and vegetables. |

**Water and Other Beverages**

3. 9; 14

4.

Keeps your eyes, brain, blood, kidneys, and lungs healthy

Keeps your skin looking healthy and reduces your chance of getting pimples

Helps your muscles function for sports and activities

Helps with maintaining a healthy body weight

Carries important nutrients through your body

**Drinks High in Sugar and Analyzing Energy Drinks**

5. High-sugar drinks: create cavities in your teeth; add to health problems, such as type 2 diabetes; cause you to gain weight

Energy drinks: high in caffeine, which can lead to anxiety, being shaky, not being able to sleep very well, or serious medical problems

# Lesson 4.2: Energy Balance, Hunger, and Appetite

## Vocabulary Review Worksheet

1. positive
2. negative
3. metabolic rate
4. deficiency
5. hunger
6. appetite
7. daily energy need

## Note-Taking Guide

**Energy Balance, Energy Input, and Energy Output**

1. The relationship between the calories (energy) you eat and the calories (energy) you burn off

|  |  |
| --- | --- |
| Positive energy balance | Negative energy balance |
| If you eat more than you use, you have too many calories in your body, which can lead to weight gain. | When you burn off more than you eat, your body does not have enough energy, which can lead to weight loss. |

**How Your Burn Calories**

2. Metabolic rate: The number of calories you burn to keep your basic body functions working

**Daily Energy Need**

3.

|  |  |  |
| --- | --- | --- |
|  | Aged 9-13 | Aged 14-18 |
| Girls | 1,600-2,200 | 1,800-2,400 |
| Boys | 1,800-2,600 | 2,200-3,200 |

**Determining Your Caloric Need**

4.

2. If you do not engage in much physical activity each day choose the number at the bottom of the range.

3. If you do light to moderate activity up to 30 minutes on most days, choose a number in the middle of the range.

**Understanding Your Hunger**

5. hormones, what and when you eat, level of physical activity, genetics

**Influences on Appetite**

6. Answers will vary based on student influences. Be sure answers differ from one another. Potential answers could be related to the following:

* Culture
* Peers
* Family
* School
* Community
* Media
* Mood
* Advertisements
* Smell and sight of food

Also, see figure 4.13

7. Answers will vary based on students’ answers in question 7.

# Lesson 4.3: Tips and Tools for Eating Well

## Vocabulary Review Worksheet

1. diet
2. balance
3. variety
4. adequacy
5. nutrition facts label
6. nutrient
7. dietitian

## Note-Taking Guide

**Building a Healthy Diet**

1.

**Accessing and Using Nutrition Information**

2. Biased information is based on feelings and opinions more than on facts. Biased information sometimes uses only part of a fact and does not tell you the full story.

**Dietary Guidelines for Americans**

3.

a. dietary pattern

b. nutrient-dense, beverage

c. food group, calorie

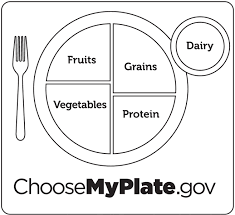
d. added sugars, saturated fat, sodium, sugary

**Reading Food Labels**

4. Refer to figure 4.17 in the textbook.

**MyPlate**

5.



6. Potential tips from the MyPlate plan to balance calories and get the right types of foods follow:

* Make half your plate fruits and vegetables.
* Make half your grains whole grains.
* Switch to low-fat or fat-free milk or yogurt.
* Vary your protein routine.
* Drink beverages and eat foods with less sodium, saturated fat, and added sugars.
* Drink water instead of sugary drinks.
* Everything you eat and drink matters.

7. Food labels and the MyPlate graphic tool provide you with nutrition information about nutrient values and portion sizes. Using both can help you understand more about the nutrients you are or are not getting enough of and if you are eating the right proportions of food groups.

**Other Sources on Nutrition Information**

8. A nutritionist is someone who claims to have knowledge in nutrition. They are not always educated about, or trained in, nutrition. A dietitian is an expert who has a university education in nutrition. A dietitian also has a professional license. Students should star dietitian.

# Lesson 4.4: The Digestive and Urinary Systems

## Vocabulary Review Worksheet

1. digestion
2. absorption
3. elimination
4. esophagus
5. gallbladder
6. large
7. kidneys
8. probiotics

## Note-Taking Guide

**The Digestive System**

1.

Tongue: Helps move food around during chewing

Salivary glands: Produce saliva, which begins to break down some carbohydrates and helps to moisten the food

Esophagus: Helps move food toward the stomach

Stomach: Mixes foods with gastric juices to chemically break down food

Liver: Releases bile

Small intestine: Absorbs nutrients

Large intestine: Absorbs nutrients

**How Digestion Works**

2. Digestion is the mechanical and chemical breakdown of foods. Absorption moves digested food from the digestive system into the cardiovascular system. Elimination gets rid of undigested food and body waste.

**Prebiotics and Probiotics**

3.

|  |  |
| --- | --- |
| Prebiotics | Probiotics |
| * The bacteria in food that feed the bacteria living in the digestive system * Prebiotic foods include bananas, garlic, onions, radishes, carrots, and tomatoes. | * The living bacteria found in food * Eating these live bacteria helps keep your gut healthy. * Foods high in probiotics include fermented foods and drinks, such as some pickles and sauerkraut, tempeh, kefir, and kombucha as well as Greek yogurt. |

**Short- and Long-Term Challenges to Digestive Health**

4.

5.

|  |  |
| --- | --- |
| Digestive System Challenges | Short- or Long-Term? |
| Lactose intolerance | Long-term |
| Constipation | Short-term |
| Ulcers | Long-term |
| Colon cancer | Long-term |
| Irritable bowel syndrome | Long-term |
| Hemorrhoids | Short-term |
| Diarrhea | Short-term |
| Colitis and Crohn’s Disease | Short-term |
| Heartburn | Short-term |
| Cirrhosis | Long-term |
| Vomiting | Short-term |
| Gas | Short-term |
| Indigestion | Short-term |

**The Urinary System**

6.

|  |  |
| --- | --- |
| Kidneys | Filter waste from the blood |
| Bladder | Stores urine until you can conveniently remove it from the body. |
| Ureters | Urine travels through the ureters from the kidneys to the bladder. |
| Urethra | Removes the urine from the bladder to outside the body |

7.

1. Urinary tract infections (UTIs)
2. Kidney stones
3. Kidney disease

**Maintaining Good Digestive and Urinary Health**

8.

* Stay hydrated by drinking plenty of water.
* Exercise regularly.
* Eat prebiotic and probiotic foods regularly.

# Lesson 4.5: Making Healthy Nutrition Decisions

## Vocabulary Review Worksheet

1. processed
2. food toxic
3. sodium
4. hypertension (high blood pressure is also an acceptable answer)
5. saturated
6. antioxidants
7. unsaturated

## Note-Taking Guide

**Nutrition, Health, and Disease**

1.

Processed foods: Foods that have been changed before they are sold or eaten

How processed foods relate to a food toxic environment: A food toxic environment is one where there is easy access to cheap, unhealthy convenience foods. Most of these foods are processed.

2.

Things that increase risk of disease:

* Consuming too much added sugar and added salt in our diet
* Diets high in added sugar make it more likely that you will end up with type 2 diabetes, cancer, or heart disease.
* Eating too much salt in your diet could make your blood pressure go too high. When the pressure in your blood vessels is higher than normal it is called hypertension.

Things that decrease risk of disease:

* Eating a balanced diet
* Eating less foods with added sugar
* Eating a healthy diet
* Eating less sodium

**Health and Unhealthy Fats**

3.

Saturated fats:

* Solid at room temperature
* Found in animal fat
* Type of fat that can lead to heart disease

Unsaturated fats:

* Liquid at room temperature
* Found in plant foods and fish
* Found in avocados, nuts, and fish
* Considered a “good fat”

**Antioxidants**

4.

**Tips for Eating Out**

5. Students should list any three of the following:

* Start with a glass of water.
* Pick your vegetables first.
* Finish your meal before ordering dessert.
* Choose meats that are grilled or broiled.
* Avoid fried foods.
* Avoid too much salad dressing, gravy, or sauces.
* Taste your food before salting it.

**Steps to a Healthy Decision**

6.

|  |  |
| --- | --- |
| **Step** | **Example** |
| **1: Understand the problem.** | You are at a place that serves only hamburgers and fries, but you are starving and don’t have enough time to go anywhere else. You know that you don’t feel your best when you eat meat and fries or drink sugary soda. |
| **2: Gather information and know your options.** | Study the menu carefully to see whether other options are available. Maybe there is a salad you can get instead of fries. Ask questions to find out whether you can get your hamburger made a certain way. Consider leaving off cheese and mayonnaise and adding mustard, lettuce, and tomato. Find out whether they have water, iced tea, or other nutritious beverages. |
| **3: Know the consequences.** | If you don’t eat, you will feel tired and might get a headache. If you eat a hamburger and fries, you might feel sluggish. If you add a soda, you will be getting a lot of sugar, which will raise your blood sugar levels and may cause you to feel jittery or anxious. |
| **4: Make a decision.** | You decide you really need to eat and that you can get the hamburger with lettuce and tomato and skip the fries. You also decide to have water instead of soda. |
| **5: Think about your choice.** | How do you feel about the decision you made? Would you do it differently next time? Think about your decision to help you be better prepared for the next choice you need to make. |

**Choosing Healthy Convenience Foods**

7. Answers will vary based on student interests and likes. Student answers should be foods that are unprocessed and low in fat, salt, and sugar.

# Test Your Knowledge

1. d. carbohydrates
2. a. popcorn
3. d. 8 cups
4. a. energy balance
5. d. adequate
6. c. serving size
7. c. make half your plate grains and vegetables
8. a. digestion
9. c. salt
10. d. You will gain weight.