



Topic: Effects of Exercise on Learning

Tier: 2

Text Type: Expository

Word Count: 333

Lexile® Measure: 790L

Skills: Making Predictions
Clarification
Summarization
Inferences
Comprehension

Lesson 1

Time: 20 minutes

Skills: Making Predictions

Student Pages: Anticipation/Reaction Guide

Lesson 2

Time: 40 minutes

Skills: Clarification

Student Pages: Exercise for the Body and the Brain

Lesson 3

Time: 30 minutes

Skills: Summarization

Student Pages: Exercise for the Body and the Brain, Summary Organizer

Lesson 4

Time: 50 minutes

Skills: Inferences

Student Pages: Making Inferences Chart, Reading Passages

Lesson 5

Time: 20 minutes

Skills: Comprehension

Student Pages: Exercise for the Body and the Brain, Exercise for the Body and the Brain
Assessment

Note: Words in bold are said aloud by the teacher.



Build Background and Develop Vocabulary

Distribute "Anticipation/Reaction Guide" (Student Activity 1). Use the Anticipation/Reaction Guide to establish a purpose for reading the text while activating prior knowledge that will consequently enable the reader to make connections with the text.

We are about to read a passage called "Exercise for the Body and the Brain." But before we begin reading, let's complete the "Before Reading" section of this worksheet. On the worksheet are four statements related to the topic of the passage "Exercise for the Body and the Brain." Read the first statement carefully. Then, underneath "Before Reading," indicate whether you agree or disagree with the statement by placing a check mark in the appropriate column. Do the same thing for each of the remaining statements.

Allow students several minutes to complete the "Before Reading" section.

Review each statement with the students, and ask them to share whether they agree or disagree. Engage them in a discussion by asking them to provide explanations for their responses. This will allow you to assess background knowledge.

Explain to students that they will revisit this worksheet after reading the passage to complete the "After Reading" section. This will allow them to compare their thoughts before reading to their thoughts after reading.

Independent Practice

Have each student write a statement at the bottom of the worksheet about what he or she thinks the passage "Exercise for the Body and the Brain" is about. Explain to students that they should base their predictions on the four given statements that are related to the topic of the passage. They need to use what the statements say and what they know to guess what the passage is about.

Note: Words in bold are said aloud by the teacher.



Preview Text

Have students take out “Anticipation/Reaction Guide” (Student Activity 1). Have students share their predictions.

Distribute “Exercise for the Body and the Brain” (Student Activity 2). **Let’s prepare to read the passage “Exercise for the Body and the Brain.” First, we’ll skim the passage. Remember, skimming a text can help successful readers answer questions they have before they read. Quickly skim the passage to find out whether it is narrative or expository.** Allow 30 seconds for students to skim. **Is this a narrative or expository passage?** (*expository*) **How do you know?** (*There are many facts in the passage.*) **What is the topic of the passage?** (*exercise*)

Read 1

Read the first paragraph of the passage. After students have finished reading, ask them whether there are any words that they need clarified. Allow time for responses, and discuss the words as needed. Model and use clarification strategies to help students understand the meanings of the words. **When you encounter difficult words or portions of text that do not make sense, you should stop and reread to understand, read on for more clues, or think about what you already know about the topic. You may have to use additional strategies to figure out difficult words, such as decoding word parts or thinking of other similar words.**

Have students continue reading the rest of the passage. Students should stop after each paragraph to clarify any difficult words or confusing information. They should go back and reread the text in question and figure out what the text is saying before reading the next section. Guide students when necessary.

Once students have finished reading the passage, have them revisit their Anticipation/Reaction Guides to complete the “After Reading” section.

Read each statement again now that you have actually read the passage. React to each statement once more by indicating whether you agree or disagree in the columns for the “After Reading” section. In addition, provide evidence from the passage in the last column to support your reactions. Compare your thoughts before the reading to your thoughts after the reading.

Discuss with the students the similarities and differences between their predictions and what the text is actually about.

Note: Words in bold are said aloud by the teacher.



Read 2

Redistribute or have students take out "Exercise for the Body and the Brain" (Student Activity 2). **Reread the passage "Exercise for the Body and the Brain." Pause after each paragraph to ask a question about the paragraph you just read. Once you've asked and then answered a question, continue reading.** Students may work alone or with a partner. Partners must answer each other's questions before continuing to the next section.

Summarize the Text

Distribute "Summary Organizer" (Student Activity 3). Read through the directions of the activity to make sure that students understand what to do. Then have students complete the organizer for "Exercise for the Body and the Brain." If necessary, complete the activity together. Explain to students that a summary is a shortened version of the passage that covers only the main, or big, ideas.

Note: Words in bold are said aloud by the teacher.



Teach: Inferences

What is an inference? Allow students to answer. Then demonstrate how students make inferences all the time by making a sad face and asking, **How am I probably feeling right now?** Students should infer that you are probably sad. **Nice! How did you know that? I didn't tell you I was sad.** Allow students to answer. If necessary, guide students to respond that they either make that face themselves when they are sad or have seen someone make that face out of sadness before. **You used what you saw and what you already knew to make an educated guess, right?** Students should agree. **Well, you just made an inference. You make inferences like this all the time. An inference is simply an educated guess. You make an inference, or an educated guess, when you use what you see (or read) and what you already know. Today we're going to practice making inferences while reading. Authors do not always tell us directly everything we need to know to understand the text, but they do leave clues. Authors want us to take these clues in the text and combine them with what we know to figure things out. You have to make inferences in order to understand everything that an author is telling you.**

Guided Practice: Inferences

Give two copies of "Making Inferences Chart" (Student Activity 4) to each student. If possible, project a copy on the board. **We are going to use this chart to help us make inferences. It guides us through using what the text says and what we already know to make inferences.** Distribute "Reading Passages" (Student Activity 5). **We are going to fill out a chart and make inferences for "Passage 1" together.** Guide students in filling out a copy of "Making Inferences Chart" for the first reading passage. Write "Passage 1" on the blank for "Title of Passage." Then work with students to answer the following questions:

1. How does the author most likely feel about Wangari Maathai?
2. Why did the children in Kenya most likely grow sick?
3. Does the author support deforestation (the clearing of forests)?
4. Why does the GBM encourage women (and not men) in particular to grow trees?

Provide corrective feedback when needed. Answers will vary, but a completed chart may look like the chart found on the next page.

Guided Practice (cont.)

Question	The Text Says . . .	I Think/Know . . .	So My Inference Is . . .
STEP 1: Write the question in this column.	STEP 2: Find information in the text that will help in answering the question, and write the information in this column.	STEP 3: Think about what you know about the information found in the text.	STEP 4: Combine what the text says and what you know to answer the question (make an inference).
How does the author most likely feel about Wangari Maathai?	"An admirable woman named Wangari Maathai recognized this truth."	People call those whom they respect "admirable."	The author feels respect toward Wangari Maathai.
Why did the children in Kenya most likely grow sick?	"Children grew sick. They did not have clean water to drink and healthful food to eat."	People get sick when they do not have clean water to drink and healthful food to eat.	The children got sick because they did not have clean water to drink and healthful food to eat.
Does the author support deforestation (the clearing of forests)?	"The human population depends on trees. Trees provide precious food, firewood, shade, and oxygen."	People who know how valuable trees are probably do not like seeing whole forests being cleared.	The author does not support deforestation.
Why does the GBM encourage women (and not men) in particular to grow trees?	"The GBM encourages women to grow trees."	Women have been discriminated against because of their gender.	The GBM wants to empower women in Kenya because they have been discriminated against.

Independent Practice: Inferences

Have students work independently to complete the second copy of "Making Inferences Chart" for the second reading passage found on "Reading Passages." Students should write "Passage 2" on the blank for "Title of Passage" and answer the following questions:

1. Why was Michael Jordan called "Air Jordan"?
2. How does the author likely feel about Michael Jordan's basketball skills?
3. What made Michael "deeply upset"?

Independent Practice (cont.)

4. How did Michael Jordan likely feel about losing to his brother Larry?

Have the questions displayed on the board so that students may copy them onto their individual charts. Answers will vary, but a completed chart may look like the following:

Question	The Text Says ...	I Think/Know ...	So My Inference Is ...
STEP 1: Write the question in this column.	STEP 2: Find information in the text that will help in answering the question, and write the information in this column.	STEP 3: Think about what you know about the information found in the text.	STEP 4: Combine what the text says and what you know to answer the question (make an inference).
Why was Michael Jordan called "Air Jordan"?	"One of his nicknames was 'Air Jordan.' He had an incredible ability to leap into the air and slam a ball through a basket."	Nicknames usually describe the person.	Michael Jordan was called "Air Jordan" because he could leap into the air and slam a ball through a basket.
How does the author likely feel about Michael Jordan's basketball skills?	"He had an incredible ability to leap into the air and slam a ball through a basket."	People call things that they think are amazing "incredible."	The author likely feels amazed about Michael Jordan's basketball skills.
What made Michael "deeply upset"?	"When Michael was in the tenth grade, he tried out for his high school's varsity basketball team—and didn't make it. He was deeply upset."	I would feel upset if I tried out for something and didn't make it.	Michael was deeply upset because he tried out for the varsity basketball team and didn't make it.
How did Michael Jordan likely feel about losing to his brother Larry?	"While they were growing up, Larry often beat Michael in one-on-one basketball games. Each game just made Michael more determined to beat his brother."	I do not like losing to my older sister/brother.	Michael probably did not like losing to his older brother Larry.

Note: Words in bold are said aloud by the teacher.



Assessment

For this lesson, redistribute or have students take out “Exercise for the Body and the Brain” (Student Activity 2). Also distribute “Exercise for the Body and the Brain: Assessment” (Student Activity 6).

Reread the passage “Exercise for the Body and the Brain,” and answer the questions. You must provide evidence from the text after each question. You may copy phrases or sentences from the passage where you found the information that best supports your answer.

Designate a place for students to place their completed assessments, or collect the assessments when students are finished.

Use data obtained from this assessment to plan further instruction. Provide timely feedback for students by reviewing with them as soon as possible so they may benefit from it.

Name: _____

Date: _____

Anticipation/Reaction Guide

Before reading "Exercise for the Body and the Brain," complete the "Before Reading" section below. Read each statement carefully. Then, underneath "Before Reading," indicate whether you agree or disagree with the statement by placing a check mark in the appropriate column. Use the statements to make a text prediction, and write your prediction on the lines below.

After reading the passage, read each statement again. React to each statement once more by indicating whether you agree or disagree in the columns for the "After Reading" section. In addition, provide evidence from the passage in the last column to support your reactions. Compare your thoughts before the reading to your thoughts after the reading.

BEFORE READING		Statement	AFTER READING		
Agree	Disagree		Agree	Disagree	Evidence
		1. Stress is good for memorizing and learning.			
		2. Physical activity can help people feel less stressed.			
		3. People who exercise regularly have better memories.			
		4. People who don't exercise make better grades.			

Text Prediction: _____

Name: _____

Date: _____

Exercise for the Body and the Brain

You know that exercise can help you improve your health. Did you also know that it can help you do well in school? Studies show that exercise has a positive effect on learning. People who exercise generally have less anxiety, a better memory, and better grades.

Stress is bad for memorizing and learning. It interferes with cell communication in the brain. One study found that physical activity can help with stress. It was performed by the University of Buffalo. Exercise reduced the amount of stress experienced by a group of students during a test. They had walked a mile on a treadmill about twenty minutes before the test took place.

Another study shows that people who exercise have better memories. This study was done by researchers at Dartmouth College. They gathered a group of healthy adults who did not exercise regularly. They then had the adults complete a memory test. After the test, half of the adults were placed on a supervised exercise program. The other half were told not to exercise. After four weeks, everyone returned to the college to take the test again. Those who had exercised regularly for the past month performed better on the test than those who had not exercised.

Students who engage in intense physical activities tend to make better grades. Researchers at Michigan State University observed over 200 sixth graders for an academic year. They found that students who actively participated in activities such as soccer or skateboarding performed about 10 percent better in classes such as math and science. These students were active at least three times a week.

Scientists are still trying to figure out exactly why exercise is so good for learning. It may be because exercise helps blood and good chemicals flow to the brain. Or it may be because exercise burns excess energy. This could allow one to concentrate better. Whatever the reason, it's clear that exercise helps the body and the brain. So what are you waiting for? Go exercise!

Name: _____

Date: _____

Summary Organizer
Expository Text

Use the following organizer to identify the topic, main idea, and major supporting details of the passage.

Title: _____

Topic:

**Main Idea:**

**Major Supporting Details:**

Name: _____

Date: _____

Making Inferences Chart

Title of Passage: _____

Question	The Text Says ...	I Think/Know ...	So My Inference Is ...
STEP 1: Write the question in this column.	STEP 2: Find information in the text that will help in answering the question, and write the information in this column.	STEP 3: Think about what you know about the information found in the text.	STEP 4: Combine what the text says and what you know to answer the question (make an inference).

Name: _____

Date: _____

Reading Passages

PASSAGE 1

The human population depends on trees. Trees provide precious food, firewood, shade, and oxygen. They keep impurities from entering water sources, the air, and the soil. They keep important topsoil in place; they prevent water sources from drying up. For these reasons and more, it is important to replace trees that have been chopped down or destroyed. An admirable woman named Wangari Maathai recognized this truth. She began a movement to restore the trees of her homeland, Kenya.

Before the 1970s in Kenya, merely nine trees were being planted for every hundred being chopped down. As a result, firewood, rich soil, food, and water became scarce. Children grew sick. They did not have clean water to drink and healthful food to eat. Maathai understood that these problems could be resolved if more trees were planted. She gathered a small group of women. Together, they began planting trees around schools, churches, and homes.

In 1977, Maathai established the Green Belt Movement (GBM). The GBM encourages women to grow trees. It teaches them how to do so and provides payment for their work. Since its establishment, it has helped plant more than fifty million trees in Kenya. Because it has been so successful, the movement has also spread to other countries, including Tanzania and Uganda. Thanks to Maathai's vision, more and more communities are getting the firewood, food, and water they need to survive.

PASSAGE 2

Michael Jordan is a six-time National Basketball Association (NBA) champion and a two-time Olympic gold medalist. He amazed countless people with his talent. One of his nicknames was "Air Jordan." He had an incredible ability to leap into the air and slam a ball through a basket. His fierce competitiveness drove him to work hard to continually improve.

When Michael was in the tenth grade, he tried out for his high school's varsity basketball team—and didn't make it. He was deeply upset (especially because his older brother Larry and his friend Leroy Smith had made the team). But he didn't give up. The failure only pushed him to work harder. He asked the coach what he needed to do to get better. He followed the coach's advice. The next year, Michael became the star player of the varsity team. In 1980, he broke a high school record by scoring forty-two points in a single game.

Michael's relationship with his older brother Larry played a large role in the development of his competitive spirit. While they were growing up, Larry often beat Michael in one-on-one basketball games. Each game just made Michael more determined to beat his brother. And by the time Michael made the high school varsity team, Larry was no longer the better basketball player.

Each failure that Michael Jordan experienced helped him improve. His own words best express his secret to success: "I've missed more than 9000 shots in my career. I've lost almost 300 games. 26 times, I've been trusted to take the game-winning shot and missed. I've failed over and over and over again in my life. And that is why I succeed."

Name: _____

Date: _____

Exercise for the Body and the Brain: Assessment

Read "Exercise for the Body and the Brain." Read the questions, and circle the best answer for each one. Provide evidence from the text in the space after each question.

1. According to the passage, why is stress, or anxiety, bad for learning?

- A. It keeps a person from eating healthful foods.
- B. It uses up too much energy in a short period of time.
- C. It makes a person not want to exercise.
- D. It interrupts the flow of information in the brain.

Evidence: _____

2. What is the author's main purpose for writing this selection?

- A. to entertain the reader with a story about students who exercise
- B. to inform the reader about how exercise positively affects learning
- C. to describe to the reader how to get better grades in school
- D. to persuade the reader to exercise at least three times a week

Evidence: _____

3. What is the main idea of the third paragraph?

- A. Adults were asked to take a memory test again after four weeks.
- B. Researchers at Dartmouth College had healthy adults take a test.
- C. A study shows that people who exercise have better memories.
- D. Half of the healthy adults in the group were told not to exercise.

Evidence: _____

4. The reader can infer from the last paragraph that the author believes

- A. soccer is a fun sport to play.
- B. exercise helps only the body.
- C. the reader should exercise.
- D. scientists are doing a bad job.

Evidence: _____

Exercise for the Body and the Brain: Assessment (Answer Key)

Read "Exercise for the Body and the Brain." Read the questions, and circle the best answer for each one. Provide evidence from the text in the space after each question.

1. According to the passage, why is stress, or anxiety, bad for learning?

- A. It keeps a person from eating healthful foods.
- B. It uses up too much energy in a short period of time.
- C. It makes a person not want to exercise.
- D. It interrupts the flow of information in the brain.***

Evidence: Stress is bad for memorizing and learning. It interferes with cell communication in the brain.

2. What is the author's main purpose for writing this selection?

- A. to entertain the reader with a story about students who exercise
- B. to inform the reader about how exercise positively affects learning***
- C. to describe to the reader how to get better grades in school
- D. to persuade the reader to exercise at least three times a week

Evidence: Studies show that exercise has a positive effect on learning. People who exercise generally have less anxiety, a better memory, and better grades.

3. What is the main idea of the third paragraph?

- A. Adults were asked to take a memory test again after four weeks.
- B. Researchers at Dartmouth College had healthy adults take a test.
- C. A study shows that people who exercise have better memories.***
- D. Half of the healthy adults in the group were told not to exercise.

Evidence: Another study shows that people who exercise have better memories. (The entire paragraph supports this idea.)

4. The reader can infer from the last paragraph that the author believes

- A. soccer is a fun sport to play.
- B. exercise helps only the body.
- C. the reader should exercise.***
- D. scientists are doing a bad job.

Evidence: So what are you waiting for? Go exercise!