

Upper Elementary (Phase 2) Student Workbook

SCIENCE: ANATOMY & PHYSIOLOGY

Unit 3: Guardians of the Body

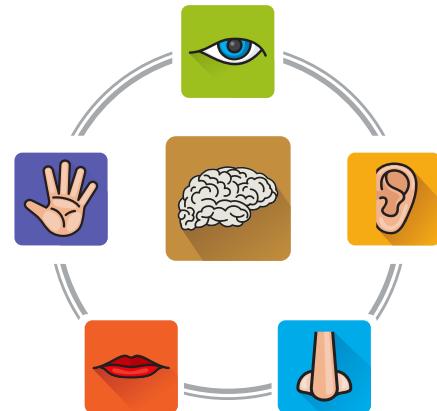


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Unit 3: Guardians of the Body

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Unit Project Overview

Life Inside: A Body Journal

Welcome Body Journalist!

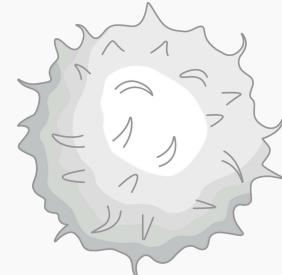
Your body is full of amazing parts that are always working hard to keep you safe, healthy, and happy. In this unit, you're going to step into the shoes (or cells!) of your body parts and imagine what life might be like if they could talk.



In this project, you'll write journal entries as if you are different parts of your body!

Each lesson will come with a special worksheet that helps you:

- Draw and label body parts
- Write short journal entries in first-person (as if you are the body part)
- Reflect on how you can care for your body



White blood cell

By the end of the unit, you will have 8 journal entries—one for each lesson—that show how your immune system and senses work together, and how you can be a good steward of your body. When all your worksheets are put together, they will make your own Body Journal!



Unit Project (continued)

Life Inside: A Body Journal

Grading Rubric

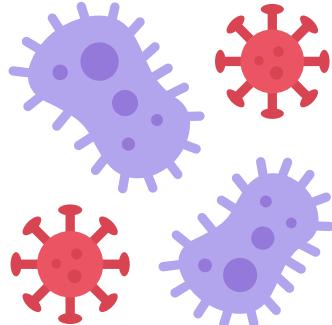
- 5: All 8 journal worksheets are complete, accurate, and show strong effort; each entry is in the first-person (“I am an eyeball...”)
- 4: 6–7 journal worksheets are complete with good effort and mostly accurate content; most entries are in first-person
- 3: 4–5 journal worksheets included; basic effort and understanding shown; some entries are missing first-person voice
- 2: 2–3 journal worksheets present; limited effort or unclear scientific content; limited first-person
- 1: 1 incomplete or off-topic journal worksheet; very little effort; little or no first-person
- 0: No work or not related to assignment

Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that your immune system works like a guard for your body. Tiny invaders called pathogens—like viruses, bacteria, and parasites—try to sneak in and make you sick. But your immune system has a special team of cells, tissues, and organs that find the germs, chase them down, and destroy them. For your journal entry worksheet, you'll imagine you are one of these defenders and write about what it's like to protect the body from sickness.



Complete Today's Tasks

- Write the Part of the Immune System You Are Pretending to Be.** Do this at the top left corner on the next page after the word, "Name." You could pretend to be your tonsils, adenoids, lymph nodes, thymus, appendix, spleen, bone marrow, or Peyer's Patch.
- Write Today's Date.** Do this at the top left corner on the next page after the word, "Date."
- Draw a Picture of the Immune System Part.** In the "Meet Me" box on the next page, draw the part of the immune system that you wrote down.
- Explain Your Job.** In the "My Job" box, write one sentence about how you protect the body from pathogens. Remember to write in first-person (i.e., "I'm the appendix . . .").
- Tell a Story About Your Day.** In the "A Day in My Life" box, write 3–4 sentences describing your day as the part of the immune system. You could describe how you found a pathogen and destroyed it, or talk about how you were on the lookout for anything bad entering the body, or anything else you'd like to talk about. Remember to write in first-person and keep your content scientifically accurate.

Grading

While your project will not be graded until it is complete, keep in mind the criteria to receive full points: **each journal entry worksheet should be complete, accurate, show strong effort, and written in first-person.**

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name:

Date:

Meet Me!

My Job

A Day in My Life

Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that your five senses—sight, hearing, smell, taste, and touch—are always working to help you understand the world around you. Each sense uses special body parts to notice things like colors, sounds, smells, flavors, and feelings, then sends those messages to your brain. Your senses also work together to keep you safe (like smelling smoke or hearing a car horn) and to help you enjoy life (like tasting pizza or feeling a cozy blanket).



Complete Today's Tasks

- Write Today's Date.** Do this at the top left corner on the next page after the word, "Date."
- Label Each of the 5 Senses.** Use the pictures to help you know which sense to write in the boxes on the left. The first one has been done for you.
- Write an Example of How Each Sense Helps You Enjoy Life OR How It Protects You from Danger.** Write your answers in the boxes on the right side of the pictures. Write each example in first-person (e.g., "I help the body taste delicious foods." or "I protect the body by detecting if food tastes spoiled.").
- Color the 5 Pictures of the Senses.** You can use crayons, colored pencils, markers, or any other coloring utensils you want.

Grading

Your final project will be graded on the following criteria: **each journal entry worksheet is complete, accurate, shows strong effort, and written in first-person.**

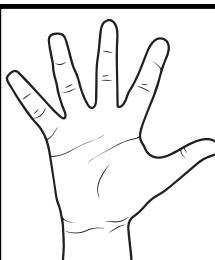
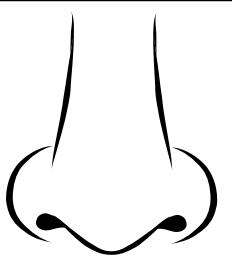
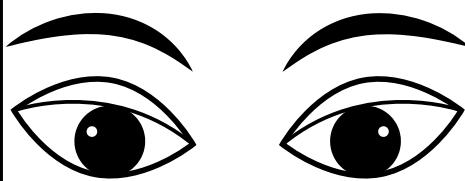
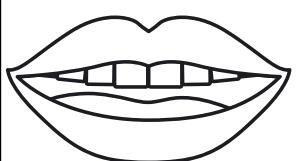
Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name: The 5 Senses

Date: _____

Taste

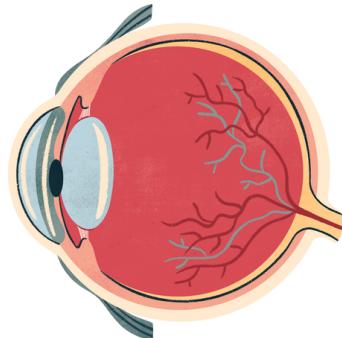


Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that sight is one of the body's most important tools for learning, staying safe, and having fun. Your eyes and brain work together with light to let you see. Each part of the eye has a special job—like focusing, letting in light, or noticing colors. For your project, you'll label an eye diagram and describe what each part of the eye does.



Complete Today's Tasks

- Write "Eyeball" or "Eyeball Parts".** Do this at the top left corner on the next page after the word, "Name."
- Write Today's Date.** Do this at the top left corner on the next page after the word, "Date."
- Label the Eye Diagram.** Using the word bank at the top of the next page, write the name of each part of the eye in the small rounded box around the diagram. The "Lens" has been done for you. There are 6 parts to label total.
- Describe the Job of Each Eye Part.** In the lined box that matches the color of the label, write a brief description of what each part of the eye does using first-person (e.g., "I help focus the light coming through the pupil.").

Grading

Your final project will be graded on the following criteria: **each journal entry worksheet is complete, accurate, shows strong effort, and written in first-person.**

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name: _____

Date: _____

Word Bank

Retina

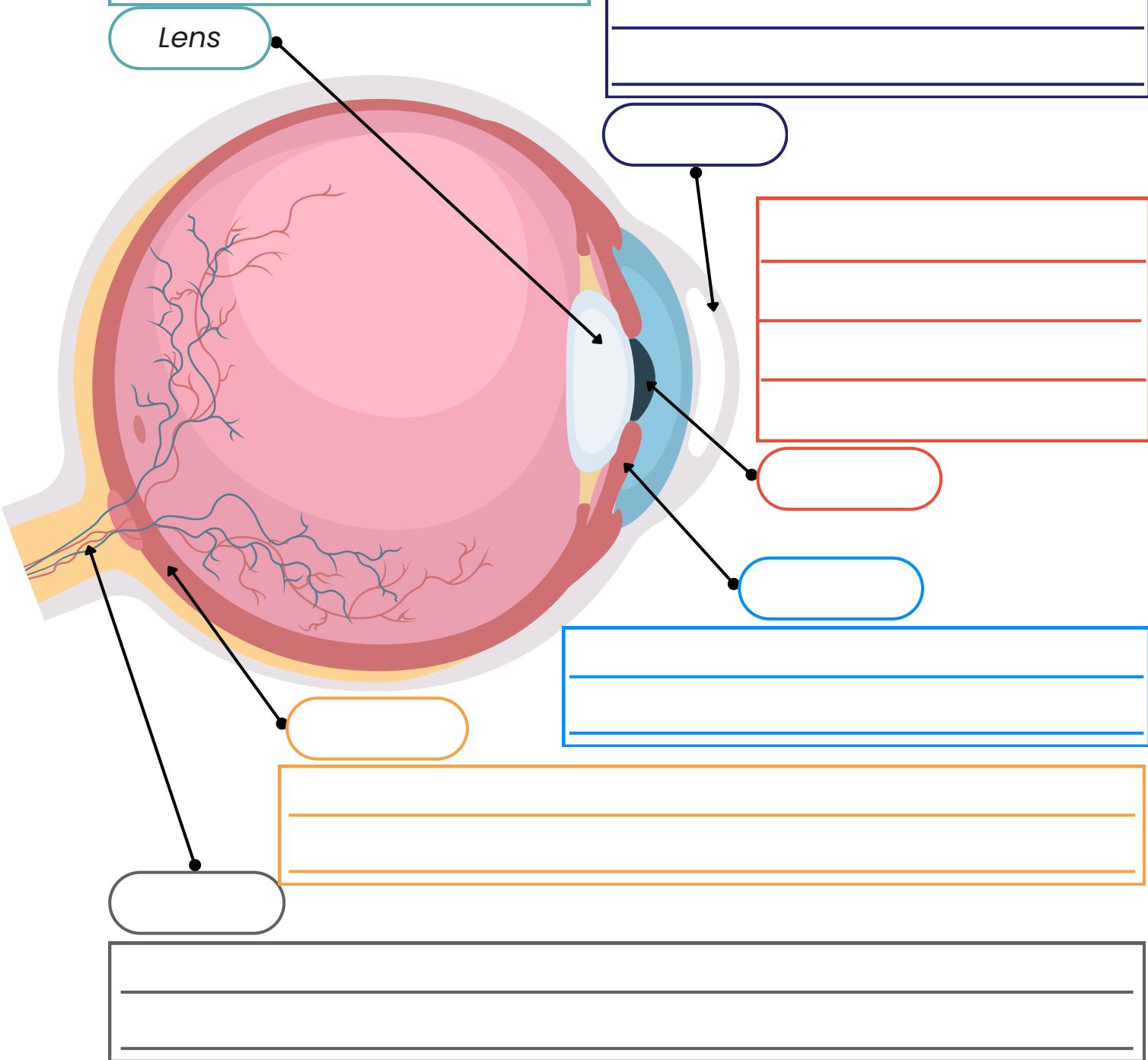
Iris

Optic Nerve

Pupil

Cornea

Lens

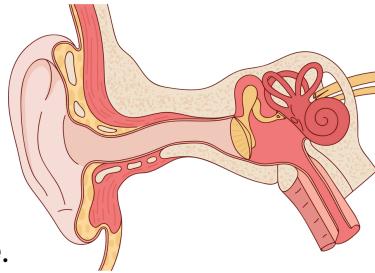
Lens

Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that sound starts as vibrations that move in waves through the air. Your ears catch those sound waves and send them to your brain, which understands them as music, voices, laughter, warnings, and more. Each part of the ear—the outer ear, inner ear, and auditory nerve—has an important job in turning vibrations into sounds we can recognize. For your project, you'll imagine you are an ear (or one of its parts) and write about what it's like to hear a world full of buzzes, booms, and beats.



Complete Today's Tasks

- Write the Part of the Ear You Are Pretending to Be.** Do this at the top left corner on the next page. You could pretend to be your entire ear, outer ear, inner ear, ear drum, ear canal, cochlea, or auditory nerve.
- Write Today's Date.** Do this at the top left corner on the next page.
- Draw a Picture of the Ear or Part of the Ear.** In the "Meet Me" box on the next page, draw the part of the ear or entire ear (whichever you chose).
- Explain Your Job.** In the "My Job" box, write one sentence about how you help the body hear sounds. Remember to write in first-person (i.e., "I'm the cochlea. I help the body hear by . . .").
- Tell a Story About Your Day.** In the "A Day in My Life" box, write 3–4 sentences describing your day as the part of the ear. You could describe how you caught sound waves and sent them to the brain, how you helped the body enjoy music or laughter, or how you warned the body by noticing a loud noise. Remember to write in first-person and keep your content scientifically accurate.

Grading

Your final project will be graded on the following criteria: **each journal entry worksheet is complete, accurate, shows strong effort, and written in first-person.**



Turn in ALL 4 of your activities from lessons 1–4 when you're done.

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name:

Date:

Meet Me!

My Job

A Day in My Life

Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that smell starts when tiny odor molecules go into your nose and wake up special smell sensors called olfactory receptors. These sensors send messages to your brain, which tells you if a smell is good, dangerous, or just plain weird. For your project, you'll imagine being the olfactory receptors and write about your adventures sniffing the world around you.



Complete Today's Tasks

- Write "Olfactory Receptors".** Do this at the top left corner on the next page.
- Write Today's Date.** Do this at the top left corner on the next page.
- Describe What Olfactory Receptors Do For the Body.** On the lines on the top of the page, write what olfactory receptors do. Remember to write in first-person.
- Find 2 Different Odorants.** These could be foods, perfumes, laundry, garbage, or anything else around your house that is safe to smell.
- Draw the 2 Odorants.** In the boxes on the left of the next page, draw pictures of the 2 odorants you found. You can label them if you want.
- Interpret the First Odorant.** Smell the first odorant you found. Then describe how your olfactory receptors interpreted the odorant in the first box on the right side of the next page. Remember to write as if you were the olfactory receptor (i.g., first-person).
- Interpret the Second Odorant.** Smell the second odorant you found. Then describe how your olfactory receptors interpreted the odorant in the second box. Remember to write as if you were the olfactory receptor (i.g., first-person).

Grading

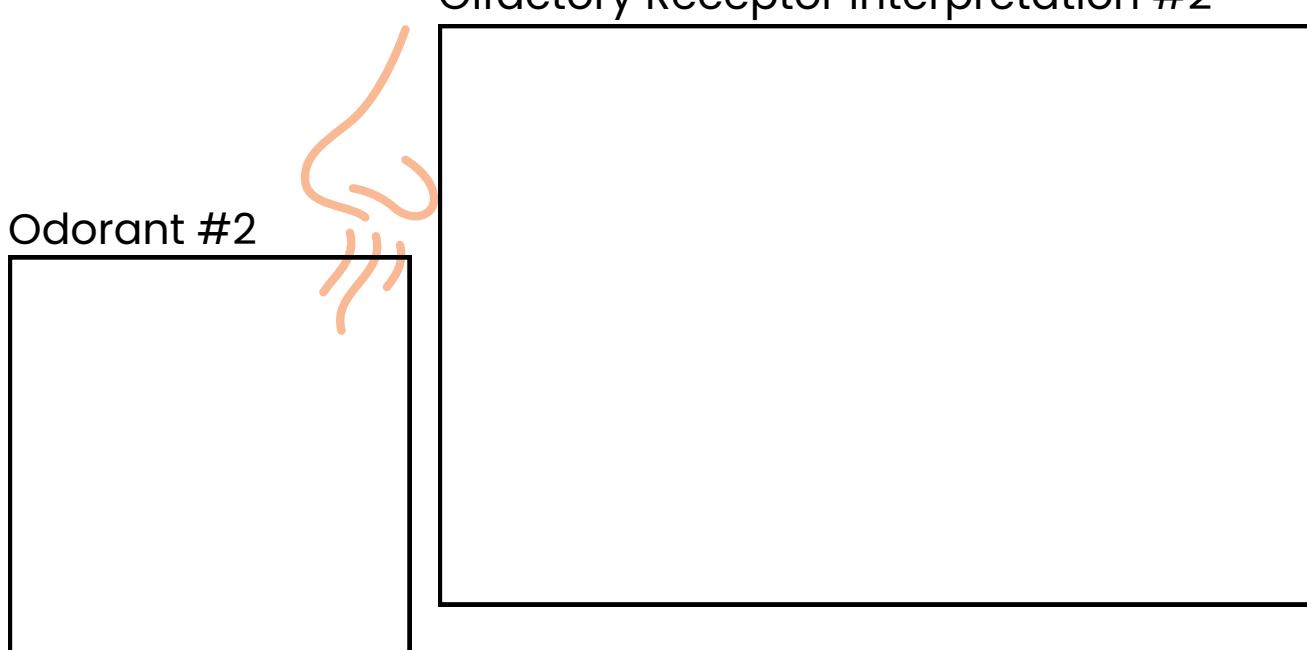
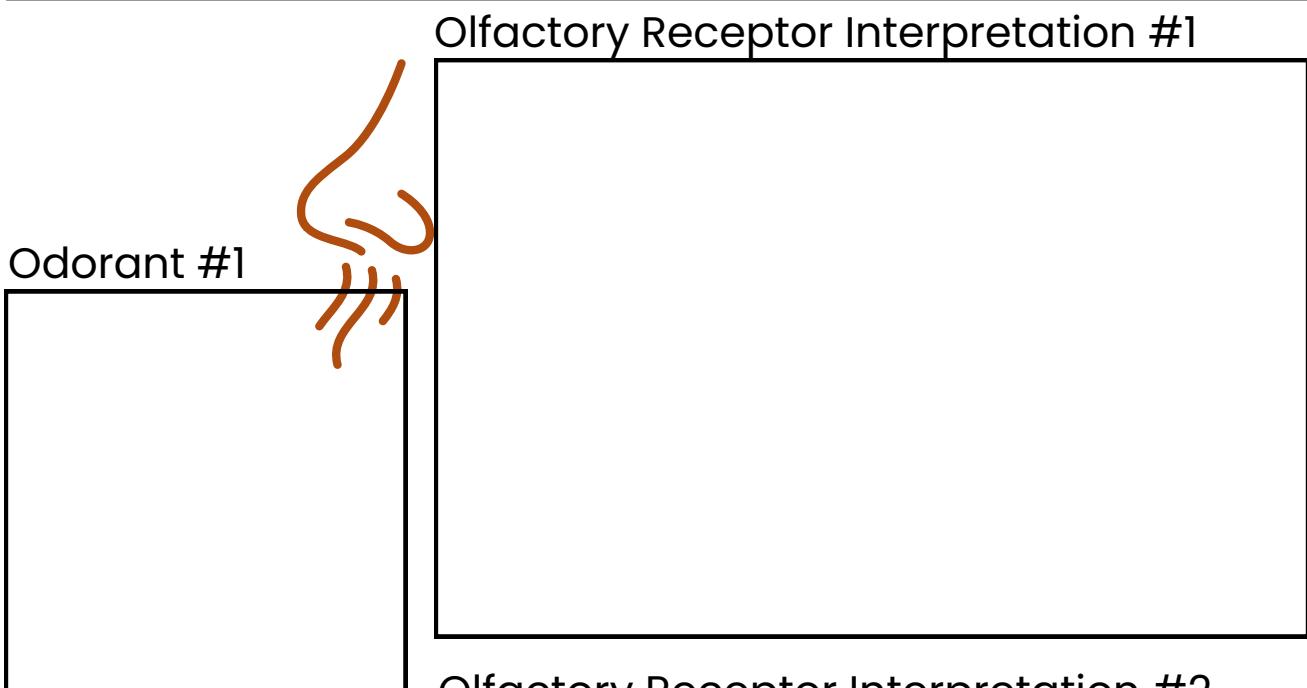
Your final project will be graded on the following criteria: **each journal entry worksheet is complete, accurate, shows strong effort, and written in first-person.**

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name: _____

Date: _____

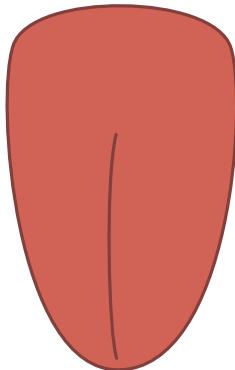


Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you discovered that your tongue is a muscle! It works with your sense of smell to help you notice five tastes: sweet, sour, salty, bitter, and umami. These tastes make food enjoyable and also warn you if food might be harmful or spoiled. Your tongue does more than taste—it also helps you talk, swallow, lick, and even whistle. For your project, you'll imagine being the tongue and write about how you help the body taste a variety of flavors.



Complete Today's Tasks

- Write "Taste Buds".** Do this at the top left corner on the next page.
- Write Today's Date.** Do this at the top left corner on the next page.
- Match the Type of Taste to the Correct Picture.** In each of the five boxes on the next page, look at the picture and then fill in the blank in the box with the taste that matches the picture. Use the word bank to help you.
- List 2–3 Examples of Sweet Flavors.** Write these in the sweet-flavors box.
- List 2–3 Examples of Umami Flavors.** Write these in the umami-flavors box.
- List 2–3 Examples of Salty Flavors.** Write these in the salty-flavors box.
- List 2–3 Examples of Sour Flavors.** Write these in the sour-flavors box.
- List 2–3 Examples of Bitter Flavors.** Write these in the bitter-flavors box.
- Describe How Your Sense of Taste Keeps You Safe.** In the box at the bottom of the next page, write 2–4 sentences about how being able to taste helps keep you safe. Remember to write in first-person as if you were the tongue.

Grading

Your final project will be graded on the following criteria: **each journal entry worksheet is complete, accurate, shows strong effort, and written in first-person.**

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name: _____

Date: _____

I can taste _____ flavors like:



I can taste _____ flavors like:



I can taste _____ flavors like:



Word Bank

sweet
sour
salty

bitter
umami

I can taste _____ flavors like:



I can taste _____ flavors like:



How I Keep You Safe

Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that touch sensors in your skin collect information and send it to your brain. This helps you enjoy things like soft blankets and warm sunshine, and it also keeps you safe by warning you when something is sharp, hot, or painful. Pain isn't fun, but it's important because it helps protect the body from getting hurt. For your project, you'll imagine being the skin (or one of its touch sensors) and write about what it's like to feel everything the world throws at you.



Complete Today's Tasks

- Write the Part of the Skin You Are Pretending to Be.** Do this at the top left corner on the next page. You could pretend to be your entire skin, or a single skin receptor.
- Write Today's Date.** Do this at the top left corner on the next page.
- Draw a Picture of the Skin or the Skin Receptor.** In the "Meet Me" box on the next page, draw the part of the skin or skin receptor (whichever you chose).
- Explain Your Job.** In the "My Job" box, write one sentence about how you help the body feel and interpret the world around you. Remember to write in first-person (i.e., "I'm the skin receptor on the finger ...").
- Tell a Story About Your Day.** In the "A Day in My Life" box, write 3–4 sentences describing your day as the part of the ear. You could describe how you felt something soft or warm, how you warned the body about something sharp or hot, or how you noticed pain to keep the body safe. Remember to write in first-person and keep your content scientifically accurate.

Grading

Your final project will be graded on the following criteria: **each journal entry worksheet is complete, accurate, shows strong effort, and written in first-person.**

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name:

Date:

Meet Me!

My Job

A Day in My Life

Unit Project: Life Inside: A Body Journal

Guardians of the Body: Senses, Systems, and Stewardship

Instructions

Today you learned that you are the steward (caretaker) of your own body. Your body depends on you to pay attention to its needs, make healthy choices, and stay away from things that could cause harm. The choices you make—what you eat, how you rest, if you exercise, and how you protect yourself—all affect your body's health. For your final project entry, you'll write down several different ways you can be a good steward of your amazing body to stay healthy and strong.



Complete Today's Tasks

- Write "Body Steward".** Do this at the top left corner on the next page.
- Write Today's Date.** Do this at the top left corner on the next page.
- Define "Steward" or "Stewardship".** In the "Steward" box at the top of the next page, write what "Steward" or "Stewardship" means in your own words.
- Write 3 Examples of Nutritional Stewardship.** In the "Nutrition" box on the next page, write 3 examples of how you can be a good steward of your body relating to nutrition. Remember to write in first-person (e.g., "I can be a good steward by eating fruits and vegetables.")
- Write 2 Examples of Dental Stewardship.** In the "Dental Health" box, write 2 examples of how you can be a good steward of your body relating to your teeth. Remember to write in first-person.
- Write 3 Examples of Physical Stewardship.** In the "Physical Activity" box, write 3 examples of how you can be a good steward of your body relating to physical activity. Remember to write in first-person.
- Write 2 Examples of Medical Stewardship.** In the "Medical Health" box, write 2 examples of how you can be a good steward of your body relating to when you should see a doctor. Remember to write in first-person.



Turn in ALL 4 of your activities from lessons 5–8 when you're done.

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Name: _____

Date: _____

Steward

Nutrition

Dental Health

Physical Activity

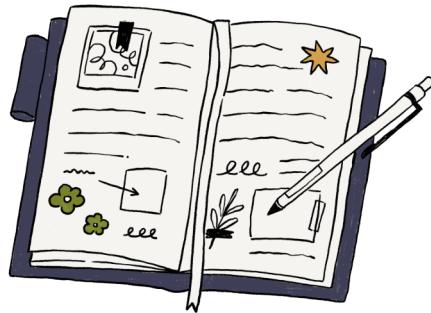
Medical Health

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Body Journal Checklist

Review the following checklist to ensure each of your journal entry worksheets meet the criteria for full points.



Journal Entry 1: Immune System—Protection from Within

- Write the part of the immune system you are pretending to be.
- Write the date.
- Draw a picture of the immune system part.
- Explain your job in first-person.
- Tell a story about your day in first-person.

Journal Entry 2: Introduction to the Five Senses

- Write the date.
- Label each of the five senses.
- Write an example in first-person of how each sense helps you enjoy life OR how it protects you from danger.
- Color the five pictures of the senses.

Journal Entry 3: Sight

- Write “Eyeball or “Eyeball Parts” at the top of the page.
- Write the date.
- Label the eye diagram.
- Describe the job of each eye part in first-person.

Journal Entry 4: Hearing

- Write the part of the ear you are pretending to be.
- Write the date.
- Draw a picture of the ear or part of the ear.
- Explain your job in first-person.
- Tell a story about your day in first-person.

Continued on next page

Unit Project: Life Inside: A Body Journal (cont.)

Guardians of the Body: Senses, Systems, and Stewardship

Journal Entry 5: Smell

- Write “Olfactory Receptors” at the top of the page.
- Write the date.
- Describe what olfactory receptors do for the body in first-person.
- Find and draw 2 different odorants.
- Interpret the first odorant in first-person.
- Interpret the second odorant in first-person.

Journal Entry 6: Taste

- Write “Taste Buds” at the top of the page.
- Write the date.
- Match the type of taste to the correct picture.
- List 2–3 examples of sweet flavors.
- List 2–3 examples of umami flavors.
- List 2–3 examples of salty flavors.
- List 2–3 examples of sour flavors.
- List 2–3 examples of bitter flavors.
- Describe how your sense of taste keeps you safe in first-person.



Journal Entry 7: Touch

- Write the part of the skin you are pretending to be.
- Write the date.
- Draw a picture of the skin or the skin receptor.
- Explain your job in first-person.
- Tell a story about your day in first-person.

Journal Entry 8: Stewardship of Our Bodies

- Write “Body Steward” at the top of the page.
- Write the date.
- Define “Steward” or “Stewardship”.
- Write 3 examples of nutritional stewardship in first-person.
- Write 2 examples of dental stewardship in first-person.
- Write 3 examples of physical stewardship in first-person.
- Write 2 examples of medical stewardship in first-person.

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