Anatomy + Physiology:
In Everyday Life

Activities

These activities are designed to be done at home. There is no grade given for these and they do not have to be turned in. The answer key has been emailed to your grown up.

Stress & Sprinting to an event you are late for!

Imagine if your nervous system was damaged and could not carry messages from your brain to the rest of the body. It could still receive information and the brain can process it, but no information can be sent back to the muscles, tissues, and other parts of the body.

How would that change how your body responds in this situation? Think about it, make some notes and then talk this over with your grown up.

Answer Key

Anatomy & Physiology in Everyday Life – Home Activities

Stress & Sprinting to an event you are late for!

Scenario: The nervous system can receive information and the brain can process it, but signals cannot be sent back to the body.

Key ideas the student should recognize:

- The brain would still *recognize* stress (being late) and understand the situation.
- Without outgoing nerve signals:
    - Muscles would not contract properly or at all → sprinting would be impossible.
    - Heart rate and breathing would not increase appropriately.
    - Reflexes (like quick movement or pulling away) would be impaired or absent.
- Hormones released by the endocrine system might still enter the bloodstream, but their effects would be limited because muscles and organs would not receive coordinated nerve signals.
- The body would feel “stuck” — awareness without action.

Big takeaway:
The nervous system is essential for *communication and coordination*. Even if the brain works, the body cannot respond without nerve signals traveling to muscles and organs.

Pre-assessment Quiz: Anatomy & Physiology in Everyday Life

Pre-Assessment Quiz
Anatomy & Physiology: In Everyday Life (Ages 10–13)

1. What is **anatomy**?
   A. The study of how the body works
   B. The study of the parts of the body
   C. The study of diseases
   D. The study of exercise

2. What is **physiology**?
   A. The study of body parts
   B. The study of how body parts work and do their jobs
   C. The study of bones only
   D. The study of injuries

3. Which list shows the correct order of how the body is organized?
   A. Organs → cells → tissues → systems → you
   B. Tissues → organs → cells → systems → you
   C. Cells → tissues → organs → systems → you
   D. Systems → organs → tissues → cells → you

4. Which of the following is an **organ**?
   A. Blood
   B. Muscle tissue
   C. Heart
   D. Nerve cell

5. How many **major body systems** are there?
   A. 9
   B. 10
   C. 11
   D. 12

6. Which body system sends **fast messages** to help you react quickly?
   A. Digestive
   B. Nervous
   C. Skeletal
   D. Immune

7. Why does digestion slow down when you are stressed or in a hurry?
   A. Food cannot be digested during stress
   B. The stomach stops working
   C. Energy is sent to muscles instead
   D. Digestion becomes damaged

8. What does **homeostasis** mean?
   A. The body being very strong
   B. The body growing taller
   C. The body keeping balance inside
   D. The body resting

9. Which system helps protect you from germs when you get a cut?
   A. Skeletal
   B. Muscular
   C. Immune
   D. Respiratory

10. Which statement best describes how body systems work?
    A. Each system works alone
    B. Only one system works at a time
    C. Body systems work together to keep you healthy
    D. Systems only work during emergencies

Post-assessment Quiz: Anatomy & Physiology in Everyday Life

1. What is physiology?

A. The study of body parts

B. The study of diseases

C. The study of how body parts work and do their jobs

D. The study of exercise

2. Which order shows how the body is organized from smallest to largest?

A. Organs → tissues → cells → systems → you

B. Cells → tissues → organs → systems → you

C. Systems → organs → tissues → cells → you

D. Cells → organs → tissues → systems → you

3. What does homeostasis mean?

A. The body growing taller

B. The body staying very still

C. The body keeping balance inside

D. The body being very strong

4. Which system sends fast messages during stress?

A. Digestive

B. Nervous

C. Immune

D. Skeletal

5. Why does digestion slow down when you are sprinting or stressed?

A. The stomach is damaged

B. Food cannot be digested

C. Energy is sent to muscles instead

D. Digestion stops forever

6. What happens first when you cut your finger?

A. Immune cells arrive

B. Hormones stop swelling

C. Skin is damaged

D. Bones repair the cut

7. Which system helps clean a wound and prevent infection?

A. Muscular

B. Immune

C. Respiratory

D. Endocrine

8. Which system releases insulin after eating?

A. Nervous

B. Digestive

C. Endocrine

D. Immune

9. What happens to the body when you do not get enough sleep?

A. Muscles recover faster

B. Immune system works better

C. Thinking and reaction time slow down

D. Blood sugar stays perfectly balanced

10. Which statement best describes how body systems work?

A. Each system works alone

B. Only one system works at a time

C. Systems work together to keep balance

D. Systems only work during emergencies