

PURPOSE

To acquaint students with their bodies, expanding their overall knowledge of the body's systems and to reiterate the concept that a healthy reproductive system is essential to the wellbeing of the whole body. To introduce hormones.

LEARNING OBJECTIVES

By the end of the lesson students will be able to:

1. Know the 9 body systems and their function.
2. Understand that every system in the body must function properly for the whole body to be healthy.
3. Understand the purpose and importance of hormones.

MATERIALS & RESOURCES

- **Lesson 1 teenFEMM** powerpoint
- **Icebreaker: Positive Post-it Notes** (post-it notes required)
- **Worksheet: Body Systems**
- **Lesson 1 teenFEMM Word Search**

VOCABULARY

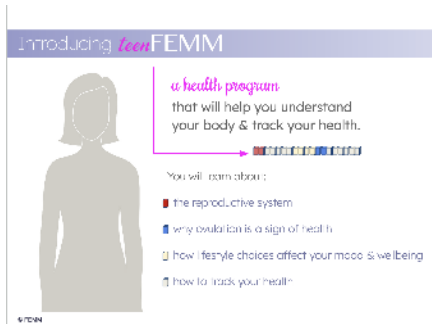
- **Body system:** Groups of organs working together for certain purposes.
- **Hormones:** Chemical signals that travel in the bloodstream, directing the activity of every system in the body.
- **Puberty:** Time when physical and sexual characteristics mature due to hormonal changes (typically between 9-14 years old for a girl, and 10-17 years for a boy).
- **Maturity:** The growth and development of the body, brain, and emotions.

PREPARATION

- ☐ Bring enough post-it notes for the **Positive Post-It Notes** activity, two to each student.
- ☐ Print the **Body Systems Worksheet** for each student.
- ☐ Print the **teenFEMM Word Search** for each student.

Step 1 (5 minutes): Introduce teenFEMM + Positive Post-it Notes

teenFEMM is a health program that will help you understand your body and your health as you grow to full maturity.



In this class, over the course of eight lessons, you will learn about the reproductive system, the physical and emotional changes of puberty, how daily lifestyle choices affect your mood and wellbeing, and how to track your health.

Give each student two-post-it notes. Ask them to get out a pen. To start, let's do an icebreaker called *Positive Post-it Notes*, to focus on the good things about each person during this unique time of growth and change!

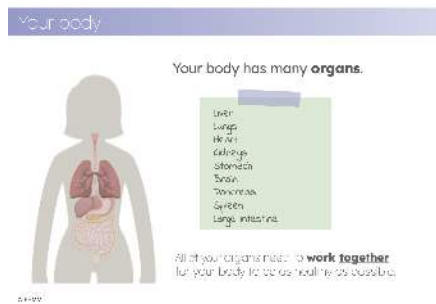
Activity: Positive Post-it Notes



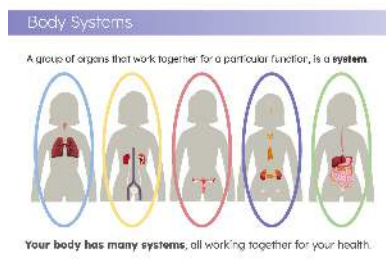
On each sticky note, write one nice thing about the person sitting to either side of you. We will put all of these up on the wall in the classroom to remember our strengths and focus on seeing ourselves and one another in a positive light.

Step 2 (20 minutes): Body Systems + Worksheet

Your body is made up of many organs. Each organ has a particular and important job to do, and all of your organs need to work together for your body to be healthy.



When certain organs of the body work together for a similar purpose, this is called a **body system**.

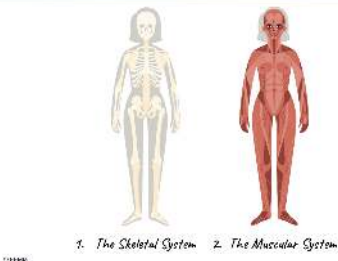


The human body is made up of many **body systems**; every system works together to ensure that you stay healthy. If one organ or body system is unhealthy, other body systems work overtime; thus, putting a strain on overall health. **Every part of the body impacts the health of the whole body.**

Let's look at the names and functions of **nine body systems**:

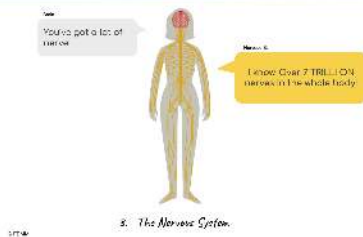
The **skeletal system**: bones support our body so that we can stand and sit, and the rib cage protects our lungs and heart.

The just going to muscle my way in...



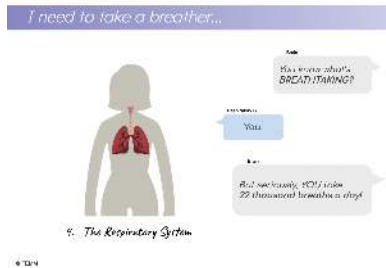
1. The **muscular system**: muscles support movement of our body.
Note: The skeletal and the muscular systems together form the **musculoskeletal system**. So, you can refer to these two systems separately or together.
2. The **nervous system**.

You've got a lot of nerve(s)!



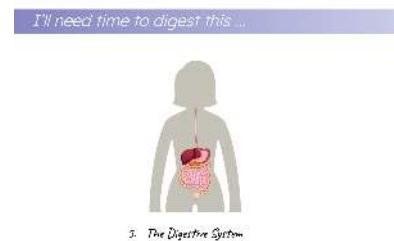
Don't be nervous about the function of this system: it controls everything you do! When you are startled and you jump, that's your nervous system working for you. It is made up of your **brain**, **spinal cord**, and **all the nerves** in your body. *Guess how many nerves you have in your whole body? Over 7 trillion nerves!* The brain is the control center and the spinal cord is the major highway to and from the brain.

3. The **respiratory system** includes the nose, mouth, throat, voice box, windpipe, and lungs.



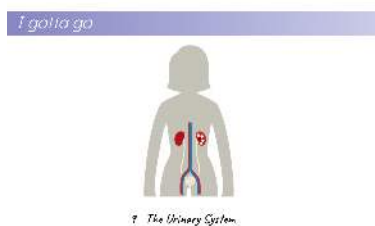
Through our lungs, we breathe the air and oxygen we need for life. Here's another crazy fact about our amazing bodies. *Guess how many breaths you take every day? 22,000 breaths a day!*

4. The **digestive system**.

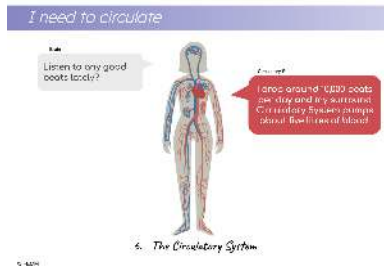


The digestive system breaks down the food you eat to make fuel for your body, which is absorbed as nutrients, then eliminates the waste it cannot use.

5. The **urinary system** is responsible for filtering, recycling, and getting rid of fluid.

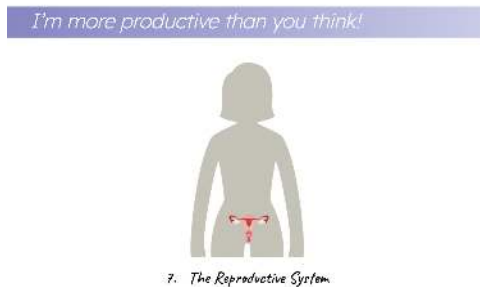


6. The circulatory system.



This system pumps blood from the heart through the blood vessels, carrying oxygen from the lungs and fuel from food, to all parts of the body.

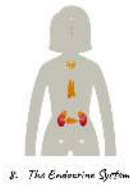
7. The **reproductive system** is responsible for bringing about new life. In boys this system includes the testes, scrotum, penis, and tubes through which sperm travel. In girls, the reproductive system includes the ovaries, fallopian tubes, uterus, cervix and vagina. It is important to note that each system develops only one of the cells needed for creating a new human life; both one cell from the male system and one cell from the female system must join together for the creation of a new human life.



Additionally, the reproductive system is vital to your overall health. As you go through puberty, the main female hormones are produced in your ovaries and travel through your bloodstream impacting mood, growth, skin, bone density and more!

8. The **endocrine system** works intricately with the reproductive system. The **endocrine system releases hormones.**

I've just gotta get a message to you



It. The Endocrine System

The system is composed of a group of ductless glands located throughout the body that produce hormones in response to the body's needs. Once released, hormones may act on nearby structures, or they may travel in the blood to distant target organs. Hormones act like text messages in the body. So, your brain might send a text to your thyroid gland to let it know that it's time to do its thing. *"Hey, thyroid, can you get moving?"* Hormones play a major role in **puberty**.

Each system in the body must function properly for the whole body to be healthy. The health of one system impacts all of the other systems!

Body Systems Worksheet

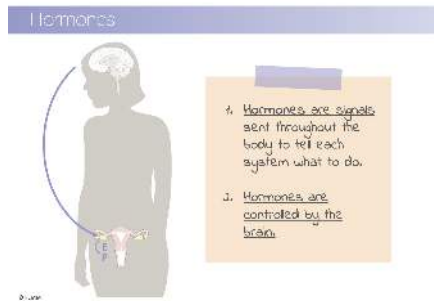


*Hand out the worksheet: **Body Systems** for students to complete. Review the answers with the class using the **Teacher's Answer Key** provided in the materials.*

Step 3 (10 minutes): *Hormones + Puberty*

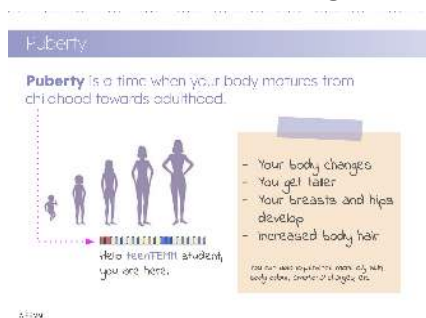
To function properly, each body system needs **signals** from the brain. These signals tell

each body system **what** to do and **when**, etc.



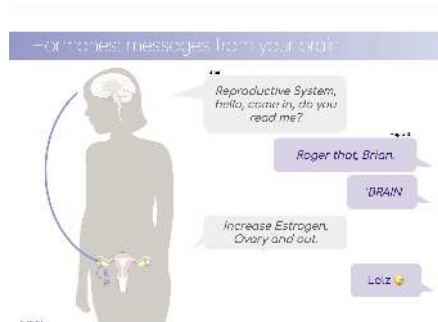
Do you know what these *signals* are called? Hormones! **Hormones are chemical signals** that direct the activity of **every system** in the body. Hormones are controlled by the brain.

In puberty, **hormones** sent from the brain tell your body to increase one of the female hormones, called estrogen.



This kickstarts the many hormonal changes that take place from around 9 to 14 years of age for a girl. For boys, the main hormone is testosterone and their puberty takes place between ages 10 and 17. Puberty is a time of rapid growth, when your brain and your body mature, develop and change.

During this time, the communication between your brain and your reproductive system is developing. You can think of it like this: puberty increases the messages sent between the brain and the reproductive system. The brain tells the reproductive system to develop and mature, triggering changes that you see and feel throughout your body.



Some changes in puberty include the notice of body odor, hair growth, acne and mood/emotional changes. All of this is part of a normal, healthy, maturation process. Hormones and the healthy development of your brain and reproductive system have a huge impact on your overall health!

Hand out the **Word Search** for students to complete in class, time permitting, or to be completed as **HOMEWORK**.

CONCLUSION

Every body system is important to our overall health. Through teenFEMM, as we learn more about your growth and development during adolescence, we will focus on how a healthy reproductive system is an especially important sign of your overall health. In the next lesson, we will learn about the parts of the reproductive system.

REFERENCES

Betts, J. G., Young, K. A., Wise, J. A., Johnson, E., Poe, B., Kruse, D. H., Korol, O., Johnson, J. E., Womble, M., & DeSaix, P. (2022). *Anatomy and physiology*. OpenStax.
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