

PURPOSE

To help students understand that a healthy reproductive system is essential to the wellbeing of the whole body.

LEARNING OBJECTIVES

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

1. Understand that every system in the body must function properly for the whole body to be healthy.
2. Understand that healthy hormones are needed for a healthy body.
3. Use teenFEMM, a health program, to help identify signs of puberty.

MATERIALS & RESOURCES

- **Lesson 1 teenFEMM** powerpoint
- **Worksheet: Body Systems** (preparation needed)
- **Worksheet: Hormones & You** (preparation needed) + Teachers' Answer Key

VOCABULARY

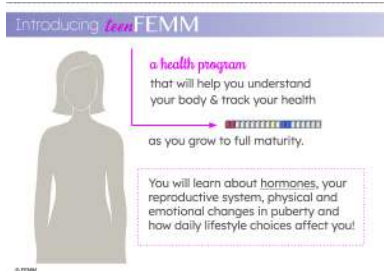
- **Hormones:** Chemical signals that travel in the bloodstream, directing the activity of every system in the body.
- **Puberty:** The time when physical and sexual characteristics mature due to hormonal changes (typically between 9-14 years old for a girl, and 10-17 years for a boy).
- **Maturity:**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

PREPARATION

- ☐ *Print the **Body Systems Worksheet** for each student.*
- ☐ *Print the **Hormones & You Worksheet** for each student.*

PROCEDURE

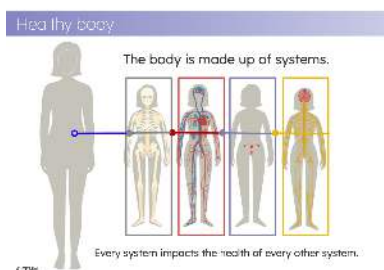
Step 1 (2 minutes): Introduction to teenFEMM



teenFEMM is a health program that will help you understand your body and track your health as you grow to full maturity. You will learn about the reproductive system, the physical and emotional changes of puberty, and how daily lifestyle choices affect health.

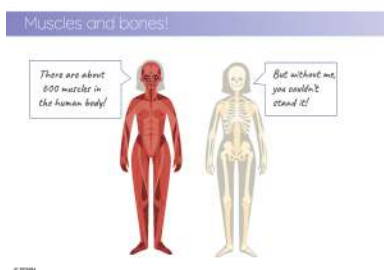
You will have 8 teenFEMM classes per year. teenFEMM classes will continue every year through grade 12. By then you will be a health expert!

Step 2 (8 minutes): Systems of the Body



Your whole body is made up of many parts. Each part has its own important job to do. When certain parts work together for a similar purpose, they are called a **system**.

Your body has several **systems**, all working together to make sure you function well. *Can anyone name a system in the body?* What about the **skeletal** and **muscular systems**?

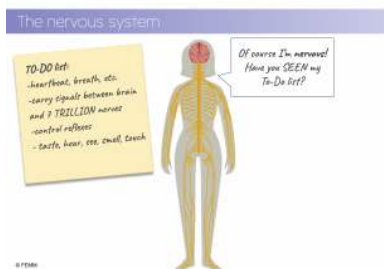


Without these two systems, we literally wouldn't be able to stand or sit down!

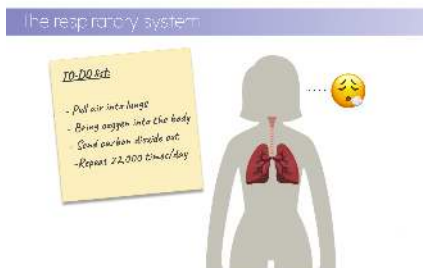
- Can you guess the jobs of the **skeletal system** and the **muscular system**, which work together to form the **musculoskeletal system**?
Bones support (so we can stand, sit) and protect (ribs protect lungs and heart).
Muscles move the body.

Let's look at a few other systems in the body and what they do to keep our bodies healthy and functioning well!

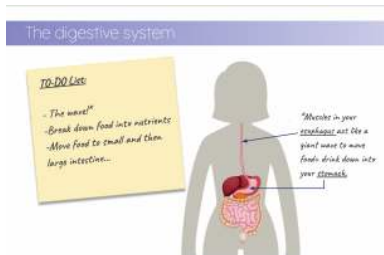
The **nervous system**: sends quick impulses between the brain and body. (The stove is hot; your muscles yank your hand from the element.)



The **respiratory system**, through the lungs, breathes air and oxygen needed for life.



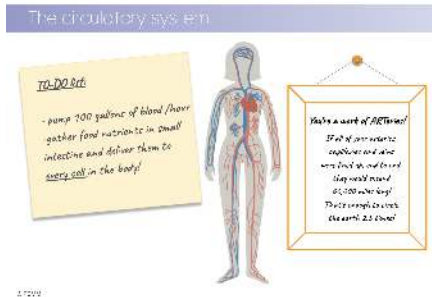
The **digestive system** breaks down the food you eat to make fuel for your body then eliminates the waste it cannot use.



Did you know: emotions (including stress) affect how your body digests food? Sitting

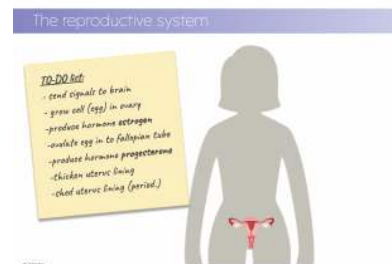
down to eat (not eating on the go) tells your brain and gut: “we’ve got time” and this relaxes the body, resulting in better digestion.

The circulatory system



The circulatory system pumps blood from the heart through the blood vessels, carrying oxygen from the lungs and nutrients from the food in the small intestine, to every cell of the body. You can think of the word *circulate*, which means to move around, as that’s what our blood is doing, to help you remember the function of this system.

The **reproductive system** is responsible for bringing about a new life. In girls, it includes the ovaries, fallopian tubes, the uterus, and vagina.



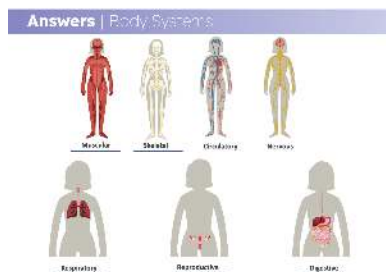
In boys it includes the testes, scrotum, penis, and all the tubes through which sperm travels. The reproductive system also produces hormones, which are controlled by your brain. Hormones do amazing things throughout the body and are necessary for your health.

Step 3 (5 minutes): Body Systems Worksheet

All of your body **systems** are working together, full-time, to keep you healthy. **Each system in the body must function properly** for the whole body to be healthy. For example, if the lungs are congested, or the stomach is upset, the body will not feel well.

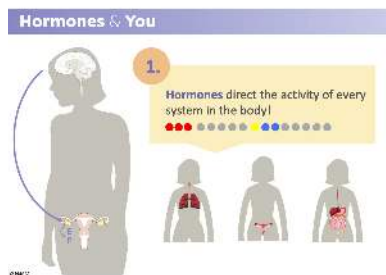


Hand out the **Body Systems Worksheet** to each student. Give students a couple of minutes to fill in their worksheet. When finished, review the answers as a class, using the following slide.



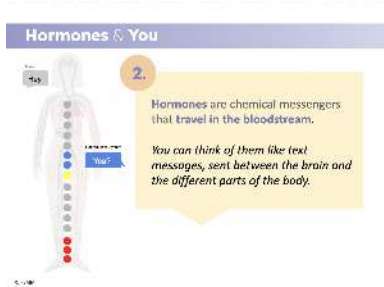
Step 4 (10 minutes): Hormones + Puberty

Every system of the body needs **clear signals** from the brain about how to do its job. Each body system needs to know **when** to do **what** and **how much**. *Do you know* what these signals are actually called...? **Hormones!**



Hormones direct the activity of every system of the body!

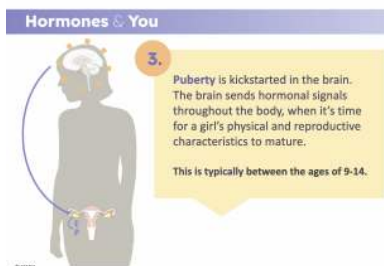
How does it work?



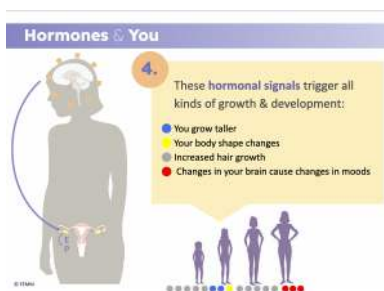
Hormones are chemical signals or messengers that travel in the bloodstream, directing the activity of every system in the body. You can picture them like text messages, sent from the brain to the different parts of the body.

Hormones are the reason that your arms and legs are the same length, your body turns food into fuel, and your body changes dramatically during puberty.

Puberty is when your body begins the process of maturing towards adulthood and is a time of rapid growth and development for your body and your brain. This typically begins to happen in girls between the ages of 9-14.



Initially, you might notice that you are growing taller, or that your body shape is changing: your breasts develop and your hips get wider.

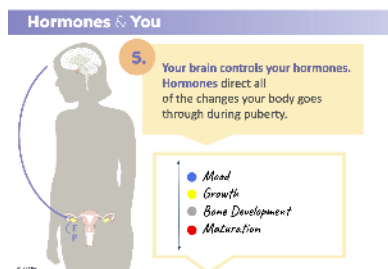


Then, you may notice increased hair growth in the armpits and pubic area and changes

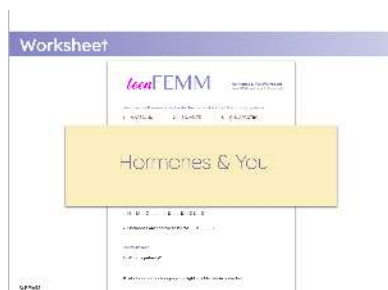
in body odor. Hormones are responsible for all of the growth and development during puberty, including mood and emotional changes.

All of these changes during puberty are signs of a healthy reproductive system.

And a **healthy reproductive system is an important part of a healthy body!**



Step 5 (10 minutes): Hormones & You Worksheet



Hand out the **Hormones & You Worksheet**. Give students a couple of minutes to complete the worksheet, then review answers together using the *Teacher's Answer Key* provided in the materials.

CONCLUSION



All body systems are important for your health. Through teenFEMM, as we learn more about your growth and development during this important time in your life, we will focus on how a healthy reproductive system is an important indicator of your body's overall health.

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. <https://openstax.org/details/books/anatomy-and-physiology>
- Strauss, J. & Barbieri, R. (Eds.) (2009). *Yen and Jaffe's Reproductive Endocrinology: Physiology, Pathophysiology, and Clinical Management*. Elsevier Health Sciences.