



KidsHealth.org/classroom

Teacher's Guide

This guide includes:

- Standards
- Related Links
- Discussion Questions
- Activities for Students
- Reproducible Materials

Standards

This guide correlates with the following National Health Education Standards:

Students will:

- Comprehend concepts related to health promotion and disease prevention to enhance health.
- Analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
- Demonstrate the ability to access valid information and products and services to enhance health.
- Demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
- Demonstrate the ability to use decision-making skills to enhance health.
- Demonstrate the ability to use goal-setting skills to enhance health.
- Demonstrate the ability to practice health-enhancing behaviors and avoid or reduce health risks.
- Demonstrate the ability to advocate for personal, family, and community health.

Your state's school health policies:
nasbe.org/HealthySchools/States/State_Policy.asp

How does your body know when to grow? How does it know when it's time to change from a kid into an adult? How does it keep your cells fueled with energy? The endocrine system handles all these things and much more! The following discussion questions and activities will introduce your students to the amazing glands and hormones of the endocrine system.

Related KidsHealth Links

Articles for Kids:

Your Endocrine System

KidsHealth.org/kid/cancer_center/HTBW/endocrine.html

Movie: The Endocrine System

KidsHealth.org/kid/htbw/ESmovie.html

What Are Glands?

KidsHealth/kid/talk/qa/glands.html

How the Body Works activity: The Endocrine System

KidsHealth.org/kid/htbw/_bfs_ESactivity.html

How the Body Works activity: Endocrine System Word Find

KidsHealth.org/kid/htbw/_bfs_ESwordsearch.html

Discussion Questions

Note: The following questions are written in language appropriate for sharing with your students.

1. What are some jobs of the endocrine system?
2. One of the jobs of the endocrine system is to give directions to your body about when to grow and develop. Can you think of some times during a person's life when the body changes?
3. Glands and hormones make a great team. Describe how they work in the body.
4. The endocrine system is also involved in preparing your body for emergencies. Know that feeling you get when you're scared or stressed? That's called the "fight or flight" response and your hormones (specifically adrenaline) are what make it happen. Can you think of a time when adrenaline caused you to spring into action? How did your body feel?
5. What kinds of problems can occur with the endocrine system?



Activities for Students

Note: The following activities are written in language appropriate for sharing with your students.

Name That Gland

Objectives:

Students will:

- Learn the names and functions of the various glands of the endocrine system

Materials:

- Computer with Internet access
- Name That Gland handout
- Eight “Hello! My Name Is _____” stickers (available at office supply stores)
- Printout of How the Body Works activity: The Endocrine System (KidsHealth.org/kid/htbw/_bfs_ESactivity.html); enlarge the images and cut them out, leaving them unlabeled)

Class Time:

- 40 minutes

Activity:

After reading the KidsHealth articles about the endocrine system and watching the accompanying movie, we’ll complete the Name That Gland handout independently using the words from the word bank.

[Note to instructor: As your students are working, place the gland cutouts you made from the printout on a table or desk, along with eight “Hello! My Name Is _____” stickers. After students complete their handouts, select eight volunteers to stand in front of the class. Assign each student to represent a gland, making sure that students don’t reveal their identities to the rest of the class. One at a time, ask them to read their description from the Name That Gland handout and call on classmates to guess who they are. The first student to guess the gland’s name picks up a “Hello! My Name Is _____” sticker, fills it in, and also selects the correct picture of the gland. The gland student wears the sticker and holds the cutout gland image. For brain glands you might want to show the whole brain with an arrow pointing to the correct gland; for the reproductive glands, you might want to show both the ovaries and testes at one time, as on the picture.]

Extension:

Complete the How the Body Works activity: Endocrine System Word Find (KidsHealth.org/kid/htbw/_bfs_ESwordsearch.html).



Gland Gratitude

Objectives:

Students will:

- Research and demonstrate why the endocrine system is important for good health

Materials:

- Computer with Internet access
- Glandular Gratitude handout

Class Time:

- 30 minutes

Activity:

Being the endocrine system is a thankless job. When it works well, nobody even notices all the amazing things it does – from helping our bones grow, to coordinating the changes of puberty, to regulating our blood sugar, energy, and other cell functions. Frankly, the endocrine system is tired of feeling overworked and underappreciated. It could use a little love.

Today we're going to show a little glandular gratitude by writing a thank-you note to our hardworking glands. Be sure to mention at least three glands specifically (as well as the hormones they produce) and the role they play in keeping you healthy.

Extension:

Imagine that your endocrine system felt so overworked and underappreciated that it decided to go on strike. Do you know what a strike is? It's when workers refuse to do their jobs. Describe at least three health problems that might occur if your glands and hormones went on strike.

Reproducible Materials

Handout: Name That Gland

KidsHealth.org/classroom/3to5/body/systems/endocrine_handout1.pdf

Handout: Name That Gland Answer Key

KidsHealth.org/classroom/3to5/body/systems/endocrine_handout2.pdf

Handout: Glandular Gratitude

KidsHealth.org/classroom/3to5/body/systems/endocrine_handout3.pdf

Quiz: Endocrine System

KidsHealth.org/classroom/3to5/body/systems/endocrine_quiz.pdf

Answer Key: Endocrine System

KidsHealth.org/classroom/3to5/body/systems/endocrine_quiz_answers.pdf



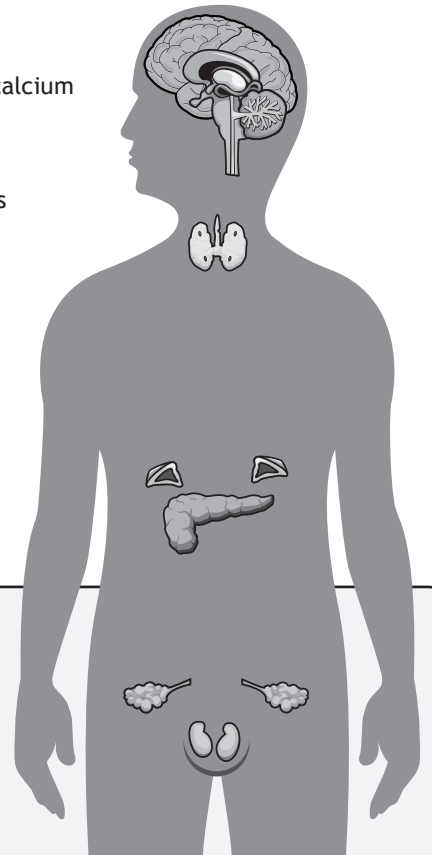
Name: _____

Date: _____

Name That Gland

Instructions: Use the word bank to answer each question.

- I live deep within the brain. I'm only about the size of a pea, but I'm very powerful. I make the hormones that help you grow, and I control the activity of other glands too. Who am I? _____
- I'm shaped like a bowtie or a butterfly. I'm found in your neck. I make the hormones that help you stay alert and full of energy. Who am I? _____
- I'm the largest gland in the body. I produce the hormone called insulin that helps glucose, the sugar in your blood, enter the cells of your body. I work closely with the digestive system. Who am I? _____
- We come in a pair, one on top of each kidney. We produce hormones that help you to act fast when you're in trouble or under stress. We're triangular in shape. Who are we? _____
- We are a set of four tiny glands that work with the thyroid to control the amount of calcium in the blood. Who are we? _____
- In girls, we're the ovaries. In boys, we're the testes. We're involved in all the changes of puberty (when kids begin to become adults). Who are we? _____



Word Bank

Adrenal glands

Pituitary gland

Pancreas

Reproductive glands

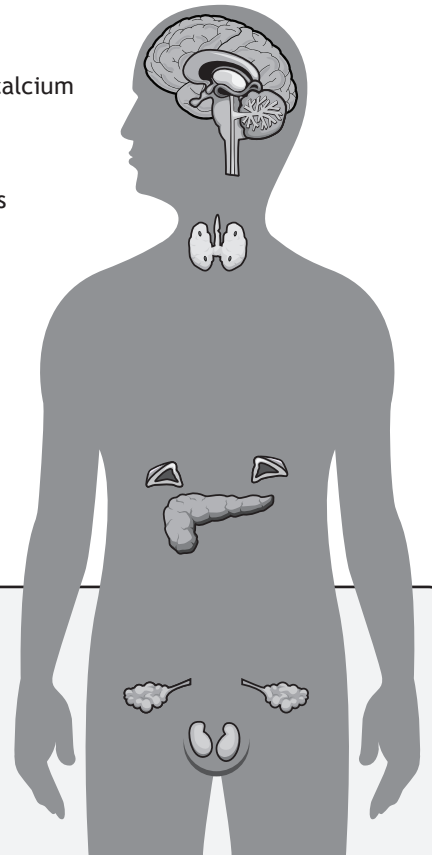
Parathyroids

Thyroid



Name That Gland Answer Key

1. I live deep within the brain. I'm only about the size of a pea, but I'm very powerful. I make the hormones that help you grow, and I control the activity of other glands too. Who am I? Pituitary gland
2. I'm shaped like a bowtie or a butterfly. I'm found in your neck. I make the hormones that help you stay alert and full of energy. Who am I? Thyroid
3. I'm the largest gland in the body. I produce the hormone called insulin that helps glucose, the sugar in your blood, enter the cells of your body. I work closely with the digestive system. Who am I? Pancreas
4. We come in a pair, one on top of each kidney. We produce hormones that help you to act fast when you're in trouble or under stress. We're triangular in shape. Who are we? Adrenal glands
5. We are a set of four tiny glands that work with the thyroid to control the amount of calcium in the blood. Who are we? Parathyroids
6. In girls, we're the ovaries. In boys, we're the testes. We're involved in all the changes of puberty (when kids begin to become adults). Who are we? Reproductive glands



Word Bank

Adrenal glands

Pancreas

Parathyroids

Pituitary gland

Reproductive glands

Thyroid



Name: _____

Date: _____

Glandular Gratitude

Instructions: Write a thank-you note to your endocrine system for all its hard work. Be sure to mention at least three glands specifically and the role they play in keeping you healthy.

Dear Endocrine System,

I just wanted to thank you for all you do and let you know that I think YOU ROCK!
Here's why:

Your appreciative friend,



Name: _____

Date: _____

Quiz

Instructions: Answer each question using a word from the word bank. Then unscramble the highlighted letters to reveal the hidden word!

- The endocrine system has eight **h** _____.
- e** _____ **h** _____ are chemical messengers produced by the glands.
- The hormone **ad** _____ **r** _____ is responsible for the fight or flight response.
- i** _____ is the hormone that helps control your blood sugar levels.
- The **thy** _____ gland is shaped like a butterfly.
- FREEBIE! The **p** **i** **n** **e** **a** **l** body helps make melatonin.
- The four glands that help control the calcium levels in your blood are called the **pa** _____ **th** _____ glands.
- When the pancreas doesn't produce insulin, the result is a disease called **d** _____.
- When it's time for boys and girls to begin **pu** _____, the pituitary gland gets the ball rolling.
- A doctor who specializes in treating people with hormone problems is called an **en** _____ **d** _____ **ol** _____ **og** _____.

Word Bank

adrenaline

glands

parathyroid

puberty

diabetes

hormones

pineal

thyroid

endocrinologist

insulin

Highlighted letters: **h** **e** **h** **e** **r** **e** **s** **e** **s** **s** **e** **s** **s**

Unscrambled word: _____



Quiz Answer Key

1. The endocrine system has eight g l a n d s.
2. H o r m o n e s are chemical messengers produced by the glands.
3. The hormone a d r e n a l i n e is responsible for the fight or flight response.
4. I n s u l i n is the hormone that helps control your blood sugar levels.
5. The t h y r o i d gland is shaped like a butterfly.
6. FREEBIE! The p i n e a l body helps make melatonin.
7. The four glands that help control the calcium levels in your blood are called the p a r a t h y r o i d glands.
8. When the pancreas doesn't produce insulin, the result is a disease called d i a b e t e s.
9. When it's time for boys and girls to begin p u b e r t y, the pituitary gland gets the ball rolling.
10. A doctor who specializes in treating people with hormone problems is called an e n d o c r i n o l o g i s t.

Word Bank

adrenaline

glands

parathyroid

puberty

diabetes

hormones

pineal

thyroid

endocrinologist

insulin

Highlighted letters: a h m a s y p h o t u l

Unscrambled word: h y p o t h a l a m u s