



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.

National Health Education Standards:
<http://www.cdc.gov/healthyschools/sher/standards/index.htm>

Ouch! You just touched a hot pan, but how did you know your finger was hot? The nerves in your finger sent a message through your nervous system to your brain, that's how. And your brain sent an automatic message to your finger to get it away from the pan - quick! Your nervous system is the information highway that controls everything you do: walking, talking, thinking, feeling, breathing, and everything else. These activities will help your students understand how the nervous system works.

Related KidsHealth Links

Articles for Kids:

Your Brain & Nervous System

KidsHealth.org/en/kids/brain.html

Movie: The Nervous System

KidsHealth.org/en/kids/nsmovie.html

Memory Matters

KidsHealth.org/en/kids/memory.html

Why Do I Have Pain?

KidsHealth.org/en/kids/pain.html

What Are Reflexes?

KidsHealth.org/en/kids/reflexes.html

Why Does My Foot Fall Asleep?

KidsHealth.org/en/kids/foot-asleep.html

Experiments

KidsHealth.org/en/kids/closet/

Discussion Questions

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

1. What part of your body controls everything you do?
2. What kinds of things does your brain tell your body to do?
Does your brain tell your body to do some things automatically, so you might not even know about them? How does your body get the messages?
3. Say you just touched an ice cube. How did your brain know it was cold?



Activities for Students

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

My Nervous System

Objectives:

Students will:

- Identify the three main parts of the nervous system
- Describe the general functions of the nervous system

Materials:

- Computer with Internet access, “Movie: The Nervous System” at KidsHealth.org
- “My Nervous System” handout
- Crayons

Class Time:

- 30 minutes

Activity:

Your nervous system controls everything you do, including breathing, walking, thinking, and feeling. The nervous system is made up of your brain, spinal cord, and billions of nerves throughout your body. These nerves are like tiny wires that run through your whole body to send messages to and from the brain. After we watch the KidsHealth.org movie about the nervous system, we'll work on the “My Nervous System” handout to color the three main parts of the nervous system and show what they do. Don't forget to add a face and hair to make it look just like you!

Extension:

At home, quiz an older brother or sister or a parent on the nervous system. See if they can name the three main parts of the nervous system, as well as three things the nervous system helps us do.



Experiments

Objectives:

Students will:

- Demonstrate how the nervous system transmits sensory messages to and from the brain

Materials:

- Computer with Internet access
- Experiments, with full instructions included, are available at KidsHealth.org/en/kids/closet/
- Senses Experiment: Are Two Eyes Better Than One?
- Senses Experiment: Brain Box
- Senses Experiment: Catch the Penny!
- Senses Experiment: Do You Hear What I Hear?
- Senses Experiment: Head, Shoulders, Knees, and Toes
- Senses Experiment: Mystery Smells
- Senses Experiment: Surprise
- Senses Experiment: Tasting - With Your Nose?
- Senses Experiment: The Red, White, and Blue
- Senses Experiment: Which One's Heavier?

Class Time:

- 2 hours in one session or a few minutes a day over a 2-week period

Activity:

Your brain is the boss of your nervous system, which carries messages back and forth between your brain and the parts of body. The spinal cord is the major highway to and from the brain to carry messages. Your body has special nerves that send signals to your brain from your eyes, ears, tongue, nose, and skin. These are called sensory nerves for your five senses (sight, hearing, taste, smell, touch). Let's put our nervous system to the test. [Note to instructor: You can have students complete one experiment a day for 2 weeks. Full instructions are included with each experiment description. You can continue instruction on the senses with The Five Senses Teacher's Guide: KidsHealth.org/classroom/prekto2/body/functions/senses.pdf]

Reproducible Materials

Handout: My Nervous System

KidsHealth.org/classroom/prekto2/body/systems/nervous_system_handout1.pdf

Quiz: Nervous System

KidsHealth.org/classroom/prekto2/body/systems/nervous_system_quiz.pdf

Answer Key: Nervous System

KidsHealth.org/classroom/prekto2/body/systems/nervous_system_quiz_answers.pdf



Name: _____

Date: _____

My Nervous System

Directions: Use the key below to color the three main parts of your nervous system. Then draw a line from the job box to show what the different parts do. You can finish your drawing with a face, hair, and shoes to make it your own.

Key

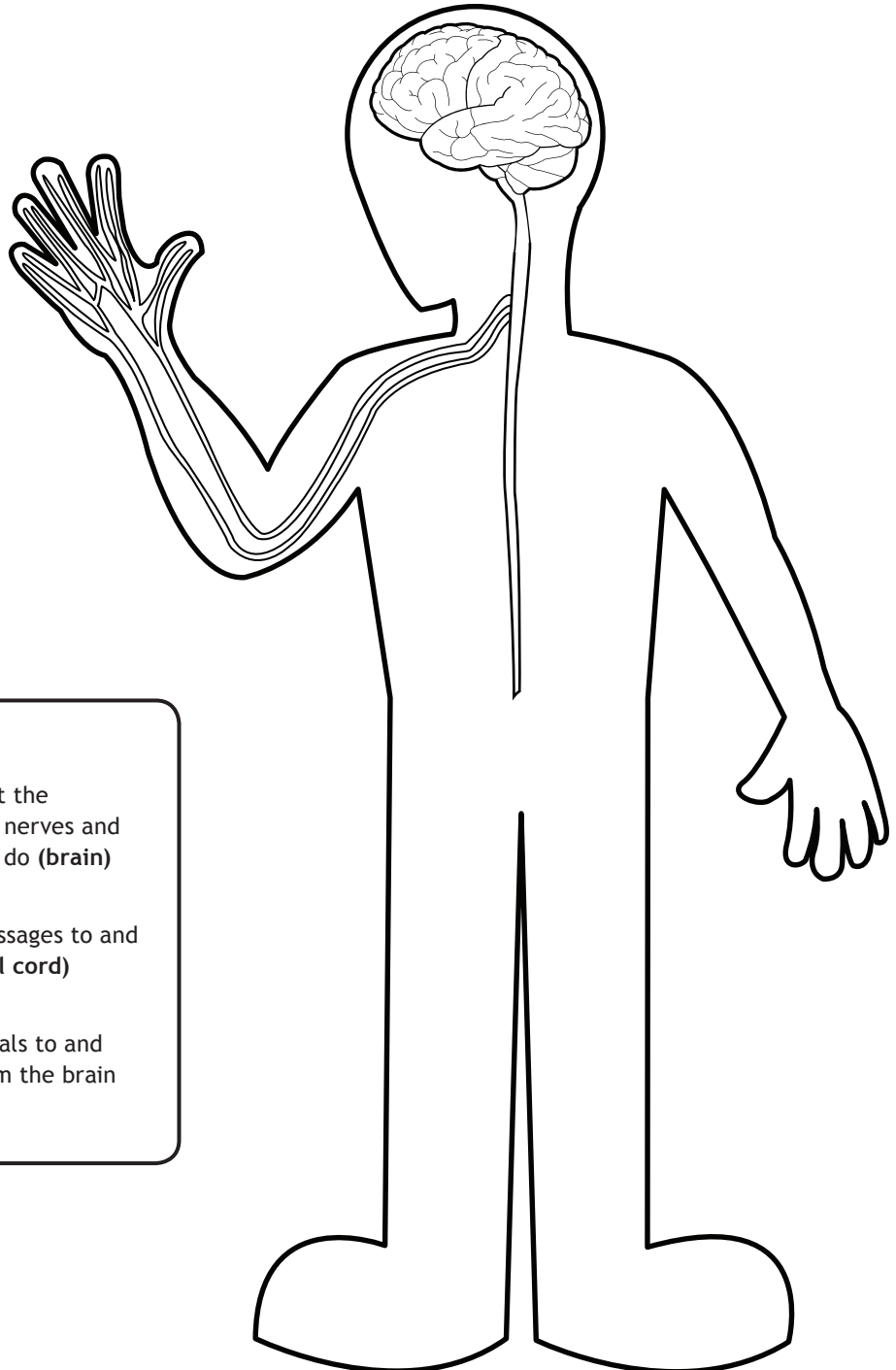
Brain = red

Spinal cord = blue

Nerves = green

Job box

- My job is to figure out the messages sent by the nerves and tell the body what to do (**brain**)
- My job is to carry messages to and from the brain (**spinal cord**)
- My job is to send signals to and receive messages from the brain (**nerves**)





Name: _____

Date: _____

Quiz

Instructions: Answer each question.

1. What part of your body controls everything you do?
 - a. heart
 - b. legs
 - c. brain
 - d. lungs

2. Name the five senses that bring information to your brain. Next to each sense, write the name of the part of your body associated with the sense.

3. What kinds of things are your brain and nervous system in charge of?
 - a. walking and running
 - b. thinking and talking
 - c. feeling and sleeping
 - d. breathing and growing
 - e. all of the above

4. A person's brain weighs about _____ pounds.

5. True or false: Your skull helps protect your brain.



Quiz Answer Key

1. What part of your body controls everything you do?
 - a. heart
 - b. legs
 - c. brain
 - d. lungs
2. Name the five senses that bring information to your brain. Next to each sense, write the name of the part of your body associated with the sense.

Sight, eyes

Hearing, ears

Taste, tongue

Smell, nose

Touch, skin
3. What kinds of things are your brain and nervous system in charge of?
 - a. walking and running
 - b. thinking and talking
 - c. feeling and sleeping
 - d. breathing and growing
 - e. all of the above
4. A person's brain weighs about 3 pounds.
5. True or false: Your skull helps protect your brain.