



BUILDING A MODEL OF THE NERVOUS SYSTEM

Name: _____

Date: _____

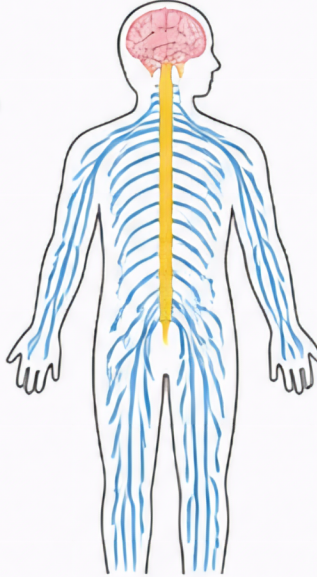
Grade: _____

GOAL: To build a model of the nervous system and identify how its parts work together to receive information, process it, and send responses.

BACKGROUND

The nervous system is the body's communication network. It receives information from the senses, processes it in the brain and spinal cord, and sends signals to the body to produce a response. It has two main parts:

- **Central Nervous System (CNS):** brain and spinal cord
- **Peripheral Nervous System (PNS):** nerves that carry messages to and from the rest of the body



MATERIALS

- ☐ 1 styrofoam ball (brain)
- ☐ 1 piece of pipe cleaner or chenille stem (spinal cord)
- ☐ Several pipe cleaners or strings (nerves)
- ☐ Small sticky notes or labels
- ☐ Tape
- ☐ Scissors (if using pipe cleaners)
- ☐ Optional: markers or model base (cardboard)

PROCEDURE

- 1 **Brain:** Label the styrofoam ball "Brain".
- 2 **Spinal Cord:** Attach one pipe cleaner to the bottom of the brain to represent the spinal cord.
- 3 **Nerves:** Attach several pipe cleaners to the spinal cord and sides of the brain. These are the nerves. Spread them out to different parts of your model to show they reach the whole body.
- 4 **Label:** Use sticky notes to label the parts: Brain, Spinal Cord, and Nerves.
- 5 **Optional:** Place your model on a cardboard base and draw a simple outline of a body to show where the parts are located.



THINK ABOUT IT

- What does the brain do in your model?
- What does the spinal cord do?
- What do the nerves do?
- How do these parts work together?

OBSERVATIONS

Describe your model. What do each of the parts represent?

Brain: _____

Spinal Cord: _____

Nerves: _____

ANALYSIS

How does your model show how the nervous system works as a communication network?



EXTENSION CHALLENGE

Add examples of sensory input (like touching something hot) and a response (like moving your hand away). Use arrows or notes to show the path the message takes.