SCIENCE

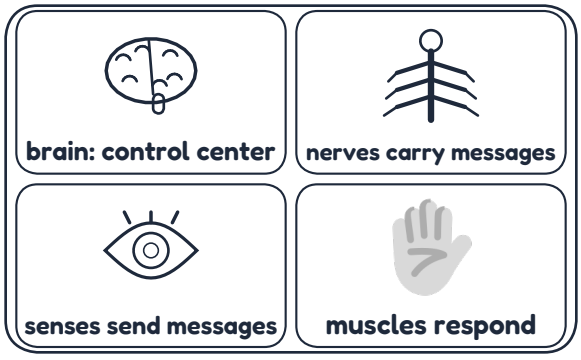
Brain and nerves

Name _____ Date _____

I can explain how the brain and nerves send messages.

1 How it works

Your brain is the control center of your body. Your senses send messages along nerves to your brain. The brain works out what the messages mean and sends messages back along nerves to tell your muscles what to do. Some messages are very fast: you pull your hand away from something hot before you even think.



2 Which sense sends the message? Circle one.



thunder

see hear touch



a sharp cactus

see hear touch



something hot

see hear touch



a ringing phone

see hear touch



a barking dog

see hear touch



a ball coming at you

see hear touch



ice in your hand

see hear touch



a red light

see hear touch

How did I do? ☆ ☆ ☆

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Messages to the brain

Name _____ Date _____

I can tell how the brain answers a message.

1 What does the brain tell the body? Draw a line.

 **something very hot**	catch it or duck
 **a ball flying at you**	pull your hand away fast
 **a red traffic light**	stop walking
 **an alarm clock ringing**	wake up and get out of bed

2 Fill in the blanks

Use the words in the box.

skull **center** **fast** **messages**

1. The brain is the body's control _____.
2. Nerves carry _____ to and from the brain.
3. The _____ protects the brain.
4. We pull away from heat very _____.

How did I do? ☆ ☆ ☆

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Think like a scientist

Name _____ Date _____

I can explain how messages travel through my body.

1 Think about it

1. Why do you pull *away* from heat so fast? _____
2. What protects the brain? _____
3. How does your brain know a dog is barking? _____
4. How can you keep your brain healthy? _____

2 True or false? Circle it.

1. Our senses send messages to the brain.	**true**	**false**
2. The brain controls the body.	**true**	**false**
3. Nerves carry messages.	**true**	**false**
4. Sleep is bad for the brain.	**true**	**false**
5. The brain is in your foot.	**true**	**false**

3 Draw the path of a message: eye, brain, then the hand that catches a ball.

How did I do? ☆ ☆ ☆

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Try it: the ruler catch

Name _____ Date _____

I can measure how fast my brain and muscles react.

1 You need

-  a ruler
-  a partner
-  a table
-  a pencil

2 What to do

1. Rest your arm on the table with your hand over the edge.
2. Your partner holds the ruler by the top, with the 0 end between your thumb and finger.
3. Your partner drops it without warning. Catch it as fast as you can.
4. Read the number where you caught it. Try 3 times.

3 I predict

Will you get faster with practice?

_____

_____

4 What I see

Try	Where I caught it	Faster or slower?
1		
2		
3		

How did I do? ☆ ☆ ☆

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FOR TEACHERS AND PARENTS

Answer key: brain and nerves

1 Page 1

Answers: 1) thunder: hear; 2) a sharp cactus: touch; 3) something hot: touch; 4) a ringing phone: hear; 5) a barking dog: hear; 6) a ball coming at you: see; 7) ice in your hand: touch; 8) a red light: see.

2 Page 2

Messages: 1) something very hot: pull your hand away fast; 2) a ball flying at you: catch it or duck; 3) a red traffic light: stop walking; 4) an alarm clock ringing: wake up and get out of bed.

Blanks: 1) center; 2) messages; 3) skull; 4) fast.

3 Page 3

Think: 1) The message travels fast, before you think; 2) The skull; 3) The ears send a message along nerves; 4) Sleep, eat well and wear a helmet.

True or false: 1) true; 2) true; 3) true; 4) false; 5) false.

Drawing: arrows go from the eye to the brain, then from the brain down to the hand.

4 Page 4: Try it!

A smaller number means a faster catch. The eyes see the ruler fall, nerves carry the message to the brain, and the brain sends a message to the fingers to close. Many children catch it a little sooner with practice, but results vary. The whole trip takes less than a second.

5 Teaching tip

Play a quick game of Simon says. Afterward, ask which senses got the message, what the brain decided and which muscles moved.

Safety: drop the ruler straight down, away from faces and feet.

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