# Lesson 2

| Grade Level: 3rd-6th  | Ti  | me Frame: 40 minutes  | Content Ar   | <b>eas:</b> Science, Critical Thinking                 |  |
|---|---|---|--|--|--|
| What are we learning?Why are we learning this?The brain functions as a<br>integrated network.The more information our brain<br>the more likely the brain is to su   |   |   | t <b>his?</b><br>our brain h<br>ain is to sur  | nas about the outside world,<br>vive.                  |  |
| <b>Introduction</b> (20 minutes)<br>-Introduce what students are learning and why they are<br>learning it.<br>-Watch <u>this video</u> .  |   |   |  | <b>Materials</b><br>"Brain Systems" student<br>handout |  |
| Activity (15 minutes)<br>-Introduce the activity<br>class. Remind students<br>it isn't about being go<br>to use the clues to help<br>-Have students get in g<br>paper, stopping when                            | nple as a<br>arder and<br>ust trying<br>ugh the | Helpful Hints<br>-Most students should get<br>round 1 correct. If you notice<br>some students are making a<br>mistake, try to guide their<br>thinking towards a sock. |  |  |  |
| <b>Discussion</b> (10-15 minutes)<br>-Based on the activity from today, why do you think parts<br>of the brain have to work together? (The brain's number   |   |   |  |  |  |
| one goal is to survive. So the brain's best chance at<br>survival is by using all the information possible to make<br>sense of the world. The more information the brain<br>has=the better chance of survival.) |   |   | <b>Extension</b><br>-See if students can create<br>their own scene with 'brain<br>system' clues. |  |  |
| Closure<br>-People commonly think that we only use about 10% of<br>our brain. Is this true? Why or why not? (This is not true.<br>We use most of our brain most of the time)                                    |   |   |  |  |  |

# **BRAIN SYSTEMS**

### **TEACHER COPY**

#### Purpose of the Game:

The purpose of this game is for students to use the clues to infer what item makes the most sense. This will help students understand that the brain uses as much information as possible to keep us alive.

### **Before:**

Introduce the activity by walking through the next page as a class. Let them know that each round will have one less clue. They do not need to fill in a clue, just use the clues provided. It *will* get harder as they progress.

Pass out the student handout. Decide whether students will work independently, in pairs, groups, or as a whole class.

Allocate 10-15 minutes for the activity and let students know there is a class discussion at the end of the time.

### **During:**

Walk around the classroom and engage students in discussions about their thought process. Start scaffolding questions to get students to think about the benefit of utilizing multiple systems. **Most students** *should* get round 1 correct, then some may get round 2/3, most will not get round 4/5.

### After:

Gather students as a class to review the results of the activity.

Project the table from the bottom of the students' paper to the board.

Begin with round one, ask students about their answer, and ask students to indicate if they got it right or wrong. Continue through rounds 1-5, recording data on the board.

Encourage students to notice any trends, particularly how the number of sensory systems used as clues affects the accuracy of guesses.

### **Discussion**:

Facilitate a discussion about the brain's role in making sense of the world and why it works collaboratively.

Prompt students to reflect on the data on the board and discuss what it indicates about the importance of the brains's network in processing information for survival.

| Round   | Scenario  | ltem     |
|---------|---|----------|
| Round 1 | Putting a sock on in the morning.                       | Sock     |
| Round 2 | Waving a flag as part of a dance in music class         | Flag     |
| Round 3 | Cleaning the art table at dismissal.                    | Sponge   |
| Round 4 | Taking a bookmark from your teacher at the end of class | Bookmarl |
| Round 5 | Writing your name on the sidewalk at recess.            | Chalk    |

ANSWERS

### BRAIN SYSTEMS WHOLE CLASS

Step 1: Read the clues below that will help you solve for the mystery item.

| Sensory                                      | Motor   | Emotions  | Body<br>Regulation   | Cognition   |
|--|---|---|--|---|
| Clues about<br>what you can<br>see and hear. | Clues about the<br>movements and<br>motions your<br>body has. | Clues about the<br>emotions you<br>are feeling. | Clues about<br>body functions<br>that keep you<br>alive like<br>breathing and<br>heart beat. | Your ability<br>to think about<br>what the<br>mystery item<br>is. |

**Step 2**: Review an example round. Sensory, motor, emotions, and body regulation clues work together to describe a specific scene. Choose the item that fits best with the scene description.

| EXAMPLE  |   |  |  |   |
|--|---|--|--|---|
| Sensory  | Motor   | Emotions   | Body<br>Regulation   | Cognition   |
| I see a math test,<br>students, desks,<br>privacy folders,<br>my teacher<br>I hear pencils<br>writing, people<br>tapping their<br>feet, the clock<br>ticking, sniffles,<br>and people<br>snacking. | I am walking<br>and reaching my<br>arm forward with<br>an open hand.            | I feel a little<br>nervous and shy.                              | My nose is stuffy<br>and I feel a little<br>tired and hot. | pencil<br>tissue<br>ruler<br>caluculator  |
| You may<br>infer the<br>class is taking<br>a math test.  | You may infer<br>this person<br>stood up and<br>is walking to<br>get something. | Maybe they<br>are shy<br>because<br>everyone else<br>is sitting. | You may infer<br>this person<br>doesn't feel<br>well.      | Based on all of<br>these clues<br>combined, a<br>tissue is<br>probably the<br>best guess! |

# **BRAIN SYSTEMS**

Name:\_\_\_\_\_

Date:\_\_\_\_\_

### Round 1

| Sensory  | Motor  | Emotions                                 | Body<br>Regulation   | Cognition                            |
|--|--|--|--|--------------------------------------|
| I see my bed, my<br>nightstand, my<br>dresser, clothes on<br>the floor, and my<br>desk, I hear my<br>family calling my<br>name | l'm standing up on<br>one leg and<br>reaching towards<br>my foot that is<br>lifted | l'm feeling<br>overwhelmed and<br>rushed | I'm feeling a little<br>sleepy but my<br>heart is beginning<br>to race | backpack<br>socks<br>blanket<br>book |

### Round 2

| Sensory   | Motor  | Emotions                          | Body<br>Regulation | Cognition                               |
|---|--|-----------------------------------|--------------------|---|
| l see people<br>moving around, l<br>see my teacher, l<br>see musical<br>objects, l hear<br>music playing and<br>kids whispering | My legs move as I<br>walk around in a<br>circle, my arm is<br>waving back and<br>forth | I'm feeling happy<br>and excited. |                    | piano<br>flag<br>trumpet<br>sheet music |

### Round 3

| Sensory  | Motor                           | Emotions | Body<br>Regulation | Cognition                           |
|--|---------------------------------|----------|--------------------|-------------------------------------|
| I see a table, art<br>supplies, my<br>classmates, my<br>teacher walking<br>towards me, I hear<br>a timer and faint<br>whispers | My arm is moving<br>in circles. |          |                    | paper<br>brushes<br>sponge<br>apron |

# **BRAIN SYSTEMS**

Name:\_\_\_\_\_

Date:\_\_\_\_\_

### Round 4

| Sensory  | Motor | Emotions | Body<br>Regulation | Cognition                                |
|--|-------|----------|--------------------|--|
| I see books,<br>students, my<br>teacher, a<br>computer, I hear<br>nothing besides<br>small movements |       |          |                    | bean bag<br>markers<br>book mark<br>book |

### Round 5

| Motor | Emotions | Body<br>Regulation | Cognition                              |
|-------|----------|--------------------|--|
|       |          |                    | jump rope<br>chalk<br>football<br>book |
|       | Motor    | Motor Emotions     | Motor Emotions Body<br>Regulation      |

As a class, fill out the table with how many groups or students answered each round correctly.

| Round   | Correct Answers |
|---------|-----------------|
| Round 1 |                 |
| Round 2 |                 |
| Round 3 |                 |
| Round 4 |                 |
| Round 5 |                 |