

Lesson Plan

About the Brain

1	Subjects <ul style="list-style-type: none">• Literacy Development• Science										
2	Unit <p>How We Think and Learn</p>										
3	Overview <p>This lesson allows students to access relevant scientific brain information as a basis for understanding how the brain works. It helps them to see how learning happens. Reciprocal Reading and Two Column Note-taking strategies are modeled to improve students' ability to use these strategies independently.</p>										
4	Materials (Describe if checked and attach if applicable.) <ul style="list-style-type: none"><input checked="" type="checkbox"/> Learning Materials: Reading – “About the Brain”, coiled notebooks,<input checked="" type="checkbox"/> Strategies: Reciprocal Reading, Two-Column Note-taking<input checked="" type="checkbox"/> Multimedia: computers, internet, printer, magazines (for reinforcement and extension of ideas)										
5	Learning Objectives <ul style="list-style-type: none">• Students become familiar with two-column note-taking strategy• Students can visualize the brain and its functions from three different perspectives• Reciprocal teaching strategies related to Question Asking and Answering, Clarifying, Summarizing and Predicting are reinforced• Students understand physical locations of the brain										
6	Types of Activities (Check all that apply.) <table><tr><td><input checked="" type="checkbox"/> Brainstorming</td><td><input type="checkbox"/> Arts Activity</td></tr><tr><td><input checked="" type="checkbox"/> Explicit Instruction</td><td><input type="checkbox"/> Small Group Activity</td></tr><tr><td><input type="checkbox"/> Hands-on</td><td><input checked="" type="checkbox"/> Whole Group Activity</td></tr><tr><td><input type="checkbox"/> Peer Teaching</td><td><input type="checkbox"/> Discussion</td></tr><tr><td><input checked="" type="checkbox"/> Reading</td><td><input type="checkbox"/> Technology</td></tr></table>	<input checked="" type="checkbox"/> Brainstorming	<input type="checkbox"/> Arts Activity	<input checked="" type="checkbox"/> Explicit Instruction	<input type="checkbox"/> Small Group Activity	<input type="checkbox"/> Hands-on	<input checked="" type="checkbox"/> Whole Group Activity	<input type="checkbox"/> Peer Teaching	<input type="checkbox"/> Discussion	<input checked="" type="checkbox"/> Reading	<input type="checkbox"/> Technology
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7 Teaching and Learning Activities – Step by Step

a	<p>Pre-Activities 10 minutes</p> <p>1) as a class, brainstorm things that have to be learned – generate a long list on the whiteboard</p> <p>2) prompt with questions and statements like “what do babies learn?”, “what do we learn as small children?”, “think about sports”, “what about in school?”, “what’s involved in learning how to drive?”, etc.</p>
b	<p>Activities 1 hour</p> <p>1) students independently look over reading “About the Brain” and Zone in on items that catch their eye (See ZAP strategy)</p> <p>2) teacher and students read sections, teacher modeling reciprocal reading skills of questioning, clarifying, summarizing and predicting</p> <p>Intro – Questions: why is it important to understand how the brain works?, What are the different ways the physical brain can be looked at? Use the Think-Aloud Strategy to model key components of Reciprocal Teaching (RT)</p> <p>Intro – Clarify: what do you think they mean “break information down into chunks?”, I’m not sure what a lobe is... think about your earlobe...?, how can I break the word hemisphere down... sphere is like a ball, hemi means... half? Does the picture help? What is a perspective... in art?... in arguments?</p> <p>Intro – Summarize: Because it’s important that I become a strong learner, it’s a good idea to understand what parts of my brain do what, I’m going to learn about the brain in three different ways</p> <p>Intro – Predict: There will probably be at least three sections to this reading, I’ll need to take notes on hemispheres, lobes, and levels</p> <p>3) begin 2 Column Note Taking structure – title “About the Brain” (right column), Heading “Intro” (right column), in the left column write the questions generated above, and in the right column (or right hand page with notebook open) write the answers in point/bullet form</p> <p>4) move on to next section: Hemispheres... write it down. Read the section and prompt students to generate questions to write down (on the left side or page), clarify details, summarize and predict.</p> <p>5) look at list of things to learn on the whiteboard and identify which things might be associated with the right and left hemispheres of the brain</p> <p>6) write answers to the questions generated (summaries)</p> <p>7) repeat 4, 5, & 6 for each section – use a different color or mark on whiteboard to identify where certain learnings take place in the brain – discuss how some might happen in more than one part of the brain</p> <p>8) when reading is complete, review notes to ensure that questions and answers are complete</p>

c	Post-Activities 30 – 45 minutes Next Day 1) divide students into groups of 4 2) assign each group a brain perspective – hemispheres, lobes, or levels 3) each group visually represents their brain perspective and the types of learning they think would be associated within (using words, drawings, cut-out images) – use big sheets of chart paper that can be displayed in the room 4) use the images from the “About the Brain” reading, or use the internet to draw appropriate outlines of the brain from the perspective assigned
d	Out of Class Assignment varies Review notes for quiz
e	Extension and Follow-up 10 minutes Quiz

8

Assessment

- Quizzes and Tests: On content
- Self-Assessment: Reflection piece on “did I study?”, “did it work?”
- Portfolio: Reflection Piece
- Teacher Observations: Group work

9

Reflection: What Worked and Why

- ◆ This reading fits nicely with Multiple Intelligences and How We Think and Learn readings because the focus is identifying ways that students have already been learners, which is important for youth who don't see themselves as successful.
- ◆ This offers a great introduction to ‘science style’ reading and note-taking because text and strategies fit together nicely.
- ◆ Visual representations make it much easier for students to understand the text that follows; students can see that the brain does not operate discretely in hemispheres, but that lobes and levels play a significant role. Note: The goal of the visual representation is not 100% accuracy, it is the recognition of how interconnected the brain really is.

10

Tips for Teachers

- ◆ Encourage going to the computer and use other resources for more information
- ◆ Have high expectations for visual representations, especially if early in the year, because it is important that students see this as a valid method of representing what they know and not as a ‘time filler’.
- ◆ Remind students that they should be using their notes and handouts and double-checking spelling
- ◆ Take time and check students notes to ensure that the note-taking strategy is being mastered. The goal is for the strategy to become routine, but it must be learned. As you review notes, make sure that the questions in the left column line up correctly with the answers in the notes on the right