### **Open Your Class With This Tomorrow**

The Horse That Won't Go Away: Clever Hans, Facilitated Communication and the Need for Clear Thinking

Jessica Flitter
West Bend East High School, West Bend, WI
jflitter@wbsd-schools.org

### **Critical Thinking Games**

Play critical thinking games to allow your students to immerse themselves in the process.

## **Scissors Critical Thinking Game**

- 1. Tell students they will be playing a critical thinking game. They need to try to figure out the pattern. Once they think they have the pattern they should raise their hand.
- 2. Students will remain in their chairs/desks, and you will need to walk around the room. You must be able to see their legs and not draw attention to this behavior. You can use the same students for multiple attempts, or you can move about the room as you restart the chain.
- 3. Pass a pair of scissors to any student. When Student A accepts the scissors, have Student A guess either "open" or "closed."
- 4. The instructor will indicate if they are correct or not. If Student A says "closed" and their legs are crossed the instructor will say "correct" and if they say "closed" but their legs are not crossed the instructor will say "incorrect." If Student A says "open" and their legs are not crossed the instructor will say "correct" and if Student A says "open" but their legs are crossed the instructor will say "incorrect"/
- 5. If Student A answers correctly, the instructor will tell them to pass the scissors to the person next to them, Student B. The person receiving the scissors will always need to respond with "open" or "closed."
- 6. If they answer incorrectly, you say "incorrect" and start the chain over.
- 7. Encourage students to find the pattern. You may need to become more obvious where you are looking so students can figure out the pattern.

https://en.wikipedia.org/wiki/Scissors\_(game)

#### Cow Math

- 1. Tell students they will be playing a critical thinking game. They need to try to figure out the pattern. Once they think they have the pattern they should raise their hand.
- 2. You can say any statement with a number of cows, i.e. there are 2.5 million cows in that pencil case. How many cows are there?
- 3. It all depends on what you say at the end consisting of "how many cows" and words beyond. For example, if you say: how many cows are there? Then there are five cows since there are five words in the question. If you say how many cows? There are three since there are three words in the question. If they interrupt you, the answer is 0.
- 4. Encourage the students to find the pattern.

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#### **Phone Game**

- 1. Tell students they will be playing a critical thinking game. They need to try to figure out the pattern. Once they think they have the pattern they should raise their hand.
- 2. Hold a cell phone any way you want and change the way you hold it while talking to students. Finally, ask students if the phone belongs to you.
- 3. If you say listen at the beginning, then it is your phone.
- 4. If you just start talking, then it is not your phone.
- 5. Encourage students to find the pattern.

# **Using Urban Legends to Improve Critical Thinking**

Source: Alva Hughes, Randolph- Macon College, Favorite Activities in the Teaching of Psychology

Usually, four basic approaches of assessing truth are covered in research method texts.

- 1. Intuition- rely on the use of irrational, nonconscious abilities. We go with our gut feeling.
- 2. Authority- rely on someone else's knowledge and expertise (can discuss knowledge in a peer-reviewed scientific journal versus knowledge obtained from a multitude of Internet sources)
- 3. Rationalism- rely on the rules of logic or reason
- 4. Empiricism- rely on objective observational techniques

Apply each of the four methods by evaluating a series of claims described as urban legends. Urban legends are stories that the story teller believes to be true. The events in the story happened to "a friend of a friend" or were reported in the media and heard by someone once or twice removed from the teller. The stories include a high level of detail and often have a moral. Use the ways of knowing to decide whether the claim is valid or whether it is an urban legend.

#### Claims to be evaluated (www.snopes.com)

- 1. We only use 10% of our brains.
- 2. Vinyl lunch boxes contain unsafe levels of lead.
- 3. Psychologist BF Skinner's daughter was traumatized by being raised in a Skinner box and later sued her father.
- 4. Drug dealers are selling flavored crystal meth called strawberry quick.
- 5. Bananas will be extinct in 10 years.
- 6. Forty-five percent of the \$20 bills in circulation in the US are contaminated with cocaine.
- 7. Bubonic plague still exists in the western US, but it does not cause epidemics.
- 8. Raisins can cause acute renal failure in dogs.
- 9. The stereotypical American image of Santa Clause originated in a Coca-Cola advertising campaign.
- 10. Tattoos laced with LSD are used to hook children on drugs.

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Assign students to work in groups of 2-3. Give each group a description and have students discover the truth about the legend using each of the four methods of knowing. Some legends cannot be tested empirically for ethical or practical reasons. If some students are assigned a legend that they cannot actually test, ask them to describe an experiment that could be used to validate the claim. Students have one week to complete the assignment.

**Discussion:** Discuss the usefulness of empiricism in validating claims. Science uses all four ways of knowing. As scientists, we use intuition to generate a hypothesis, and we often use authority by basing our decisions on reviews of existing research findings. We use logic and empiricism in designing experiments and in interpreting their results. The discussion can also include the fact that there are cultural differences in the value placed on empiricism and authority. Traditional societies often place more emphasis on authority, whereas technological societies often emphasize empiricism and ignore the logic, intuition, and authority that also underlies science. Now students have the tools to validate information that they encounter as part of their daily lives. The assignment can help students to see why psychology is a science. It can also help them to see how the methods of psychology are related to life.