

Nuclear Flowers

Facilitation Guide

What is it?

In Principled Innovation, finding creative solutions requires fighting against confirmation bias and seeing our social settings from new perspectives. Use this brief activity to highlight the brain's propensity toward confirmation bias.

Why use it?

Confirmation bias pushes us to interpret what we see in a way that reinforces our beliefs. In Principled Innovation, finding creative solutions requires fighting against confirmation bias and seeing our social settings from new perspectives. Confirmation bias prevents us from seeing things from new perspectives that could inspire us toward new solutions. On a classroom level, confirmation bias colors the way we look at our students based on their economic status, race, language or immigrant status, or abilities. It is important to remind ourselves to look behind appearances and question whether we are interpreting our environment through the eyes of our preconceived biases.

The following activity is drawn from an example used by a [Stanford study on critical thinking](#) with a sample of 170 US high school students. The researchers found that 40% of high schoolers assumed that the picture presented strong evidence of the conditions nearby the site of the Fukushima Daiichi nuclear meltdown.

What you need

- Time: 5 minutes of participants' time
- Tweet: <http://t.co/14nKHqmlci>

Instructions

Have students visit the Twitter link above and ask the following questions:

1. What does this photo say about the dangers posed by the potential of nuclear reactors to melt down?
2. What would most people assume when they see this photo?
3. How would someone who is critical of nuclear power respond to this photo?
4. How would someone respond to this photo who values nuclear energy as a greenhouse-gas-reducing form of energy?

Share the following Smithsonian article, pointing out that there is no obvious link with radioactivity and the way these flowers look:

<https://www.smithsonianmag.com/smart-news/dont-freak-out-over-funky-flowers-appeared-near-fukushima-180956021/>



Then, share the following definition of critical thinking, drawn from the Principled Innovation framework:

Critical thinking is the process of refining our beliefs through analysis, interpretation of evidence, inference, explanation, self-regulation, open-mindedness, and problem-solving.

Explain that critical thinkers need to ask how their biases or assumptions are coloring their perceptions of the information they take in. Looking at data with both an open mind and critical eye is key to gaining a better understanding of the issues facing our learning environments and to uncovering new solutions to deal with those problems.