



VISUAL THINKING: SEEING + ANALYZING

OVERVIEW

Students don't always realize the previous knowledge that they have about a subject, or their own ability to be critical thinkers. Asking students to observe their surroundings, or images that you provide, can be an empowering way for them to recognize the prior knowledge that they bring to a situation or lesson. This is a particularly successful strategy for introducing new topics, and helping students connect prior knowledge to new concepts, projects, or assignments.

VISUAL THINKING ACTIVITIES

Using Images to Raise Questions

Select a series of pictures of a relevant topic area with which students may or may not be familiar. Pass them out and have students freewrite* their responses to the following questions:

- How would you precisely describe this image?
- What conclusions can you draw about it?
- What about the image led you to reach this conclusion?
- What questions does it raise for you? What do you want to know more about?
- What do you think is the significance of this image (social, political, scientific, environmental, or otherwise)?

When time is up, select two or three students to share their work. Tell them the context of the image and ask them to discuss how that changes their understanding of it.

***Freewriting** is a strategy by which students write for a given period of time (1- 20 minutes) without stopping.

Using Visualizations to Challenge Assumptions

Find a map, diagram, or data visualization and have students study it. (One favorite is a chart that shows the correlation—as opposed to causation—between autism diagnoses and organic food sales.)

Using Think. Pair. Share or another group-work technique, prompt them with the following questions:

- What does the author lead you to infer? Is this a fair inference?
- Give an alternative explanation of the data shown.
- What further data is needed to reach a conclusion?

Through guided small- or large-group conversations, ask the students to consider how the data might be incomplete, skewed, or misrepresented. Ask them to consider other explanations for the data. Consider using the intellectual standards to guide your discussions of clarity, accuracy, precision, relevance, significance, etc.

READINGS & RESOURCES

McKim, Robert. *Experiences in Visual Thinking*. Cengage Learning, 1980.

Grandin, Temple. *Thinking in Pictures*. Vintage Books, 1995.

Arnheim, Rudolf. *Visual Thinking*. University of California Press, 2004.

See also:

Visual Thinking: Mapping and Diagramming at <https://think.dasa.ncsu.edu>

Using Visualizations to Test Knowledge

Five Card Flickr is a game devised by web developer Alan Levine. It is based on the game Five Card Nancy by Scott McCloud, the author of *Understanding Comics*. The translation inherent in storytelling is a great way to test students' understanding of a topic currently being studied.

Using Flickr or another image database, students choose 5 images that tell a story about a topic. These images should relate to one another in some way. As a longer assignment, students can write about the images to create a linear essay. As a shorter in-class exercise, they can use the images in a presentation or in small-group discussions. Prompt them with questions to help uncover more nuanced or hidden components of the content, or to encourage debates. For example:

- Use 5 images to tell the story of the decision to drop the atomic bomb in WWII from the perspective of the U.S. President, an American citizen, and a Japanese politician.