

Critical Thinking is the process of actively evaluating and interpreting ideas. Creative Thinking and Critical Thinking often work together. Creative thinking originates ideas that are assessed using Critical Thinking.

Explore these strategies to intentionally support Critical Thinking as a Habit of Mind in your classroom.

Infographic It!

Want to develop critical and creative thinking skills at the same time? Ask students to evaluate and organize their data in a visual way. They must think critically as they evaluate the validity of their data and decide how to organize it. They must think creatively as they communicate their data in the form of a graph, drawing, or infographic. The more students exercise critical and creative thinking, the better problem-solvers they will be!

Critical Thinking Sentence Stems

Use these sentence stems to promote critical thinking:

- Why did...
- How do you know that...
- Are you sure that...
- What's your evidence that...

Show Your Thinking

Instead of saying, "Show your work," try saying, "Show your thinking." This emphasizes that you value critical thinking over rote memorization; working smart more than working hard.

Where's the Evidence?

Make a habit of asking, "Where's the evidence?" or "What's your evidence?" The more students hear you ask this question, the more apt they will be to provide evidence-based responses. By asking this question in multiple contexts, you encourage students to be lifelong critical thinkers. (For example, if a student says, "My mom is making meatloaf tonight," ask, "What's your evidence?")

Five Whys

When students answer a question or give an initial response, follow with, "Why?" They should give a slightly deeper answer and/or understanding. Follow that response with, "Why?" again. Continue asking "Why?" five times so students become accustomed to deeper and deeper levels of understanding.

FQR Format

When asking students questions, have them respond in a FQR format. Have them answer the question with a Fact, then ask a related Question, then Respond to the question. For example, if you ask "Why did the bulb light?," students may answer as follows. Fact: Because the wires formed a complete circuit. Question: How fast does the current move through the wires? Response: I'll add that question to my journal to research later. The FQR promotes critical and creative thinking instead of basic recall.

Worksheets Gone Wild

When you have to use a worksheet, bolster its utility by using it as a tool to strengthen creative thinking skills. Have the students weave a story out of the answers on the worksheet. Have them connect something on the worksheet to something they have learned in another subject. Have them turn the worksheet into an infographic.

Data Your Way

Help students take ownership of their learning by allowing them to choose how they represent their data from an investigation. They may stretch in their abilities and learn a new way to graph or chart data. They may observe other students' representations and want to learn that method. Or you may want to share a variety of graph choices to spur their thinking, such as those presented in this Graph Choice Chart. When students take ownership of their learning, engagement increases.



A Dot for your Thoughts

Draw a dot on the board. Have students brainstorm a list of what the dot could possibly represent (basketball, eye, star, etc.). Then ask the group to create categories out of the ideas listed so far (sports, art, space, etc.). Resume the brainstorming, this time filling up the newly created categories. Going between divergent thinking (creative brainstorming) and convergent thinking (critical categorization) can yield more varied ideas and better focus. As students brainstorm, allow for new categories and also discuss any unique ideas that couldn't fit in a category.

Mystery Box

Pick an object, for example, a banana. Observe it carefully. Place the object in the box. Have students take turns asking yes/no questions about the object. When they think they know what the object is they should ask a question to prove it. When a large number of your class believes they know the answer, count to three and have them speak the answer out loud. You can pick students to take your place as the leader.

Compare and Contrast

Having students explain similarities and differences they find between two processes or concepts is a great way to promote critical thinking. Use a Venn diagram or other graphic organizer to represent similarities/differences visually. Students could compare needs of plants and animals, land formations in different states, math problems that have the same answer, etc.

Turn Data into Evidence

Having students transform data into evidence is a powerful strategy to promote critical thinking. Guide students in first evaluating their data for trustworthiness, then analyzing the data for patterns and trends. This could include organizing and representing the data visually. Finally, have them interpret the data in a way that conveys meaning and understanding.

Idea Snowball

Utilize a variety of collaborative structures to develop and refine ideas. Use individual think time to reflect on a reading, video, or topic. Use small group time for students to share their thoughts with others and develop their ideas, and use whole group time for discussion that allows for refinement of learning. Like a snowball rolling down a hill, each structure adds layers of insight to the original idea.

Think-Aloud

Model self-direction and metacognition by thinking aloud. You can share your rationale as you design an investigation plan so that students learn to emulate that thought process when they design their own investigation plans. You can share possible reasons for a particular result so students see what ongoing critical thinking looks like. Thinking aloud also supports a culture of risk-taking by modeling the communication of ideas freely and without judgement.

Fact-Question-Connection Format

When curious people learn new information, they continue to ask questions and make connections. Develop curiosity by encouraging students to share their learning from secondary resources using a Fact-Question-Connection format. They should share one fact they learned, one question they still have, and one connection from what they learned to something they already know, something they are interested in, or something another classmate said.