

What do we mean by ‘critical thinking’?



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One of the big ideas that keeps emerging in our district strategic planning process is the desire to promote critical thinking. As we think about the kind of students we want to help shape for the future, everyone agrees that they should be effective critical thinkers.

Critical thinking is also listed as a major 21st Century workforce skill – along with creativity, collaboration and communication – in a host of recent research studies.

But what exactly do we mean by critical thinking?

Socratic method

The intellectual roots go back 2,500 years to Socrates and his focus on justifying thinking through probing questions. His Socratic method was intended to discover the underlying premises of student beliefs including assumptions, reason and evidence.

Professor Dan Kurland identifies critical thinking through dispositions. He writes:

- Critical thinkers are by nature skeptical. They approach texts with the same

skepticism and suspicion as they approach spoken remarks.

- Critical thinkers are active, not passive. They ask questions and analyze. They consciously apply tactics and strategies to uncover meaning or assure their understanding.

- Critical thinkers do not take an egotistical view of the world. They are open to new ideas and perspectives. They are willing to challenge their beliefs and investigate competing evidence.

A strength of our Washington state standards is an explicit focus on critical thinking. In science, students learn to pose questions, analyze and interpret data, and engage in argument from evidence. In math, students master conceptual understanding and computational skills, justify their thinking, and show multiple ways of solving a problem.

Classroom examples

And in English Language Arts, students relate one’s own point of view to that of the author of a text; distinguish claims that are supported by evidence from claims that are not; and evaluate multiple sources of information to address a question or solve a problem.

Three classroom examples show critical thinking in action.

- Fourth graders learned how to write a

thesis and how to support it. They read the book, *Fox*, and had to take a position on whether the character Magpie was a good friend or not. In debating the topic, they collaborate with classmates to find evidence in the text to support their stance. This leads to future work in social studies where they write about and debate a topic of their choice related to Westward Expansion.

“Our curriculum spirals in a way that everything builds on everything else from grade to grade,” said instructional coach Michelle Murray. “They’re making big connections, analyzing more deeply, thinking about their own beliefs and how they can support them.”

- Eighth grade science students engaged in a “bottle flipping” lab where they had to design their own experiment to determine how to manipulate a bottle to land as many times as possible on 10 tries or within a minute. In doing so, they could adjust independent variables such as adding water or using syrup in the bottle. Students collected data, created data tables and presented their claim, evidence and reasoning.

“Ten years ago, we would have given them a ‘cookie-cutter’ lab with all the data pre-arranged,” said teacher Lindi Kudlacek. “Now they must do the thinking by designing their own experiment.”

- AHS ninth graders recently debated topics such as: “Single-gender classrooms improve student learning,” or “Social media does more harm than good.” Students selected their topic, researched, wrote cases and argued pro and con. Librarian Dana John helped them access the library’s databases and other reputable sources.

In 10th grade, students wrote an argumentative paper in which they posed their subject as a question to allow them to change their minds if the evidence led them there. Topics included funding for National Endowment of the Arts, teacher pay, and the quality of food provided to school lunch programs. Students used a guide to determine the credibility of sources. Teacher Ruth Masters noted:

“Our discussions about resources are completely different than what I’ve seen with previous students. Some students had to change their topics altogether because the research they found was all opinion or contained non-empirical data such as biased polls.”

I’m excited about our focus on critical thinking. As we imagine the workplace and civic roles we aspire for our students in the future, their ability to think deeply about information and formulate evidence-based arguments will serve them well throughout their lives.