

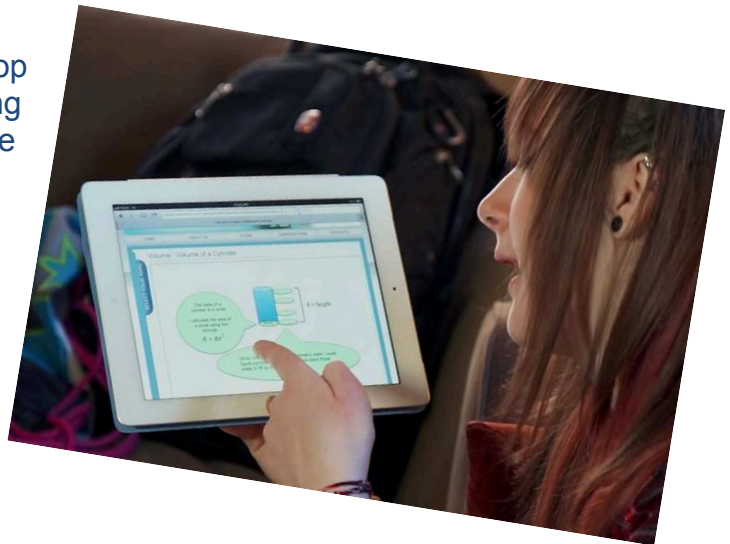
Think-Aloud, Articulate, and Reflect as part of the Learning Process

Get It Guide Math Tutorials use effective questioning strategies to help guide students' thinking as they work through the solution to a math problem. Effective questioning can also be used to encourage and facilitate student discourse. When students ***think-aloud***, ***articulate*** and ***reflect*** as part of their problem-solving and learning process, learning is enhanced.

Think-Aloud

You can help your students develop critical thinking skills by modelling think-aloud strategies as part of the problem-solving process.

Providing examples of thinking-aloud also demonstrates how good problem solvers work through and overcome the challenges and barriers that are part of learning.

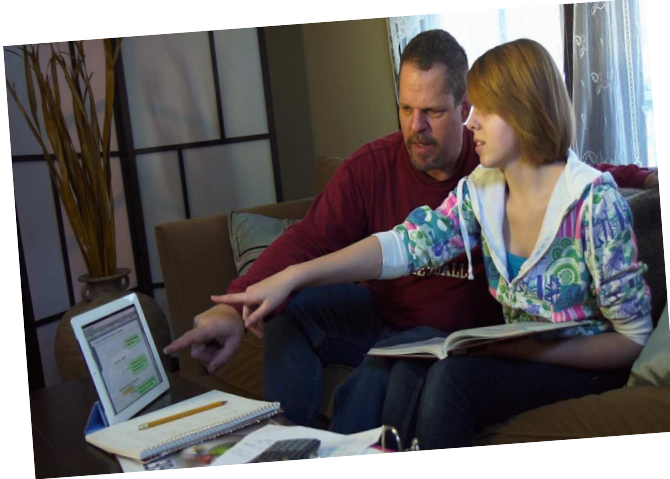


Some examples of verbalizing your thinking and decision making as it relates to solving a math problem might include:

- ***Restating*** in your own words what a question is asking
- ***Making predictions*** about the outcome of a calculation
- ***Linking prior knowledge*** with new learning
- ***Verbalizing*** inner speech as you perform calculations within your solution
- ***Summarizing*** the steps of your solution path
- ***Reflecting*** on whether your approach for solving was successful
 - Which solution steps am I confident performing?
 - Which steps do I need help with?
 - Does my answer seem reasonable?

Articulation

Articulation is similar to thinking-aloud in that students are verbalizing their thoughts and actions as they work through a math problem.

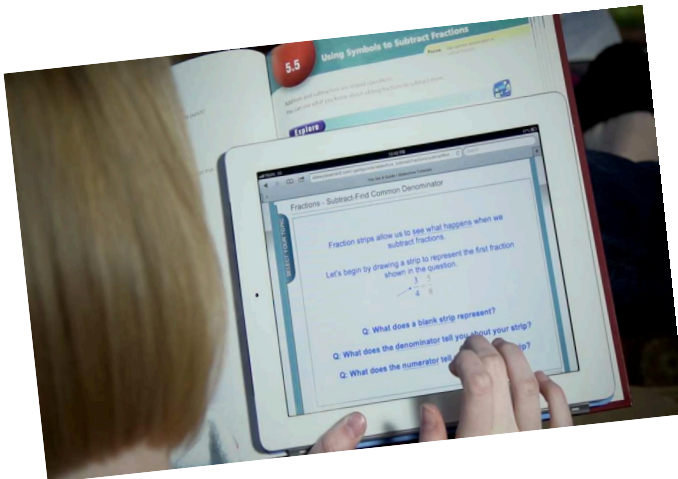


Articulation also describes the process by which a student explains, clearly and confidently, how they approached and solved their problem.

Being able to articulate, as well as demonstrate, the various steps involved in a solution path, improves comprehension and recall.

Reflection

Reflection allows students to compare their approach for solving a problem with that of others such as teachers, students, and family members.



Encouraging your students to reflect on how they solve and what they have learned will help them to develop critical thinking skills and the ability to self-assess their learning.