

Teaching Thought Process - Thinking Maps

Introduction

[Thinking Maps](#) are visual representations for different thought processes. Thinking maps aid students in making connections, describing, comparing and contrasting, classifying, showing parts of the whole, and determining causes and effects. The Bridge Map, a type of thinking map, helps students show relationships between ideas and see analogies. In the bridge map model, the idea or concept on the top and the idea or concept on the bottom have a relating factor. Using bridge maps with differentiated Penda activities will deepen student understanding of and relationships between ideas. The ultimate goal for any educator is for their students to move from concrete to abstract concepts, think with depth, and directly apply their thinking to complex tasks. According to Cristy Kessler, professor at the University of Hawaii's School of Education, thinking maps, including the bridge map, "link to higher order thinking skills; and support representations of an actual thought process."

Classroom/Instructional Practice

Struggling with getting your students to think critically, express, and support their ideas in class? Consider teaching your students how to use thinking maps in tandem with completing assigned Penda activities. Thinking maps provide a common language that supports visualizations of actual thought processes. The bridge map is used to draw connections between ideas and can help students improve their understanding of concepts presented in their Penda assignments. Teachers can share and discuss with the whole class an exemplar of the bridge map, using information that students already have a strong foundation in. Teachers can then open a preselected Penda activity using the first 3 screens to demonstrate how to complete the bridge map, while they model and think aloud. Students can then work independently to complete the bridge map their teacher started by working through the rest of the activity screens. To close, teachers can create an anchor chart with students' input used to finish the bridge map. Moving forward, students can make bridge maps for assigned Penda activities to demonstrate their thought process or understanding of a concept through the use of analogies. As an extension, students can be partnered up with another student to think-pair-share their bridge map.

Impact on Student Learning

With thinking maps, including the bridge map, teachers have a consistent set of tools to meet the needs of all learners. Thinking maps allow teachers to "see" the evidence of their students' learning, enabling them to assess more effectively. Using thinking maps promotes metacognition and continuous cognitive development for students. They help close the achievement gap, by providing students with the tools to self-regulate their own learning (student-driven vs teacher-driven) and be more successful in school. Thinking maps serve as a device for mediating thinking, listening, speaking, reading, writing, problem-solving, and acquiring new knowledge. Thinking maps such as bridge maps, help construct students' understanding of concepts with analogies and offer a language for articulating their thinking with teachers and peers.

Give It A Try - Here's How:

1. Demonstrate for students a bridge map exemplar or the finished product (i.e. identify tools and what they measure).
2. Select and open a Penda activity using an LCD projector. Complete the first 3 screens using the gradual release model while modeling whole-class under a document camera (i.e. describe changes of state/phase changes of matter - temperature increase/ temperature decrease).
3. Instruct students to complete the remaining Penda activity screens independently and fill in the rest of the bridge map.
4. Provide students an opportunity to evaluate and enhance their own work as it is reviewed whole class.

Artifact/Example:

