

Crossing the River - Task

Context:

- A pre-algebra or early algebra (likely middle school or early high school) class of mixed ability including students with gaps in their basic math skills.
- This is the second or third “anchor problem” of the course. The first anchor problem focused on students identifying patterns. The second focused on students identifying and extending patterns. Students have been reviewing and working with variables, coefficients, and writing equations and expressions.

Beginning: Introduction/Hook <i>Consider: engagement, higher order thinking, inquiry</i>	Middle: key skills, tasks and activities, formative assessments	End: summative assessment
<p>-Follow instructions to make an origami boat (spatial reasoning)</p> <p>-<i>Three Read Strategy</i>--two versions (one to support ELL connections) to support students in finding an entry point into the problem.</p> <p><i>Toolkit:</i> Students keep a copy of their toolkit in the front of their binder. This is a large version of the toolkit up on the wall of the classroom.</p> <p>-What tools are you using? Record them</p> <p>-What tools are already in your toolbox? Use them! (examples might include “work backwards” or “use manipulatives”)</p>	<p><i>Anchor problem:</i> Crossing the River Problem--jump right in!</p> <p><i>Vocabulary:</i> Students use Frayer model sheets to record vocabulary. Vocabulary might include:equation, expression, variable(s), coefficients</p> <p><i>Manipulatives/supplies:</i> little people or small blocks, origami boats, chart or graph paper, markers, pencils, graph paper</p> <p><i>Do Nows and Exit Tickets for formative assessment and/or basic skills</i></p>	<p><i>Demonstration of learning:</i> Groups present their work. Each group member has a role in explaining the group’s thinking, the tools and strategies they used, their process and their solutions.</p> <p><i>Documentation:</i> Each student is responsible for turning in his/her own packet with his or her own thinking represented. In other words, although the group worked together, the explanations should be crafted by individual students and thus should vary and be specific to his/her own thinking and process.</p> <p><i>Transfer:</i> Students build on and demonstrate skills built so far in next anchor problem.</p>

Crossing the River Task:

1. Get into a group of 3-4 people
2. Review the *Understanding the Problem: Three Read Strategy* document as a way to access the problem
3. Use the materials and manipulatives available to engage in the task with your group members. Additional materials are available in the resource folder.