

## Performance-Based Task

<b>Name of Task:</b> <b>Buckets of Fish</b>		<b>Grade Level: 3</b>
<b>BEGIN WITH THE END IN MIND:</b> What will we learn about the students' mathematical understanding from this task?  Students will solve multi-step multiplication and division word problems.		
<b>Common Core Content Standards assessed through this task:</b> (choose 3-5 standards at your grade level that can be clearly assessed through this task. Standards need not be from the same domain but should relate to the task). 3.OA.6 Unknown factors 3.OA.7 Multiply and divide within 100 3.OA.8 Solve multi-step word problems	<b>Standards for Mathematical Practice assessed through this task:</b> (choose 2-3 Standards for Mathematical Practice that can be clearly assessed through this task.)  2. Reason abstractly and quantitatively 4. Model with mathematics	

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Use the space below to outline your task. Keep the following in mind...

During the summer, Lisa went to a creek for a nature field trip. The State Fisheries Department caught 32 fish for the students to sort into buckets. In the process of catching fish, eight escaped down the creek. How many ways could we sort the fish into different buckets?

Extension: How could the fish be sorted if there were 61 fish and 8 died?

Intervention: There are 3 buckets. How many fish are in each bucket?  
There are 12 buckets. How many fish are in each bucket?

### Does this task...

- reflect a real-world task/scenario-based problem?
- require application of mathematical concepts and assess related Common Core content Standards?
- Require students to engage in 2-3 Standards for Mathematical Practice?
- Allow for multiple approaches?
- Require a high level of cognitive demand?

**Assessment:** How will you evaluate student work? Create a task-specific rubric. Apply the Exemplars levels– Novice, Apprentice, Practitioner, Expert – when creating your rubric.

<b>Novice</b>	No strategy is chosen or a strategy is chosen that will not lead to a solution. Little or no evidence of engagement in the task. No correct reasoning nor justification for reasoning is present. Little or no communication of an approach is evident with mathematical language. No connections are made. No attempt is made to construct mathematical representations.
<b>Apprentice</b>	A partially correct strategy is chosen. Evidence of previous knowledge.

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	<p>Arguments are made with some mathematical basis. Some formal math language is used, and examples are provided to communicate ideas. Some effort is made to relate to own interests and experiences. An attempt is made to construct mathematical representations to record and communicate problem solving.</p>
<b>Practitioner</b>	<p>A correct strategy is chosen. Evidence of applying prior knowledge is present. Arguments are constructed with adequate mathematical knowledge. Systematic approach or correct reasoning is present. Precise math language is used with audience in mind. Mathematical connections are recognized. Appropriate mathematical presentations are used.</p>
<b>Expert</b>	<p>An efficient strategy is used. A correct answer is given. Evidence is used to justify and support decisions. Precise math language is used to communicate to an appropriate audience. Mathematical connections or observations are used to extend the solution. Abstract or symbolic mathematical representations are constructed to analyze relationships, extend thinking and clarify or interpret phenomenon.</p>

## NCTM Process Standards and the CCSS Mathematical Practices

NCTM Process Standards	CCSS Standards for Mathematical Practice
<b>Problem Solving</b>	1. Make sense of problems and persevere in solving them. 5. Use appropriate tools strategically.
<b>Reasoning and Proof</b>	2. Reason abstractly and quantitatively. 3. Critique the reasoning of others. 8. Look for and express regularity in repeated reasoning
<b>Communication</b>	3. Construct viable arguments
<b>Connections</b>	6. Attend to precision. 7. Look for and make use of structure
<b>Representations</b>	4. Model with mathematics.