Transcript - Using the Focal Points to Amplify Instructional Tasks

How can we use the connections that the focal points provide to take existing instructional tasks and amplify them to provide multiple connections to the mathematics for our students? The goal in amplifying instructional tasks is not necessarily to turn the volume all the way up to the maximum volume. Rather, how can we, in the given time, take an existing problem and turn it up one or two levels?

We will spend the next few minutes considering a process to amplify instructional tasks. We will look at a particular task, explore a process that could be used to amplify the task, and, finally, examine an example of an amplified task.

Transcript - Grade K-2 Video

To begin, let's start by looking at the following grade two task:

"A candy company asked students to vote for their favorite flavor of candy. Of the students polled, 275 voted for raspberry. The number of students who voted for cherry was 120 more than the number of students who voted for raspberry. How many students voted for cherry?"

What do you notice about this problem? Did you notice that this problem asks students to add two 3-digit numbers in a one-step problem?

Is this an example of an amplified task that offers opportunities to make multiple connections?

No. It is not an example of an amplified task. It is an example of a task that we can amplify using our focal points and mathematical process standards and differentiate to offer access for all students.

Some important things to consider as we amplify this problem are additional student expectations and process standards that could apply. We are already working with the student expectation 2(4)(C) and the process standard 2(1)(A).

As we brainstorm additional student expectations found in the curriculum focal points, we could consider including additional process standards, solving problems using data as a graph, and other student expectations that may connect to the original problem.

Remember to consider context that incorporates real world examples, as well as those that include other content areas. Based on the context of this problem, the student creates a bar graph to help determine a solution.

©Texas Education Agency Fall 2013

Transcript - Grade 3-5 Video

To begin, let's start by looking at the following grade five task:

"A local farmer bottles cider in one-and-a-half-gallon bottles. If the farmer brings six bottles to the farmer's market to sell, how many gallons is she bringing to sell?"

What do you notice about this problem? Is this an example of an amplified task that offers opportunity to make multiple connections?

This task easily falls under the student expectation 5(3)(E). The student is expected to solve for products of a decimal to the hundredths, including situations involving money, using strategies based on place value understanding, properties of operations, and the relationship to the multiplication of whole numbers.

Let's take a few moments to work the problem.

Some important things to consider as we amplify this problem are additional student expectations and process standards that could apply. We are already working with the student expectation 5(3)(E) and the process standard 5(1)(A).

As we brainstorm additional student expectations found in the curriculum focal points, we could consider including additional process standards, multiplying decimals including money, conversions within a measurement system, solving problems using data as a graph, and other student expectations that may connect to the original problem.

Remember to consider context that incorporates real world examples, as well as those that include other content areas. Examples for this problem might be net and gross income or total sales.

Transcript - Grade 6-8 Video

To begin, let's start by looking at the following grade seven task:

"Mr. Mott recorded the number of plants in each row of his garden as shown. Write an equation that could be used to determine p, the number of plants in the rth row."

What do you notice about this problem? Is this an example of an amplified task that offers opportunity to make multiple connections?

This task easily falls under the expectation 7(7)(A) where the student is expected to represent linear relationships using verbal descriptions, tables, graphs, and equations that simplify to the form y = mx + b.

Let's take a few moments to work the problem.

Some important things to consider as we amplify this problem are any additional student expectations and process standards that could apply. We are already working with the student expectation 7(7)(A), Representing Linear Relationships, and the process standard 7(1)(A) could easily be tagged here since the problem is set in a real-world context.

As we brainstorm additional student expectations found in the curriculum focal points, we could consider including additional process standards, circumference and area of circles, and even area of composite figures that may connect to the original problem.

Remember to consider context that incorporates real world examples as well as those that include other content areas. Examples for this problem may include "How many plants to outline a garden?" or "What if the garden is twice as large?" or "What if we create a garden made of concentric circles?"

©Texas Education Agency Fall 2013