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## For MATHEMATICS



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## Thank you

FOR YOUR
Please enjoy this complimentary excerpt from Visible Learning for Mathematics, Grades K-12. This excerpt provides example questions that teachers can use to check for understanding-a crucial aspect of visible learning.

## FUNNELING AND FOCUSING QUESTIONS IN MATHEMATICS

| Funneling Questions | Focusing Questions |
| :--- | :--- |
| How do you find the mean of the data? What <br> about the median and the mode? What about the <br> interquartile range? | What do you notice about the data? How would <br> you describe them to someone? What makes you <br> say that? What other ways might you be able to <br> describe them? |
| How can I get rid of the 2? What do I have to do <br> to the other side? What about the 4? | What do you think about when you see this <br> equation? How do you want to solve it? |
| How do I find the area of this trapezoid? Do you <br> see the rectangle and the triangles? I can just add <br> them up. How can I find the area of the rectangle? | I want to know the area of this trapezoid, but I'm <br> not sure how to find it. Any ideas? Where should <br> we start? |
| Let's add these fractions by finding the least <br> common denominator. What's the first step in <br> finding the least common denominator? | What should we do with these fractions? [Student: <br> "Add them."] Why add them? [Student refers to <br> word problem.] Okay, so how would you add them? |

Figure 3.4

Some other useful focusing questions to have in your back pocket are the following:

- What are you trying to find?
- How did you get that?
- Why does that work?
- Is there another way you can represent that idea?
- How is this connected to (other idea, concept, finding, or learning intention)?

Questions that check for understanding are a crucial aspect of visible learning. The best teachers probe deeper for more specific information. They don't just want to know whether or not a student understands something. If the student does, they want to see if the child can explain his or her thinking and apply what is understood. If the student doesn't understand, these teachers probe deeper to find the point at which a misconception, overgeneralization, or partial understanding led them

