

Promoting Good Writing

5

“What humans do with the language of mathematics is to describe patterns. Mathematics is an exploratory science that seeks to understand every kind of pattern – patterns that occur in nature, patterns invented by the human mind, and even patterns created by other patterns.”

Lynn Steen

Few strategies will do more for eliciting good thinking from students than asking a question in the right way. If a student is told, “Tell me what you know about fractions,” the teacher will get vague and disjointed writing that offers little insight to what the student truly knows. Rephrasing the question will result in greatly detailed and high-level thought. Asking such questions is not a difficult task. We simply have to remember the four key elements of a good question. First of all, students are usually not told who their audience is. Most simply think they are writing this for the teacher. No great writer picks up a pen without first considering the **audience**. Thus one of the important elements of a well worded writing prompt is that it offers a unique audience.

Great novels never start with, “Hi. I’m an author and I have something to say.” Instead, the writer creates a character or **voice** from which to speak. Although the need for this may not seem apparent at first, it separates creative and stimulating writing from the mundane. Even though the setting of the writing is a mathematics classroom, our goal is to stimulate rich thinking.

Every good writer also chooses an appropriate **format**. Will the writing be a letter? ...a note? ...an essay? ...a poem? ...a list? ...an argument? The example used above, “Tell me what you know about fractions,” could be improved by saying, “Make two lists, one list of the skills you understand about fractions and one list of the things you want to study more.” The teacher will get much more usable information with this type of question.

Lastly, to write well, a writer needs a narrowly focused, **specific topic**. The difference in the responses between general and specific writing prompts is phenomenal. “Tell me what you know about fractions,” will never generate the valuable thinking we would receive if we were to say, “Explain how to add two fractions when one is thirds and the other is fourths.”

Thus the four components of a good writing prompt are audience, voice, format, and specific topic. Simply including these elements in your question is all that is needed to promote effective responses. Look at the following examples and see if you can identify the four elements.

As a worker bee, write a letter to the queen explaining why the hexagon is the best shape for the hive cells.

Pretend you are the teacher and write a note to a parent explaining what we are covering in class this week.

Write a dialog between two students one of whom was absent explaining what we learned in class today.

Write an instruction manual for young children telling them how to draw a parallelogram.

Write directions for blind people telling them how to walk in the shape of an isosceles right triangle.

In fact, writing good prompts can be as simple as filling in the blanks. Use the following sentence as a template and substitute items from the list below to create effective prompts. Remember that for the topic, you will simply use whatever you are studying currently, but keep it focused. Ask the student to summarize a specific skill or concept but not the entire unit of study.

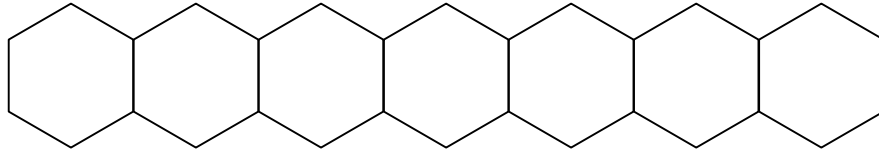
Write a (format) from (voice) to (audience) about (specific topic)

<u>Format</u>	<u>Voice</u>	<u>Audience</u>
note	teacher	younger student
paragraph	younger student	sibling
song	older student	the President
list	alien	employee
award	architect	customer
dialogue	parent	boss
speech	principal	teacher
poem	news reporter	the PTA

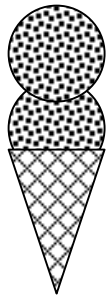
Obviously these lists could go on and on and the combinations are extensive.

“When students communicate mathematical information, they remember it, understand it, and use it to uncover and find even more information.”
(Perkins 1992)”
Larry Buschman

8. How many people can be seated at this arrangement of tables? People sit on each side and both ends. What if 17 tables were used? What if a total of 100 tables were used?

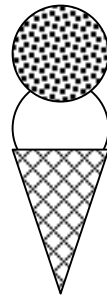
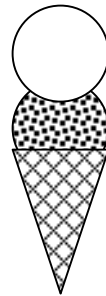


14. An ice cream shop sells five different flavors of ice cream. How many different types of double scoop cones can they create? It is acceptable to use the same flavor in a cone, but switching two flavors is not a new type.



This is allowed.

These are the same type.



75. Sasha and Josh are at the food court in the mall. They noticed these prices. Explain how to find the price for the burger and for the taco.

