Asking Effective Questions:

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How to Open Questions:

| Strategy: | Example: |
|---|--|
| Begin with the answer. Ask for the question. | The solution to a 2 step trigonometric equation is |
| | $x = 120^{\circ}$. What could the original equation be? |
| Ask for similarities and differences. | Which of the following functions are most alike? |
| Ask for similarities and differences. | $f(x) = 2e^{3x+6}$, $g(x) = \frac{1}{2}x^2 + 6$, or $h(x)=4 \log (3x)$? |
| Leave certain information out of the problem, | The vectors <2, -4, 5> and <3,,> are |
| e.g. omit numbers. | perpendicular. What could the 2 nd vector be? |
| Provide several numbers and math words; | Create a statement that uses the words and |
| the student must create a sentence using all | range, greater, sin, 45°. |
| the numbers and words. | |
| Use "soft" language. | The cosine of an angle is almost 1. What could |
| | the angle be? |

Creating Parallel Tasks:

- Begin with a task that will be the right level of difficulty for many students, but might cause problems for some.
- Adjust the original task to create alternatives that are similar but simpler (or more complex).
- Develop a set of common questions to be asked of all students regardless of the task they selected.

Common Debrief Questions:

- What did you find the most difficult?
- What strategies did you use?
- How did your questions look the same & different from another group?
- What was the same & different between your questions and those from another task?



For more ideas, check out the Capacity Building Series on "Asking Effective Questions" and "More Good Questions"

http://www.edu.gov.on.ca/eng/literacynumeracy/inspire/research/CBS AskingEffectiveQuestions.pdf

