

Effective Teaching through the Umbrella of Questioning

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Welcome and Expectations

Who's here? (At Each Table)

Name, School, and Grade

Icebreaker

What questioning strategies do you use in your classroom?

What information do you know about different levels of questioning? (i.e. Bloom's, Costa's, etc.)

Pocket Questions

Pre-planned questions that help students meet the learning objective/essential question.

Used to differentiate the lesson.

Using Depth of Knowledge Question Stems or Costa's House to ensure higher level thinking and questioning.

Video Link of Teacher Questioning ([first](#))

Algebra 2 Lesson Example

Essential Question:

How can I use systems of equations to solve problems?

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Volunteer Read Introduction

Volunteer Read “How Tall is Harold?”

Algebra 2 Lesson Example

Essential Question:

How can I use systems of equations to solve problems?

TEAMMATES CONSULT: Pencils down!

1. What is this problem about?
2. What are the facts we are given?
3. What are we asked to find?
4. What strategies do we have to solve?

Algebra 2 Lesson Example

Essential Question:

How can I use systems of equations to solve problems?

Red Light/Green Light: Whiteboard Diagram to Model the Situation

“How can we model this situation with equations?”

Algebra 2 Lesson Example

Essential Question:

How can I use systems of equations to solve problems?

TRAVELING SALESMAN:

1. Have we indicated what our answer is?
2. Have we answered the question that the problem asked?
3. Have we put the correct units into our answer?
4. Does our answer make sense?
5. Are we able to explain our work?

Algebra 2 Lesson Example

Essential Question:

How can I use systems of equations to solve problems?

TRAVELING SALESMAN:

How did you model this situation with equations?

How did you solve it?

Algebra 2 Lesson Debrief

What Standards for Mathematical Practice were applied in this lesson?

1. Make sense of problems and persevere
2. Reason abstractly and quantitatively
3. Construct viable arguments and critique the reasoning of others
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure
8. Express regularity in repeated reasoning

Algebra 2 Lesson Debrief

How was questioning used to...

- Clarify the problem
- Access prior knowledge
- Check for understanding
 - Concept and Skill
- Differentiate
 - Including Depth and Extension

Pocket Questions Used in the Lesson

What family of functions models this situation?

When did the food begin to fly across the room?

What would x & y represent?

What could be some ordered pairs on the graph?

How can you determine the vertex of the graph?

How could you determine the stretch factor?

Where is Harold in the diagram?

What tools do you have to solve? Is there another way?

What does the solution mean?

How can you convert the units to inches?

Article on Funneling vs. Focusing

As you are reading, use the **3-A Protocol**:

What do you agree with?

What do you argue with?

What do you aspire to?

Closure: Question Cubes

Use the question cubes to come up with a question you could use *as a teacher* during the Algebra 2 lesson we worked on today.

Answer: Is that question *funneling* or *focusing*?
Where does your question fall on DOK? In Costa's House?

Closure: Questions?

Feedback form

Thank you!!!

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