

SOME Prompts and Mechanisms for Eliciting Student Thinking

Prior Knowledge

Prompts

- I think _____ about _____'
- This is what I know about _____
- What is something you remember about _____
- What are some examples of _____
- This is like _____ because _____
- Predict what you think will happen
- How do you think this works?

Mechanisms

- Discrepant events: what is occurring
- Visuals: what does this remind you of
- Total Physical Response to show what you know
- Write the ideas on post-its; compare with a partner
- Write ideas on whiteboards and share

Data Collection

Prompts

- Display data in two ways
- How can you measure _____?
- What do you _____ (insert senses)
- What are the outliers?
- How could you organize your information so that someone else could understand what you did?
- Compare your information with _____ and make adjustments

Mechanisms

- Real data (e.g. pile pennies)
- Use post its for bar graphs
- Notes on videos or reading
- Use diagrams, drawings, illustrations

Sense Making

Prompts

- Explain to your friend
- I noticed
- Compare data
- Share data with another group; look for similarities and differences
- Make an explanation (claim, evidence, reasoning)

- Refer to _____ and explain how this experience relates
- What might be the reason for outliers?
- How does what you experienced today relate to the Big Idea concept on the wall?

Mechanisms

- Use graphic organizer
- Construct and graph and summarize data
- Produce a product (e.g., brochure, letter to governor, poster)
- Create new experiment based on findings

- Use a snowball (students write what they know, toss in air; next student picks it up and adds to the first comment)

Metacognition

Prompts

- Before I thought _____ Now I know _____
- Choose the task that is easier/more difficult for you and explain why
- I know this for sure _____ I am not sure about _____
- What would you change and why?
- Where in the process did you struggle? Why?
- What amazed you? Why
- I wonder _____
- How do I know this?
- What is one thing you still have a question about?

Mechanisms

- Post Card to self with metacognitive prompts/answers
- Explain phenomenon to a younger student
- Reflection in notebook