

Questioning Strategies

How can we use questions to encourage or discourage exploration & discussion?





Examples of Questions

Example Prompt 1:

What do you notice about what that animal is doing?

Example Prompt 2:

Describe what you notice about what that animal is doing.



Session Goals

- Experience and reflect on different types of questions
- Practice activities incorporating meaningful questioning strategies
- Reflect on how these ideas can improve our work





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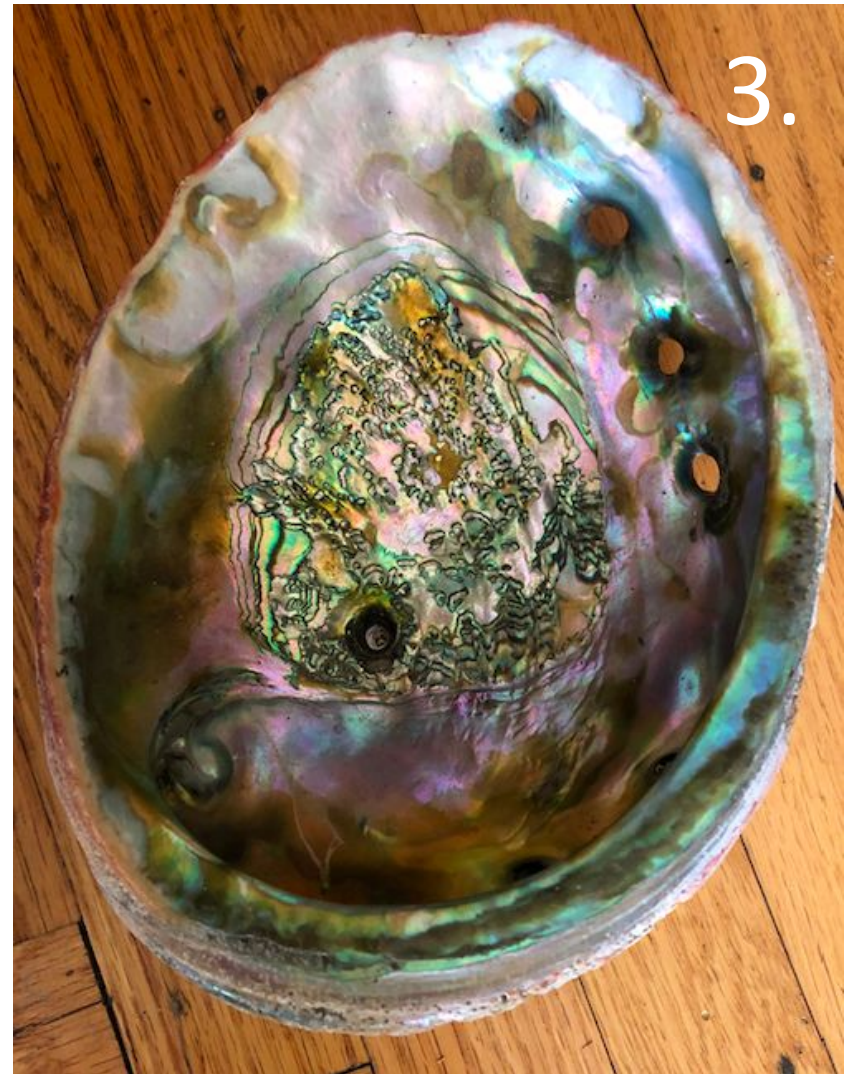
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Types of Questions

B r o a d

Narrow



Comparing Broad and Narrow Questions

B r o a d



- have no specific answer
- answer requires higher-level thinking, exploration, observation, or an opinion
- Promote discussion and divergent thinking

Narrow



- have a specific answer
- answer requires recall of information
- Promote group response and convergent thinking

Read the handouts, then discuss:

- What are some situations or goals for which narrow questions might be appropriate?
- What are some situations or goals for which broad questions might be appropriate?
- Any questions that come up for you from reading the handout.

When you receive a reminder message in your breakout room, begin adding comments to Padlet.



Use of Broad Questions

- Broad questions tend to be under-utilized by classroom teachers and field instructors.
- Field instructors often use broad questions about feelings and values, but not about science.
- NGSS and Common Core encourage more use of broad questions to help students develop reasoning and critical thinking skills.



BFF Questions

- What do you notice?
- What do you wonder?
- What does that remind you of?
- How might you explain that?
- How is this similar/different from...?
- What do you think about that idea?
- Do you agree with...?
- Tell me more about that.
- Can you explain/show me your evidence for that?
- How can you be more sure?
- What surprised you?

And any questions **you** don't already know the answer to!



“True dialogue occurs when teachers ask questions to which they do not presume to already know the correct answer.”

(Jay Lemke, education researcher, 1990)



Thought Swap

Question 1:

Find out as many ways as you can in which you and your partner are connected. Music? Activities? Interests? People you know?

Anne Kritchen	Elizabeth Burttram
Susan Caplow	Caroline Little
Tatiana Height	Toni Bruner
Marla Dean	Rebecca Persons
Maggie Johnston	Brooke McMinn
Amy Carbone	Kimberly Murray
Tina Brandon	Martha Hunter
Bridgett Harris	Christopher Schell



Thought Swap

Question 2:

What are some organisms (living things) that are found around your home, or wherever you're calling in from today?

These could be organisms you can see, or organisms you haven't seen but think might be present.

Bridgett Harris	Martha Hunter
Caroline Little	Amy Carbone
Tatiana Height	Marla Dean
Susan Caplow	Elizabeth Burttram
Kimberly McMurray	Brooke McMinn
Anne Kritchen	Tina Brandon
Maggie Johnston	Christopher Schell
Toni Bruner	Rebecca Persons



Thought Swap

Question 3 (SAME PARTNERS):

Discuss as many ways as you can think of that the organisms you just thought about might be connected with one another.

Bridgett Harris	Martha Hunter
Caroline Little	Amy Carbone
Tatiana Height	Marla Dean
Susan Caplow	Elizabeth Burttram
Kimberly McMurray	Brooke McMinn
Anne Kritchen	Tina Brandon
Maggie Johnston	Christopher Schell
Toni Bruner	Rebecca Persons



Thought Swap

Question 4:

In one year, an 8-pound rabbit may eat and drink around 400 pounds of plants and water. About 140 pounds comes out as poop and pee. What happens to the other 260 pounds?

Caroline Little	Maggie Johnston
Toni Bruner	Marla Dean
Tatiana Height*	Rebecca Persons
Bridgett Harris	Elizabeth Burttram
Susan Caplow	Brooke McMinn
Martha Hunter	Amy Carbone
Anne Kritchen	Tina Brandon
Kimberly Murray	Christopher Schell



Thought Swap

Take ~2 minutes to respond in chat and read one another's comments:

- How might this sequence of questions work well to start off a learning experience focused on ecosystems?
- What are some possible benefits of the *Thought Swap* routine?



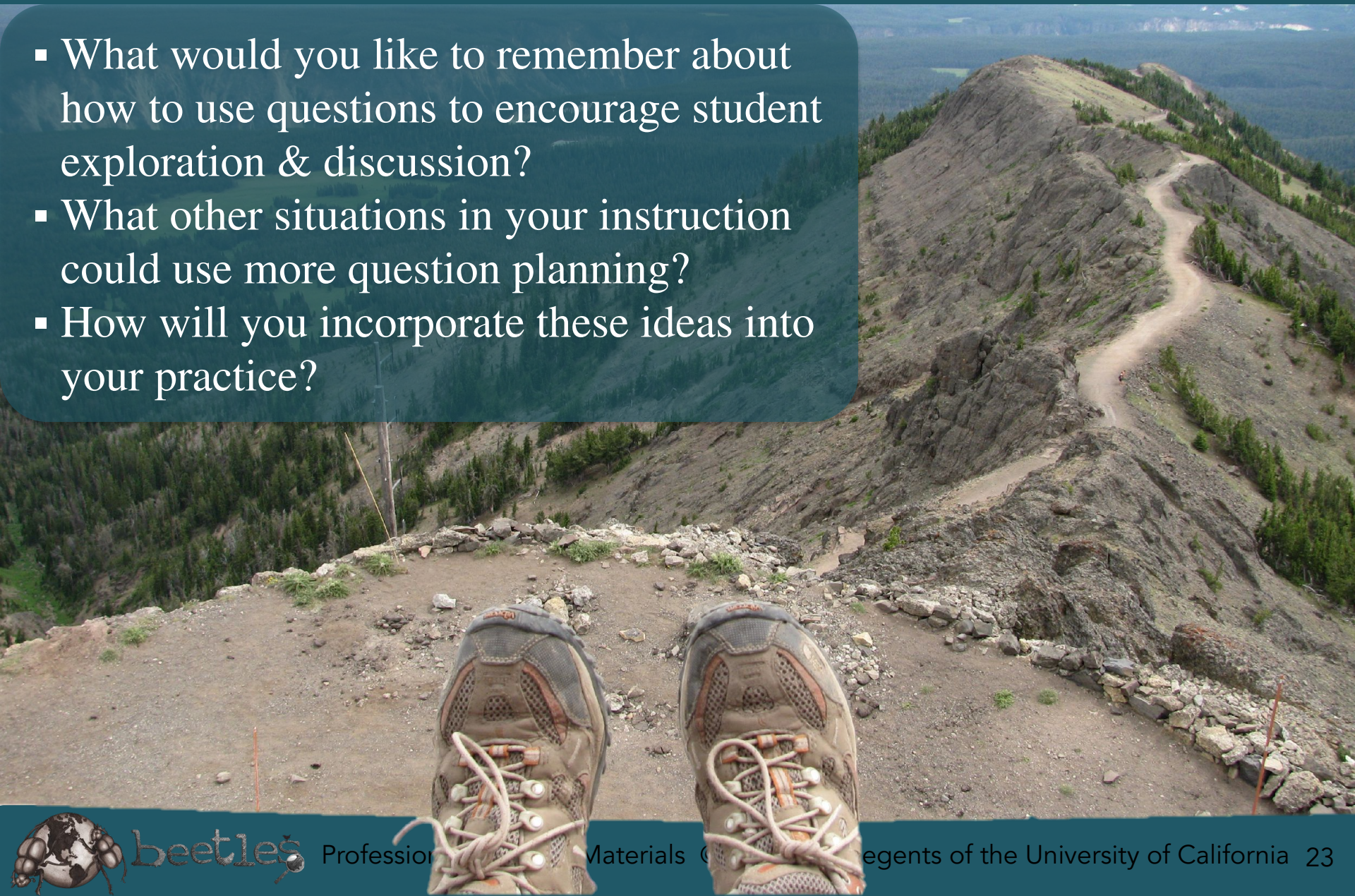
Why is planning questions important?

- Helps ask productive questions, even in stressful situations
- Causes instructors to think about potential student responses ahead of time
- Planning does not take the place of improvising—they work in tandem!



Reflection

- What would you like to remember about how to use questions to encourage student exploration & discussion?
- What other situations in your instruction could use more question planning?
- How will you incorporate these ideas into your practice?



Program Reflection

- How could this session help you to meet goals for your staff?
- How might you incorporate this session into your staff training and what's your rationale?
- What kinds of strategies could you use to set the stage for professional growth?



Gots and Needs

- Share a few things you “got” and a few things you “need” from today
- Related to teaching and learning, concepts, “creature comforts,” social dynamics, etc.

