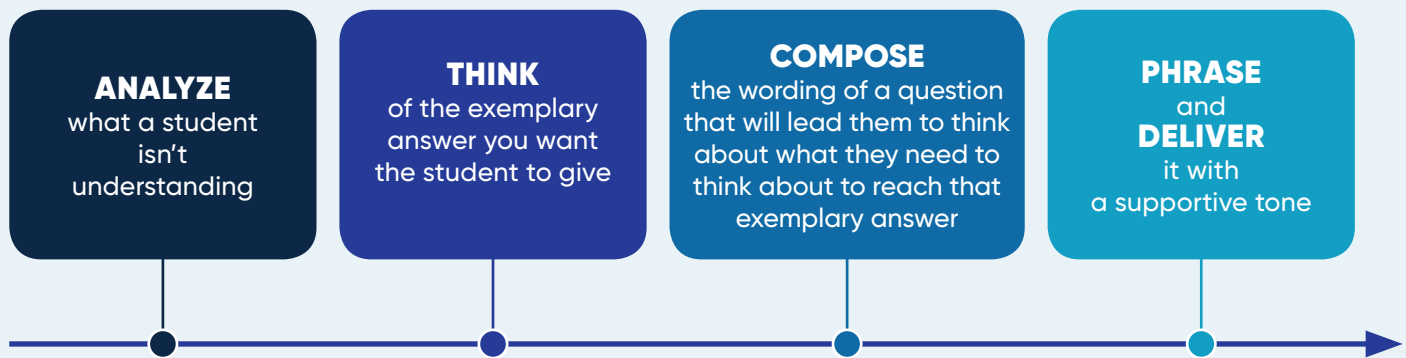


Planning to Respond to Student Thinking Protocol

High-quality instructional materials often have exemplary responses for key questions in the lesson plan, but they rarely offer suggestions on how you might respond back once students have shared their thinking. And coming up with responses that support student learning on-the-fly is really hard. **We strongly recommend planning for how you will respond to student thinking for the most important concepts in the lesson in advance to ensure your response supports student learning.**

Why is it so hard to respond to student thinking in the moment?

IT'S REALLY HARD TO:



...ALL IN THE FEW SECONDS YOU HAVE TO PROCESS THAT INFORMATION (!).

Key Criteria for Responding to Student Thinking:

When a student shares a response that is inaccurate or incomplete, you can support them in revising their thinking by asking a follow-up question. To ensure that question enables students to do the thinking necessary for learning, make sure it meets the following criteria:

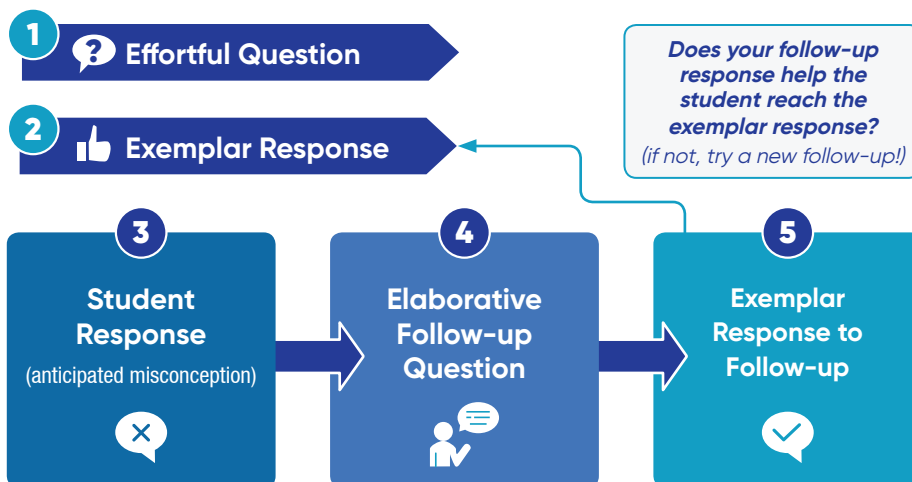
- **Your follow-up is effortful:** Elaborative follow-up questions support students with incorrect or incomplete understanding by scaffolding them to think effortfully about a concept. Follow-up questions should be effortful otherwise students won't encode the concept. Make sure it prompts analysis, justification, or detailed explanation to help students encode the information in long-term memory.
- **Your follow-up is targeted:** Elaborative follow-up questions must be targeted enough that they prompt students to think about and encode the to-be-remembered information. So make sure your question prompts them to elaborate on the thing you want students to remember and NOT something else. Otherwise, you can cause cognitive overload or students can end up encoding the wrong information.

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Planning to Respond to Student Thinking Protocol

Scripting follow-up questions in advance, including exemplar responses, improves a teacher's ability to focus student thinking on the most important information in a lesson. Without planning in advance, asking an aligned effortful follow-up is **much harder** and teachers risk directing students to think about less relevant information that takes them away from achieving learning objectives. **Below is a template you can use when internalizing your lesson to anticipate student misconceptions related to the most important content in the lesson and script your response to them.**

Scripting Responses to Student Thinking



1 Effortful Question & 2 Exemplar Response

Filling in this top section is usually the easy part: **Most of the time you can find this information in your curriculum guide.** However, in some cases you'll have to script the answer yourself.

3 Student Response

Now for the harder part. **It's time to anticipate student responses that indicate they need more support and plan how you might respond.** Consider how students might misunderstand or have only partial understanding in answering this question. **What's likely to be the most common misconception?**

4 Elaborative Follow-Up Question

Here's where we as teachers need to do some effortful thinking ourselves. **How can we ask an elaborative follow-up question here to support this student in refining their understanding? Remember, your follow-up should be effortful and targeted.** Make sure it prompts analysis, justification, or detailed explanation to help students encode the information in long-term memory, and that it prompts students to elaborate on the thing you want them to remember and NOT something else. Otherwise, you can cause cognitive overload or students can end up encoding the wrong information.

5 Exemplar Response to Follow-Up

Now it is time to draft the exemplar response you want students to give to your follow-up question. Consider, does the follow-up question you asked lead the student to think about the information they need to get to the exemplar response? Answer it to find out! When evaluating the quality of your exemplar responses consider: **"When I try answering this question, does it lead to the specific information in the exemplar response?"** If the answer is no, try again.

QUESTION STEMS

Some stems you can use to draft effortful questions...

Why... ?

How... ?

How might this be different if... ?

Why else might that be true/ how else could that work?

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