Bridging Practices

Bridging Practices are central tasks that support preservice secondary teachers as they move through their first years of teaching. These practices emphasize student learning, content taught in the classroom, collaborative work with peers, and deliberate instructional decisions. Bridging practices aim to prepare preservice teachers to be life-long learners by providing them skills to develop various knowledge bases needed for teaching.

Bridging practices support the development of preservice teachers' subject matter knowledge for teaching, or pedagogical content knowledge. The bridging practices we implemented aim to support preservice teachers in evaluating both concepts and students' understandings of those concepts when planning, implementing, and reflecting on their teaching. The questions we pose in the lesson plan below scaffold preservice teachers' thinking around the best courses of action to make a particular concept understandable to a particular group of students.

The graphic on page three contains descriptions of four Bridging Practices emphasized in one secondary science methods course: content considerations, adapting lessons, data-driven decisions, and collaborating with colleagues. These Bridging Practices were specifically selected for a particular context, and there are other Bridging Practices that support the learning of early career science teachers that may be more important in other contexts. The central concept is that early career teachers learn practices that bridge the gap from preservice to the first years in a classroom, and that these practices strengthen and sustain their instruction.

On page four we include a lesson plan template that is specifically used to engage students in these practices. Note that other important components of traditional lesson plans

are excluded to instead focus on these practices. Excluded components are emphasized in other lesson plans during a methods course, not replaced by Bridging Practices. Often we focus initially on one bridging practice, and with subsequent lesson plans add in additional practices until prospective or early career teachers have a firm understanding of each component.

The Bridging Practices included here also support students in the kinds of thinking emphasized in the edTPA. Specifically, the focus on analyzing student understanding and making data-driven instructional decisions based on those analyses.

For more details on the Bridging Practices see Luft and Idsardi (2018) Engaging Prospective Teachers in Building a Foundation for 3D Instruction through Bridging Practices in the Secondary Methods Classroom. In Rhoton, J. (Ed.), *Preparing Teachers for Three-Dimensional Instruction*. Arlington, VA: NSTA Press.

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Bridging Practices Lesson Plan

Name: _____

Date of Lesson: _____

(Name of Lesson)

Class: (year/subject)	**Length of Lesson:**
Overview: (brief description of lesson and context of unit)	
Learning Objectives: (state the measurable learning objectives)	
Standard(s):	
Content Considerations: What are the major components of the science concepts you're targeting in this lesson? What aspects of those components are difficult for your students to understand? Explain why. What knowledge/concepts need to precede the current lesson? What knowledge/concepts will follow learning about the current lesson?	
Adapting Lessons: Describe any relevant curricular materials on this topic you plan to adapt for use in your classroom.	

Are these materials aligned with a 5E lesson format? NGSS?

If no, what revisions are necessary to align with the 5E format and the NGSS?

Data-Driven Decisions:
What data on your students' existing understandings will inform your planning for this lesson?

What data will you collect during the lesson to inform your teaching in the moment (formative assessment)?

What data will you use to evaluate student understanding after the lesson (summative assessment)?

How will you use these data together to reflect on the effectiveness of this lesson?

Collaborating with Colleagues:
What colleagues can you discuss the logistics, instructional decisions, philosophy, or psychology of this lesson with? (For reference: Logistical discussions focus on identifying resources and procedures needed to teach science. Instructional discussions are focused on the knowledge needed for instruction. Philosophical discussions are important in building foundational beliefs

and knowledge related to practice. Psychological discussions consist of emotional support and creating one's identity within a community.

What questions will you ask?

What did you learn from those discussions?

Lesson Sequence		
Time-line: (provide each segment a title, estimated duration, and identify the step in the 5E model the segment contributes towards)	**Teacher's Responsibilities** (provide detailed descriptions of what you will do as the teacher in each segment)	**Students' Responsibilities** (provide detailed descriptions of what you students will do in each segment)
(add/remove segments as needed)		