This virtual companion tool is meant to support the use of the Common Planning Time Support Tool. This tool is specifically designed for the planning of science instruction for virtual units and lessons. This companion gives examples of virtual considerations needed for each indicator of the support tool.

During planning virtual science instruction, teachers:

Indicators	Virtual Planning Considerations
Prepare for the unit by: ● Identifying the disciplinary core ideas, science and engineering practices, and crosscutting concepts for the unit ● Outlining the unit storyline; identifying the problems students need to solve and questions that need to be answered ● Discussing how the disciplinary core ideas, science and engineering practices, and crosscutting concepts are threaded throughout the unit's storyline ● Identifying the appropriate places in the unit to address key understandings and/or misconceptions about the phenomenon and science concepts ● Reviewing the unit assessment	Prepare for the unit: ● Examine the unit to identify the disciplinary core ideas, science and engineering practices, and crosscutting concepts. Plan intentional virtual opportunities for students to interact with relevant digital data, models, images, and texts that represent the language and style used and produced by scientists. Prepare digital anchor charts (e.g. notice and wonder chart in a shared document, virtual initial model) for the unit launch. ● Identify what phenomena students will explain and what problems students will have to solve, and include opportunities for students to prepare artifacts that represent students' thinking as they incrementally build understanding throughout the unit. ● Determine which virtual tools will allow students to make sense of phenomena through simulations and demonstrations as well as investigations adapted for virtual settings. ● Identify places in the unit launch where students may struggle, and identify appropriate synchronous and asynchronous opportunities to provide support, such as virtual office hours or breakout sessions to allow for teacher and peer feedback. ● Complete and analyze the unit assessments to plan for how students will deepen their understanding of the three dimensions by building on previously learned content. Plan for opportunities for students to articulate and iterate upon their learning and thinking in a virtual experience (e.g., digital incremental model trackers and student journals, illustrations, interactive driving question boards, audio/video recordings, virtual demonstration).
Prepare for the lesson or lesson set by annotating the lesson plan to: ● Determine connections to the phenomenon and opportunities to build understanding of key science concepts ● Review lesson guidance and lab safety requirements ● Prepare labs and hands-on activities ● Identify connections between the lesson and upcoming assessments	Prepare for the lesson or lesson set: ● Critically read the lesson or lesson set performance expectations. Plan how to utilize virtual tools and other resources (videos, visuals, etc.) to ensure the most authentic engagement with the three dimensions possible, particularly engagement with science and engineering practices ● Identify competing ideas students may have about phenomena. Determine where you will leverage these ideas synchronously versus asynchronously during in planning for sense-making and argumentation. ● Identify what instructional routines you'll use throughout the lesson set including what strategies, routines, and protocols will be utilized synchronously vs. asynchronously. Plan how to use virtual tools and resources such as virtual labs and simulations, videos, and websites can be used to differentiate the learning opportunities for students.

	● Determine how student understanding will be assessed after the lesson set. Note key understandings you will look and listen for in critical tasks of the lesson set, and plan for opportunities for making student thinking visible within synchronous and asynchronous settings. ● Identify places where students may have misconceptions and determine strategies to support students by scaffolding learning for key science concepts.

Questions

Preparing for the unit/lesson:

- What will students learn about the phenomenon by the end of the unit? What virtual tools will be used to engage students in the phenomenon of the unit?
- What science concepts will students learn by the end of the unit? What tools do I have available in my virtual platform to support the teaching of these concepts?
- How will I assess and support students' understanding of the three dimensions (science and engineering practices, crosscutting concepts, and disciplinary core ideas)? What virtual instructional strategies and/or tools might assist with students building understanding of these dimensions?
- What incremental checkpoints will I use throughout the unit to assess students' knowledge of the phenomenon and science knowledge? How will I check for understanding virtually?
- What will I be looking for in student work, discussions, and engagement during the lesson to see struggle?
- Where will I embed visuals, videos, audio clips that enhance students' understanding?
- How will students deepen their understanding of the three dimensions by building on previously learned content asynchronously and synchronously?
- How and when within the lesson will I provide feedback to students using virtual platforms?

Prepare for the lesson:

- How will students demonstrate mastery of performance expectations virtually?
- What am I looking for in student work, discussions, and live video actions of students?
- What does success look and sound like for students virtually for this lesson?
- What are the best tools to utilize in our virtual platform to engage students in the lesson's objective?
- How will I provide feedback to students on their learning in the virtual lesson?
- How will I provide opportunities for students to give feedback to each other in the virtual lesson?