

Key Design Features to Support Sensemaking

Element	Description	Module
<p>Phenomena Based</p> <p><i>Centered around figuring out phenomena or solving problems</i></p>	<ul style="list-style-type: none"> Students' work is anchored in meaningful phenomena or problems that motivate building ideas over time. Anchoring phenomena and problems are complex, relevant, and returned to as we figure out more. Students investigate related phenomena to figure out pieces of the explanation. Assessments ask students to make sense of specific and compelling phenomena using their understandings built during the unit. 	Anchoring Phenomenon Module (1 &2)
<p>Coherent for Students</p> <p><i>Driven by students' questions and ideas</i></p>	<ul style="list-style-type: none"> Students' prior ideas and understandings are elicited, valued and built upon. Students and teachers work together to figure out where to go next and what evidence is needed to answer their questions. Students understand what they are doing and how it will help them answer questions about a larger phenomenon or solve a problem. Students engage in science and engineering practices in meaningful ways in order to make progress on their questions. 	Storyline Module (3)
<p>Driven by Evidence</p> <p><i>Incremental building and revision of ideas based on evidence</i></p>	<ul style="list-style-type: none"> Students' ideas and questions determine what evidence to collect. Students seek and use evidence to figure something out as they build and revise their explanations, models and arguments. Investigations provide evidence to build new science ideas instead of confirming pre-taught ideas. Evidence can be used to problematize our current thinking and help us think about where to go next. 	Investigations within Modules (various)
<p>Collaborative</p> <p><i>WE figure out ideas together</i></p>	<ul style="list-style-type: none"> Students have opportunities to use, build upon, and critique other's ideas. Students use evidence to support ideas, ask for evidence from others and suggest ways to get additional evidence. Students have several opportunities to give and get feedback The culture of the classroom supports risk-taking and changing our minds. 	Discussion Module (might differ depending on unit?)

<p>Equitable</p> <p><i>Requires a classroom culture that values all ideas</i></p>	<ul style="list-style-type: none">● Students have multiple opportunities to make sense individually and through small and whole group discussions.● The class community values the diversity of resources students bring to science class, including language, gestures, metaphors, and various modes of expression.● Norms are established and revisited to support equitable sensemaking.● Teachers integrate a variety of assessment activities to elicit, interpret, and provide feedback to build from students' diverse ideas and experiences.● Students understand how and why what they are learning is relevant to their own lives and their communities.	<p>Assessment Module (6 or 7)</p>
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