

TABLE 1: The Three-Dimensional Framework for the Baltimore Floods Unit

System and System Models	CT Practices	Water Literacy (and Flooding) Core Ideas
<p>Students define the system in which flooding occurs.</p>	<p>Students develop a conceptual model of a system.</p>	<p>Students define watershed boundaries and parameters, with particular attention to flood-prone areas.</p>
	<p>Students use a physical model to explore system components and processes.</p>	<p>Students identify that topography and land cover play key roles in flooding.</p>
<p>Students make sense with system data and representations.</p>	<p>Students use data from a physical model to represent a system in discrete time and space, identify relationships and define rules, and quantify the system’s behavior.</p>	<p>Students use models and system data to refine qualitative explanations and construct quantitative explanations of when, how, and why flooding occurs.</p>
<p>Students validate models and use models to explain and predict.</p>	<p>Students examine validation of system models.</p>	<p>Students examine how well the models explain and predict flooding.</p>
	<p>Students use models to make predictions and test solutions.</p>	<p>Students test and evaluate potential solutions to flooding.</p>