

Competencies	Learning Goals	<i>Curiosity. Asking questions</i>	<i>Developing and using models</i>	<i>Engineering Design Cycle</i>	<i>Persistence. Redesign.</i>
Level 1	Notice features, patterns, or contradictions in one's world		Students use diagrams, maps, drawings, photographs, 3D models as tools that enable them to elaborate on their own ideas or findings and present them to others.	Solve design problems by appropriately applying their scientific knowledge.	Students compare different designs by running them through the same kinds of tests and systematically recording the results to determine which design performs best. Students identify the characteristics of the design that performed the best in each
Level 2	Ask questions about the features of the phenomena being observed		Make and use a model to test a design, or aspects of a design, and to compare the effectiveness of different design solutions. Discuss the limitations and precision of a model as the representation of a system, process, or design and suggest ways in which the model might be improved to better fit available evidence or better reflect a design's specifications.	Engage in all steps of the design cycle and produce a plan that meets specific design criteria.	test and incorporate those into the new design.
Level 3	Ask questions about the need or desire to be met in order to define constraints or specifications for a solution			Construct a device or implement a design solution.	