

Design Challenge Assessment Scale Grades 4 - 6

Criteria	Level 1	Level 2	Level 3	Level 4
Developing a plan	<ul style="list-style-type: none"> ➤ plan is unclear but identifies a few steps 	<ul style="list-style-type: none"> ➤ plan is unclear but identifies several steps 	<ul style="list-style-type: none"> ➤ plan is clear and steps are in a logical sequence 	<ul style="list-style-type: none"> ➤ plan is clear and steps build on each other to accomplish the task
Use of Design Process	<ul style="list-style-type: none"> ➤ uses little of the design process ➤ inconsistently uses tools, equipment, and materials safely ➤ rarely selects materials and resources that enable the model to function 	<ul style="list-style-type: none"> ➤ uses some of the design process ➤ usually uses tools, equipment, and materials safely ➤ occasionally selects some appropriate materials and resources that enable the model to function 	<ul style="list-style-type: none"> ➤ uses the design process fully (i.e., plan, build, test, evaluate, communicate) ➤ consistently uses tools, equipment, and materials safely ➤ usually selects appropriate materials and resources that enable the model to function 	<ul style="list-style-type: none"> ➤ uses the design process fully and with insight ➤ shows others how to use tools, equipment, and materials safely ➤ consistently selects appropriate materials and resources, and adapts them as needed to enable the model to function
Model	<ul style="list-style-type: none"> ➤ requires assistance to translate design plans into a working model ➤ model may not perform intended function 	<ul style="list-style-type: none"> ➤ requires limited assistance to translate design plans into a working model ➤ model demonstrates some evidence of intended function 	<ul style="list-style-type: none"> ➤ translates design plan into working model ➤ model performs intended function 	<ul style="list-style-type: none"> ➤ translates design plan into working model and makes modifications to enhance the design ➤ model functions beyond its intended function
Organizing information	<ul style="list-style-type: none"> ➤ requires assistance to select an appropriate strategy to record data ➤ records limited relevant data 	<ul style="list-style-type: none"> ➤ requires limited assistance to select an appropriate strategy to record data ➤ records some qualitative data 	<ul style="list-style-type: none"> ➤ selects an appropriate strategy to record data ➤ records qualitative data (e.g., what you see) 	<ul style="list-style-type: none"> ➤ selects a variety of appropriate strategies to record data ➤ records extensive qualitative data (e.g., what you see)
Scientific communication	<ul style="list-style-type: none"> ➤ communicates with limited clarity and accuracy ➤ uses few scientific terms and symbols 	<ul style="list-style-type: none"> ➤ communicates with some clarity and accuracy ➤ uses a number of scientific terms and symbols 	<ul style="list-style-type: none"> ➤ communicates clearly and with appropriate precision (e.g., oral, written or visual) ➤ makes use of scientific terms and symbols 	<ul style="list-style-type: none"> ➤ communicates clearly and precisely ➤ uses scientific terms and symbols in context
Reflecting and Interpreting	<ul style="list-style-type: none"> ➤ requires significant assistance to formulate conclusion supported by model's performance ➤ makes limited reflections 	<ul style="list-style-type: none"> ➤ conclusion is partially explained and somewhat supported by model's performance ➤ reflects on results but makes few changes 	<ul style="list-style-type: none"> ➤ conclusion is explained and supported by model's performance ➤ reflects on results in order to modify plans 	<ul style="list-style-type: none"> ➤ conclusion is thoroughly explained and fully supported by model's performance ➤ uses sophisticated reflection to record and modify plans