



DESIGN AND CONSTRUCT IT!

TRAINER'S GUIDE

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Objective: Children will investigate how to use simple building materials to make structures that can withstand a simulated earthquake.

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STRAWMENDOUS

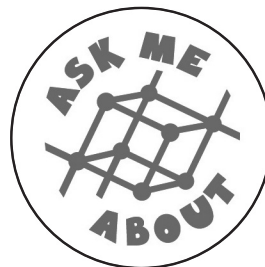
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APEX Science Curriculum Overview



Standards and Objectives: Design and Construct It!

	National Science Education Standards	Objectives
Problem Solving Out of the Bag	<p><i>Abilities necessary to do scientific inquiry</i></p> <ul style="list-style-type: none"> Build and improve unique designs by investigating successful and unsuccessful models. <p><i>Abilities of technological design</i></p> <ul style="list-style-type: none"> Engage in technological problem solving through first hand experience using given materials. <p><i>Understanding about science and technology</i></p> <ul style="list-style-type: none"> Design a solution to a problem understanding the relationship of science and technology. Scientists and engineers often work in teams. 	Children will investigate how to use simple building materials to make structures that can withstand a simulated earthquake.
Sail Away	<p><i>Abilities necessary to do scientific inquiry</i></p> <ul style="list-style-type: none"> Build and improve unique designs by investigating successful and unsuccessful models. <p><i>Abilities of technological design</i></p> <ul style="list-style-type: none"> Engage in technological problem solving through first hand experience using given materials. <p><i>Understanding about science and technology</i></p> <ul style="list-style-type: none"> Design a solution to a problem understanding the relationship of science and technology. Scientists and engineers often work in teams. 	Children will build and improve a unique sailboat design.
Strawmendous	<p><i>Abilities necessary to do scientific inquiry</i></p> <ul style="list-style-type: none"> Build and improve unique designs by investigating successful and unsuccessful models. <p><i>Abilities of technological design</i></p> <ul style="list-style-type: none"> Engage in technological problem solving through first hand experience using given materials. <p><i>Understanding about science and technology</i></p> <ul style="list-style-type: none"> Design a solution to a problem understanding the relationship of science and technology. Scientists and engineers often work in teams. 	Children will use limited resources and materials to create the tallest building possible.
Paperclips! Foiled Again!	<p><i>Abilities necessary to do scientific inquiry</i></p> <ul style="list-style-type: none"> Build and improve unique designs by investigating successful and unsuccessful models. Use observations to collect data. Use data to formulate explanations. <p><i>Position and motion of objects</i></p> <ul style="list-style-type: none"> Describe and manipulate while describing and measuring location. <p><i>Abilities of technological design</i></p> <ul style="list-style-type: none"> Engage in technological problem solving through first hand experience using given materials. <p><i>Understanding about science and technology</i></p> <ul style="list-style-type: none"> Design a solution to a problem understanding the relationship of science and technology. Scientists and engineers often work in teams. 	Children will build and improve unique design of aluminum foil boats to explore the forces involved in building a boat that floats.