

# South Florida Science Center and Aquarium

## ***Virtual Science Fair Series***

*Intended for students in grades K-8th*

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The South Florida Science Center encourages you to keep your creative curiosity and critical thinking going by taking part in our Virtual Science Fair series, all from the comfort of your home. While kids take the lead as the project team captains, families are encouraged to work together, be safe and have fun!

**FORMAT:** There are 5 two-week themed sessions to participate in throughout the months of April, May and June. Choose one or choose all! A suggested donation of \$5 per student project submission is greatly appreciated. Your generous support will help the Science Center continue our mission to *Open Every Mind to Science*.

<b>DATES</b>	<b>THEME</b>	<b>SUMMARIZATION</b>	<b>RULES/GUIDELINES</b>
April 6 <sup>th</sup> – April 17 <sup>th</sup> <i>Submission due by 6pm on 17<sup>th</sup></i>	<b>Brick Design Challenge: “Future City”</b>	The future is yours. Using bricks, Legos® or blocks, plus additional mini items and accessories you can find around your house, build your vision of the best future city.	Overall dimensions of project must be no larger than 24in x 24in x 24in  Majority of project should be constructed with bricks/Legos®  Individual construction pieces should be used as-is with no permanent modifications  Pieces must lock or stack together without using tape or glue
April 20 <sup>th</sup> – May 1 <sup>st</sup> <i>Submission due by 6pm on 1<sup>st</sup></i>	<b>Backyard Science Lab</b>	In celebration of the 50 <sup>th</sup> anniversary of Earth Day, harness the wonders of nature in your backyard while practicing safe distancing! What will you investigate, discover and present?	Submissions should include:  A question that fits the theme of the challenge  Your hypothesis, or what you think the answer to that question is  An experiment to test your hypothesis  The results of your experiment  Your conclusion based on your result - was your hypothesis correct?
	<b>Slingshot Paper Airplane</b>	Get ready to take flight, but	Airplane must be made of

<p>May 4<sup>th</sup> – May 15<sup>th</sup>  <i>Submission due by 6pm on 15<sup>th</sup></i></p>	<p><b>Launch</b></p>	<p>you need an extra boost in this two part engineering and physics challenge.</p>	<p>only one sheet of 8.5in x 11in plain printer or notebook paper - no cardstock or heavyweight paper stock</p> <p>No tape, glue, or other fasteners should be used in the construction of the airplane except for securing pieces that attach the airplane to the slingshot during launch.</p> <p>Launcher must be stationary and not leave a solid starting base when the plane is released. Table top is recommended.</p> <p>Airplane must completely release from slingshot at launch.</p> <p>Slingshot should remain intact before, during, and after launch</p> <p>Flight distance is measured in a straight line from the most forward part of the launcher to the first place the airplane contacts the ground after launch - not where the airplane comes to a full stop after bouncing, sliding, etc.</p>
<p>May 18<sup>th</sup> – May 29<sup>th</sup>  <i>Submission due by 6pm on 29<sup>th</sup></i></p>	<p><b>Rube Goldberg Machine</b></p>	<p>A Rube Goldberg machine is a contraption that does a simple task in a comically complex way. The “machine” accomplishes its task through a series of chain reactions - the more steps the better!</p>	<p>The machine must:</p> <p>Be no larger than 6 ft x 6 ft x 6 ft.</p> <p>Have a minimum of eight steps. There is no maximum of steps.</p> <p>Run for no more than 90 seconds per run, from start to finish.</p> <p>Contain or use no hazardous materials or explosives within the machine.</p> <p>Have no living things except</p>

			<p>the person starting the series of events</p> <p>Be safe to the satisfaction of the contest judges</p>
<p>June 1st - June 12th  <i>Submission due by 6pm on 12<sup>th</sup></i></p>	<p><b>Thrill It Rollercoaster</b></p>	<p>Roller coasters are called "gravity rides" for a good reason. Seek the thrill of physics in this challenge as you construct an operational, table-top roller coaster.</p>	<p><u>Rules for coaster challenge:</u></p> <ul style="list-style-type: none"> <li>- Use only materials such as wood, wire, string, twine, doweling, toothpicks, cardboard, construction paper, glue, tape or other low cost items for construction of the coaster. <u>You will need a 1 cm (1/2") in diameter or greater steel ball or glass marble</u> to travel through the entire length of your coaster.</li> <li>- Ready-made coaster or paper kits are prohibited.</li> <li>- The use of a plane or slanted board with bumpers to create a "pinball" like structure is prohibited. <u>All coasters must have a track.</u></li> <li>- Size restrictions: the base, including all shims, must fit within a rectangle footprint that is 30 cm x 75 cm. The overall track must fit within a rectangular box 30 cm x 75 cm x 100 cm high</li> <li>- Testing and judging will be based on the following criteria: Run Time (ball must make the travel from start to finish in one time), Technical Merit, Theme and presentation.</li> <li>- Plenty of attempts to tweak the design and function before submitting your video, but don't forget to clearly present your project before or after testing it!</li> </ul>