



**Monday – It’s About Time:** Could you make it to school on time if there were no clocks or watches? Learn how to measure time with some fun and unique engineering challenges.

**Tuesday – The Sound of Science:** Get in tune with sound waves and experience some good vibrations as you make music with science.

**Wednesday – Keep It Simple:** Realize your true potential as an engineer while you use simple machines to transform potential energy into kinetic energy.

**Thursday – The Shape of Strength:** Are all shapes created equal? Discover the strongest shape, what makes it so special, and how to construct marvelous structures!

**Friday – Sink or Swim:** Will you manage to stay afloat in your final set of engineering challenges? Explore density and prepare to make a splash with your most creative designs yet!

**Monday**

Item	Quantity	Substitution
Lightweight paper	3 sheets	
Writing utensil	1	
Dominoes	20+	Uniform-sized, flat objects LEGO, Jenga pieces, blocks
Single-use plastic cups	3	1 should be transparent
Thumbtack	1	Sewing needle
Index card	1	Paper
Tape	1 foot	

**Tuesday**

Item	Quantity	Substitution
Recycled materials*	Various	See table below for ideas
Smartphone	1	
Paper	3 sheets	
Shoebox	1	Any box or container larger than smartphone
Scissors	1	
Ziploc bag	1	
Ruler	1	
String	1 meter or yard	Yarn, fishing line, thread
Tape	1 foot	
Device to measure seconds	1	Stopwatch, smartphone
Small objects of different weight	2	Coins, marbles, washers
Metal eating utensils	3	Spoons, forks, butter knives





### Wednesday

Item	Quantity	Substitution
Rubber bands	10+	Hair ties
Pencils	6	Pens
Tape	1 roll	
Popsicle sticks	10+	Craft sticks
Small paper cups	6	Styrofoam or plastic cups
Plastic straws	5	
Marbles	10+	Objects of similar weight/size
Paperclips	5	
String	1 meter or yard	Yarn, fishing line, thread
Ruler	1	
Cardboard piece	1	Cereal box, top of pizza box
Scissors	1	
Index card	1	Paper
Glue	1 stick or bottle	Tape, rubber bands, etc.
AA battery	1	Object of similar weight/size

### Thursday

Item	Quantity	Substitution
Lightweight paper	3 sheets	
Writing utensil	1	Pencil, pen, crayon, etc.
Scissors	1	
Tape	1 roll	
Ruler	1	
Toothpicks	70	30 pieces of long, flat pasta
Index cards	Pack of 100	
Small porous objects	30+	Mini-marshmallows, Play-Doh

### Friday

Item	Quantity	Substitution
Measuring cup	1	Holds $\geq 2$ cups
Tall, skinny, clear drinking glass	1	Graduated cylinder
Aluminum foil	1 roll	
Corn syrup, vegetable oil, honey, dish soap	2 oz of at least 2 of these liquids	
Tape	1 roll	
Recycled materials*	Various	See table below for ideas
Paperclips	10	
Styrofoam cup	1	Styrofoam plate or ball
Small weighted objects	3	Coins, washers, marbles, etc.
Access to water in a container	1	Bathtub, sink, pool, bucket





**\*Recycled Materials could be any of the following:**

Cardboard boxes	Packing peanuts	Bubble wrap
Bottle caps	Cans	Bottles
Food jars	Milk cartons/jugs	Old greeting cards
Egg cartons	Clean takeout containers	Plastic cups
Old t-shirts	Corks	Plastic bags
Paper towel tubes	Toilet paper tubes	Cereal/Cracker boxes
Newspaper	Plastic utensils	Wooden chopsticks
Old electronics	Magazines	Old books
Hardware (nuts, bolts, washers)		

