Spaghetti Bridge Quiz

What is Compression?

1. The act of pulling something apart
2. The act of twisting something
3. The act of pressing something together
4. None of the above

What is Tension?

1. The act of twisting something
2. The act of pressing something together
3. The act of pulling something apart
4. The act of cutting something in half

Draw the strongest shape

Draw how you can make a rectangle stronger



What were the forces acting on the bridge?

1. Air, water, fire
2. Gravity, weight of materials, weight of sugar
3. Weight of sugar, gravity, air
4. Gravity, weight of materials, water

Foil Boat Quiz

What is buoyancy?

1. The ability of an object to bounce on the ground when dropped
2. The ability of an object to rise or sink due in a fluid due to density differences
3. The ability of an object to have good air flow
4. The ability of an object to efficiently move through water

What is Archimedes’ principle?

1. The weight of an object can change depending on the density of the fluid it is in
2. The weight of the fluid displaced by an object is equal to the object's buoyancy force
3. The density of an object must be less than the density of the liquid to float in the liquid
4. None of the above

What is water’s density?

1. .6 grams per milliliter
2. 1.2 grams per milliliter
3. 1.0 grams per milliliter
4. 2.0 grams per milliliter

To increase the buoyancy force of an object you do what?

How are boats made of steel able to float on water?

Crumple Zone Quiz

What is a Crumple Zone?

1. The area around a building during construction where it is dangerous
2. The front of a car that crumples to reduce impact in an accident
3. A part of the car, especially the extreme front and rear, made to crumple easily in a crash and absorb the impact
4. None of the above

What is Potential Energy?

1. The energy an object at rest has
2. The energy an object in motion has
3. The energy an object has to become a great object
4. The energy it takes to combust an object

What is Kinetic Energy?

1. The energy and object as rest has
2. The energy and object in motion has
3. The energy an object takes to freeze
4. The energy an object takes to raise a degree

What is Newton’s Third Law of Motion?

Why does a popsicle stick easily break in one direction and not the other?

Egg Drop Quiz

What is the speed that object fall at in a free fall?

1. 7.6 meters per square second
2. 12.4 meters per square second
3. 9.8 meters per square second
4. 5.7 meters per square second

What is drag?

1. Pulling something on the ground
2. Any force acting opposite the motion of an object
3. Any force pushing on an object
4. A heavy weight

What shape or shapes promote good air flow? (please draw)

What shape or shapes promote bad air flow? (please draw)

Why do cars want to have efficient air flow?

What makes a smart landing system? (Multiple answers possible)

Rube Goldberg Contraption Quiz

What is friction?

1. It is the heat made when two things rub together
2. It is the temperature change between two objects when mixed in water
3. It is the resistance one object has when moving over another object
4. It is the amount of time it takes to push an object over a rough surface

True or False: If the statement is false correct to make it true

 Friction always works in the same direction the object is moving

True or False: If the statement is false correct to make it true

 The smoother a surface the less friction will occur between an object and it

Why in this task do we want to incorporate small upward slopes?

What are possible ways to decrease the speed of the marble in the contraption?

Filtration Quiz

What is the % of the world’s fresh water

1. 12.6 %
2. 3.4%
3. 1.0%
4. 2.5%

What is the most common characteristic of a filtration system?

1. Large in size
2. Have multiple layers of filtration
3. Very difficult to clean
4. Cost a lot of money

How can water filters useful?

What systems worked for you in your project?

What is the name of the revolutionary new water filter used in third world countries?