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SLT Science Expo 2016

Physical Science

Participants



Name: _____

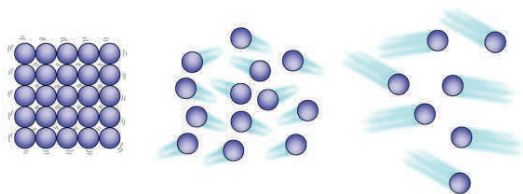
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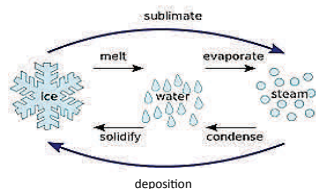
Properties of Matter

Physical Properties

Matter on the Move: What are the three states of matter?



Phase Change Poppers: What is the phase change called when a solid changes directly into a gas?



Invisible Mass: Air has mass.
True or False (Circle one)

It's a Gas: When citric acid and baking soda react, what gas bubbles out of the solution?



Slime Time: What type of fluid acts like both a liquid and a solid?

Mixtures

Separation Anxiety: Are mixtures separated by chemical or physical means?

Chemical or Physical (Circle one)



Energy

Light



Color Combination: When you combine red, green, and blue light, what color light do you get?

Colored Shadows:

Write in the 3 primary colors of light



Three Little Pigments:

Write in the 3 secondary colors

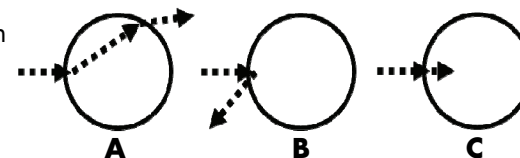


The Sky is Purple?: What gives the sky its color?



Great Wall of Color: Did you see colors reflected in the bubble film? Yes or No (Circle one)

Laser Light Show: Which image represents reflection? (Circle one)



Refraction Action: The bending of light is called _____

Super Spectroscopes: A spectroscope is a tool used for observing a spectrum of _____.

It's a Mirror-cle: Why does it look like you are flying?



Heat

Some Like it Hot: Name 3 methods of heat transfer and an example of each

- 1)
- 2)
- 3)

Energy

Mechanical



Give it a Ride: _____ energy is stored energy.

_____ energy is energy in motion.



Keep Your Eye on the Ball: Energy cannot be created nor destroyed but can change into different forms.

True or False (Circle one)

Sound

Musical Coat Hangers: Which is the best medium for sound waves to travel?

Solid or Gas (Circle one)



Good Vibrations: What creates sound?

Electricity

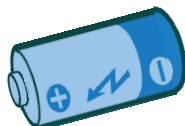
Sizzling Static Electricity: Uncharged objects become charged by gaining or losing _____

Human Battery: Which pair of metals produced the most current:
(Circle one)

Copper + Brass Copper + Aluminum Copper + Zinc

Electricity, Simply Magnet-ificent: In this activity you observed
(Circle One)

- A compass needle move when you connect a battery to copper wire
- Copper wire rotating on a battery and magnet
- An electromagnet picking up a paper clip
- All of the above



Currently Working: A solution with ions is able to conduct electricity.

True or False (Circle one)

Properties of Matter

Density

Mystery Box: What is the definition of density?

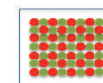


Floating Golf Ball: Which is more dense,
Freshwater or Saltwater? (Circle one)

Stacking Colors: Which is less dense?
Oil or Water (Circle one)

Hot and Cold Density: How can you change the density of water?

Changing the Density of an Object: Can two objects have the same volume but different densities? Why?



High Density



Low Density

Chemical Reaction

Gassy Lava Lamp: What is a chemical reaction?

Shake it Up! An indicator, like cabbage juice, is used to demonstrate that a chemical reaction has taken place.

True or False (Circle one)

Exothermic vs. Endothermic:

_____ reactions release energy in the form of heat.
(For example, Calcium chloride mixed with water feels warm and can be used to melt ice.)

_____ reactions absorb energy in the form of heat. (For example, Urea mixed with water feels cold.)



Fire Starters: What is needed for a fire to burn?

Forces & Motion

Air Pressure



Automatic Balloon Inflator: Which takes up more space:

Hot air or Cold air? (Circle one)

Mystery Candle: Is the pressure higher or lower inside the flask:

Higher or Lower? (Circle one)

Balloon in a Bottle: How do you know air takes up space?

The Power of Words: True or False (circle one): The more surface area something has, the more atmospheric pressure pushes down on it.



Gravity

Gravity keeps you down: _____ causes falling objects to slow down.

Strike a Balance: What physics concept keeps objects from falling over? The _____ of _____ of an object.



Friction Frenzy: What is an example from your life when you experience friction?

Physics of Animal Flight

Flight: What are two things that help animals fly?



Forces & Motion

Magnetism



Magnet Magic: Magnetic fields cause magnetic _____ and _____.

Magnet Mania: True or False (circle one): All metals are magnetic.

Eddy Currents: Does a magnet fall faster in:

Copper tube or Plastic tube? (Circle one)



Properties of Water

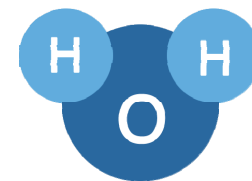
Magic Playing Card: What bond is breaking when the water spills out?

H2Olympics: _____ is the attraction between water molecules.

_____ is the attraction between water molecules and other materials.

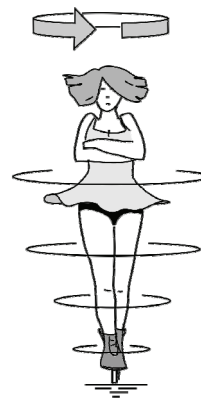
_____ is the strong bond formed between water at the surface.

_____ is the movement of water molecules within materials.



Momentum

Match the type of momentum to the photo.



Angular

Linear

