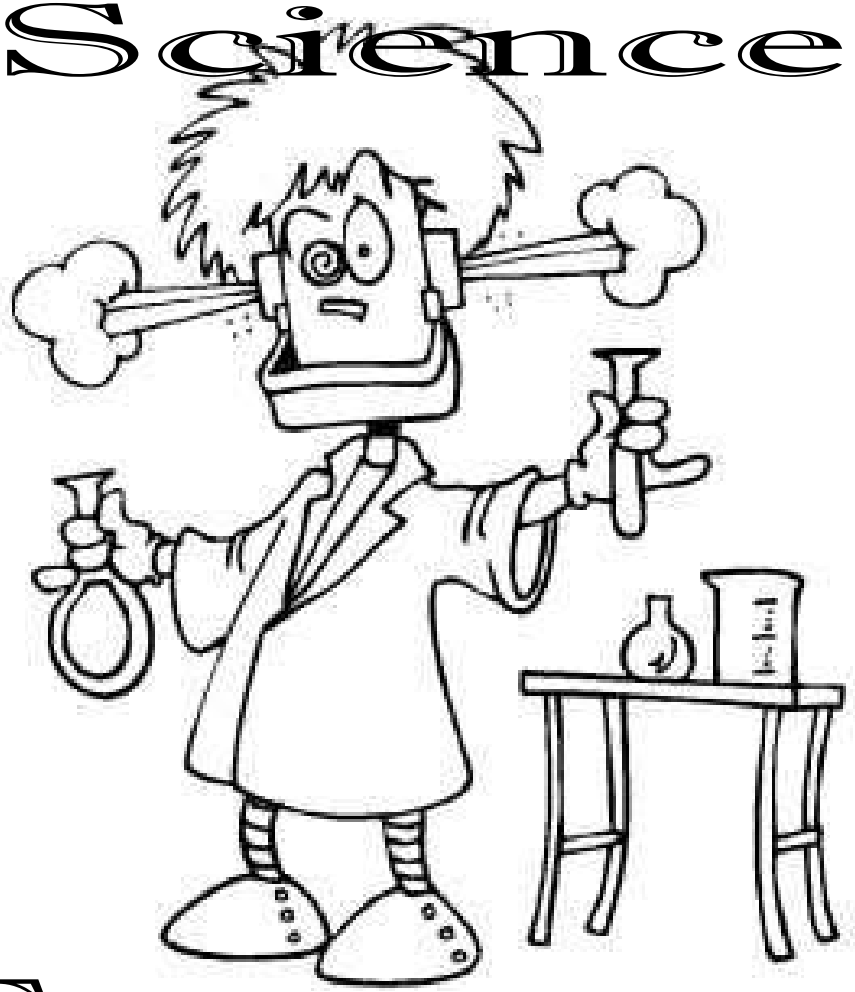
Mineola Science



Extravaganza Activity Book

Cave of Lasers

D L I Y M V S S K I Y N M W T
J I O T X A L R N O S C H P N
A Z F G H A E T K P J W J D E
Q V D F T T V B S F H S E Q R
Z H F S U U G C K R O L O C E
P O Y B T S Z N L O I E F D H
M R R E L N E C E G O K M T O
C G U I Q R O C H L J O W I C
D V H Q B X Y T L O E Z K E E
X M N Q C I B D R W A V S X E
M K D B U I Y E Y O P L A V N
N O I T A C I F I L P M A W E
J C P H O T O N S L V Q Q A R
S D T F V C M K G B Z U S B G
E C J R W N W Y X Z W Z W M Y

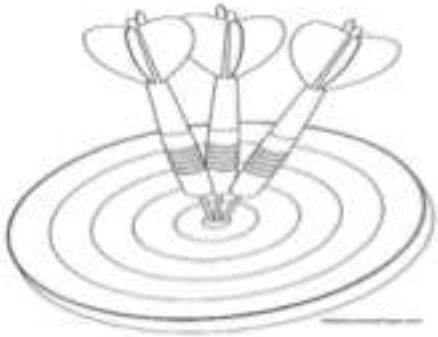
AMPLIFICATION
BEAM
COHERENT
COLOR
CRYSTALS
DIFFUSE
ENERGY
LIGHT
PHOTONS

Our project is the laser cave, where you shine lasers into fog and they can be seen. This causes the light from the laser to scatter. And ultimately be seen by the human eye. By- Cindy Jasmine Ana

Darting Darts

S T J I O E G P L E W P P K L
V P H H Y D E O C N L M J H O
S T E U S Q T N G W Q P M G K
V C K E T Q A J J S M X T P D
Y K I S D T N Z E E G N L R C
E N W M S I A H J V U N A I D
C O G I A B G F Q L V G O L J
N R D E N N T F I L W S R S H
A M I I B R Y G N D V T E Y I
T T B A Z H D D L L M P N R T
S L P Q L F A I O S I A I T P
I M O T I O N F O R A R Z R N
S E U O D R M I R T E E B P A
E L E J M C Z Y C I Q A X C G
R O J A Q E W K P E W V D J I

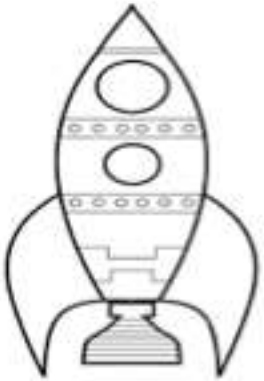
AERODYNAMICS
AIM
AIR
DISTANCE
DRAG
FORCE
LIFT
MOTION
RESISTANCE
SPEED



Throwing darts is a great way to learn about aerodynamics. Aerodynamics is the way air moves around things. Anything that moves through air has drag and lift. Drag is what slows down the object in the air.

Created by Spring, Hailey and Hannah.

Water Rockets



P T S G T U G P D R R R G L D
L H E L Z Z O N V L C O U G W
Z R K H S W V Z F E B S F A O
N U D N R O X S D E K S L Z L
F S L C L E R E R U X E C Q Q
S T S U Z K Z U P B C R N A M
S D M V M X S I N B O P S O F
I E M H O S U C L N X M S R X
Z M E L E G A S D I V O A E Y
D L P R Y Z F O A D B C M E Z
B R P U N E W T O N S A Y Y I
I K I Y L K E A Z W I B T P D
N Y U H H S E A V O J M K S X
F Q D R T J E E A W P C K J D
N G P P A H E U W X G G X V O

COMPRESSON
GAS
IMPULSE
LAW
MASS
NEWTONS
NOZZLE
PRESSURE
STABILIZER
THIRD
THRUST
VOLUME

Water rockets are a type of rocket using water as its fuel. The rocket is made normally out of a two liter bottle. The bottle is pressurized which causes the water to shoot out and the rocket to launch.

Created by Drason tenner, Quinton Kimmel and Landry

Radar Gun

Q R Z X N R A Y E S E V A W V
V M C I A O T J F E O S E F K
O X R D G I I N F R H U B T K
S V A I C L M T E D U S N R V
M R U O B C H P C B E D I A F
I G L H W F L P T E K E D N Z
B E D I S T A N C E L Y P O Y
V A E J R H I D Z T A F C S C
Z D S P C D L M J F U B E P N
T E N G A M O R T C E L E R E
S A K U K T H P W V J N T P U
J Y O F I Q B T P F E F L A Q
D C N O V S T Z N L T Q M X E
H B N D I X U S M F E Z W E R
E H R V A F P A V X L R A F F

DISTANCE
DOPPLER
EFFECT
ELECTROMAGNET
FREQUENCY
MOTION
RADAR
REFLECTION
SONAR
SPEED
VELOCITY
WAVES

Radar guns use Doppler radar to perform speed measurements. They consist of a radio transmitter and receiver. The radar gun shoots out radio signals and receives the signals back after it bounces off the target, calculating the speed.

Physics of Soccer

F M U P F J U R K F Y O V I P W S Z R J
R K U J C O E L G N A I Z N S G W S S B
I D A T N P R Z F X N R D E A G S I T E
C V G L N D I C Z M O K J R J I H R B P
T P V M C E G Q E F I R K T T K S K N A
I I O G H M M O L R T O O I O Y G J V K
O J Z L N G Y O Y U A E Y A V W G G L Q
N J W D S D J R M R R C T T X G H J L M
D S F L P A B I L U E M G O E G G V W A
U X Q W H X X A W R L K I C K I N G L Z
S J Z X E S J J Y Z E O V N X G T A U S
H W X N R V V P W T C L V E L O C I T Y
V G Q V E U J N R X C E N O C L O J C E
Y N G G Q Q K K O Z A M F I H B N V A J
Z T E V M F Z A J V S H L A F B M A U O
N L I E P C E C E V V R T E S P O K N B
Z X P V E S S N S N F P Y S G Z S T F V
Y B W S A D Z S K L H K S Q Q T U P M G
N Y A Z H R X S O V L R K Q Q P D C M V
P L L S P S G C J U U F B Y F U I N L G

ACCELERATION
ANGLE
FORCE
FRICTION
GRAVITY
INERTIA
KICKING
MOMENTUM
SPHERE
VELOCITY

Newton's 1st Law – An object in motion stays in motion and an object at rest stays at rest. Newton's 2nd Law – Force = mass x acceleration; Newton's 3rd Law – Every action has an equal but opposite reaction. Created by Heaven, Luygui, Jaime

What's Poppin?

W I X S J C W Y H P O S U J M
R X F Z K G X Z R Q F L G N J
X R Z B B T F E F E W E N J E
T K M D W W S B T B L N H C O
J S W W T S W Y H M R R N Q A
E L E R U T S I O M G E F L R
S Z A R A Q E C N U I K A X I
P Z E M N F P O P C O R N E H
L H G X R C G I S T A E H R A
C G Y K J E S W U I O T S D W
E F D S Z J H A K F J T N Q P
D R M O I Z L T N U E Q N G Y
J B T C X C N E J A S Z O M U
V L Z C W N S R M L C B W B O
Y L L W N K Z K T K C C Y N C

HEAT
KERNELS
MOISTURE
PHYSICS
POPCORN
PRESSURE
SCIENCE
STEAM
THERMAL
WATER

Popcorn pops because each kernel has water inside of it. When the kernels are heated enough pressure is exerted to burst the kernel open. Created by Anthony Tresca

Strobe Station

P T O S U L F P T V Q D A R S
R E Y T G V L Q Z P W Q E W E
I T B R B N E T K O Q F U M V
S R V O Z O F N B I L N G P T
M O O B O K H N I E L I G H T
S W P O N O I T C A R F E R M
W W E S Y A F T I U B Z C H U
M E L C R C I L T V F H O U R
P M C O V O N N A U H F V X T
Z E G P N A U E R S O V H H C
N Q T E G Q T A U R H G X J E
P L Q I G T Y Y X Q K D V O P
V B N F X P W X E E E E D F S
D G C U G R U G O D M R D J M
I D S M N G U H F A X U F I I

FLASH
FREQUENCY
LIGHT
PRISM
RAINBOW
RAY
REFLECTION
REFRACTION
SPECTRUM
STROBOSCOPE

A strobe light is a device used to produce regular flashes of light. It is just one of many instruments that can be used as a stroboscope, which can make a moving object appear to be slow-moving. Strobe lights use xenon gas. A pulse of voltage is put on the end of a bulb, which then flashes to give off a bright light. Created by Eden, Mallory, Lexi

Super Mario Cart

Y T I C I R T C E L E V Q Q A
G D D W S S Y N R A N D D C F
R R L F P E O L B I L U C Y Z
I K A E S I I C H T C E H V W
Z R E V T O G R N N L G M T P
X D F A I P B P E E C R O F H
G O T X E T N N R T D G D K M
J O R H K I Y A S O T L K A X
R P Z F T C T V F P J A H F M
Q N T K K I Z K E N D B B P V
T V S O O R U S N Z F Y G O A
Z K I N E T I C E U I C X Y O
S Q J P U E R B R M W M G B T
C T X O A H V O G Z W T V E I
L X S S Q L E L Y I E V F J J

ACCELERATION
BATTERIES
ELECTRICITY
ENERGY
FORCE
GRAVITY
KINETIC
POTENTIAL
ROTATION
SPEED

The electric go cart uses electricity to function instead of fossil fuels which is the gas we put in our cars. Fossil Fuels are nonrenewable while is electricity is renewable.

Created by Seth, Spencer, and Marco.

Marshmallows

W J E I A C M N M Q E Y J F K
Y Q R I O E H Q O R N H D N E
S Y E I L J Z E U B Q P Q Y X
T Q T T U C H T M Z R B R D P
C A I S U B A N R I P A E I L
R N F X Y R Y L E J S I C L W
G P B X E G L C A Q A T N O Z
V Z Y P O I N T C T P H R S W
I Z M R A D I A T I O N E Y F
K E W E G N I L I O B E Y A A
T M E I Z O K S O V O F X M T
V W A M G P Z K N I A T Y G T
N E G A V H Z G E A X Q W S U
D D Y G U J X M T R Q S G X W
P Y V O J G O P N G L O K T R

BOILING
CARBON
CHEMISTRY
HEAT
MELTING
POINT
RADIATION
RATIO
REACTION
SOLID
TEMPERATURE

Roasting marshmallows, in scientific terms, causes a chemical change where the marshmallows turn into carbon. A Chemical change is when one substance is combined with another to form a new substance. Created by Landan and Brian.

3D Printing

D C J S Q N F T F S E N C L C
L N M Y N O U M A Z B X J P O
R A M F E I A A Z R U D R B D
E R U I S T X X N Y G I U E P
B Y O T S A Q O V Z N I T Z E
E E T Z R C E H S T I A S R G
U Y M F N I U O I V L S U L H
R R R S I L V N R U E T R F E
X I Q C R P G N M I U R Z L D
M M A W D E S U D F A N Y A L
P O S Q T R C V S N O L I S Q
O N Z I E C H N O L O G Y T H
G T K R A R E T U P M O C I I
O H J U K Y C J P R O S L C E
T T U Y I U T B H Z I G E S I

ACCUMULATES
COMPUTER
FUTURE
PLASTICS
PRINTING
REPLICATION
ROBOTS
TANGIBLE
TECHNOLOGY
VIRTUAL

The 3D printer works by melting filament, which is plastic. Then the computer puts layers of the plastic to create your 3D design. Basically anything can be made with 3D printing.

-Gustavo and Omar

Tornado

E C N O Q D Q Z D L O G T L Z A
R Q Y L A Y D E N Q V K F M D Q
U V Z C K D G M I Z V D A K V D
S O D T L R T Y S K R E N T W M
S R X U E O O X F V R Z J I S P
E T Z E O R N D T T M L M B W X
R E P B I L G E S T O R N A D O
P X L C U H C T A L T Y V S A C
R A D A R R E L P P O D R Q G L
I S Q B S J A Q E O E D C C H Y
A J H S W K J L D N I N I P T W
S O Z H K U P U Y B N I C Y U C
D Y V J J D R T X V V U S A T M
U Y T J V X T X R I C P F V I T
R R R F Z U O K D J Z W L I A H
W G H D R Z W Q V X F L H B D O

AIRPRESSURE
CYCLONE
DEGREE
DOPPLERRADAR
FUNNELCLOUD
HAIL
JETSTREAM
TORNADO
VORTEX
WIND

Tornadoes form when warm, moist air and cold, dry air collide in the atmosphere. A change in wind direction and increase in wind speed create a spinning column of air. The spinning air sucks up warm air from the ground and makes a funnel, or a TORNADO!

Cotton Candy Kisses

M N I C V G N K H C K R Y M M
A O H A B F M T L S C H M G O
S I V R N E G O R D Y H N O T
W T O H V L H T W F N I C E I
H C D O K T A H G E N H K I O
E A G H W J G C V N E X G V N
Q E I Y W K M E I M D H K V K
M R G D L D O P I S T L E N B
V V F R O H S S E B Y T D H Y
X N U A T X T Y N A U H H X Q
X P I T E R Y E G Y Q E F M C
X P Y E Y A N G U L A R O X O
F I E L S U D W E T I M O C X
G Y Y N G A O G G N H R P L I
V M G A X J L Y R O Q N W L T

ANGULAR
CARBOHYDRATE
CHEMISTRY
HEAT
HYDROGEN
MELT
MOTION
OXYGEN
PHYSICAL
REACTION
SPINNING

The cotton candy is made by melting sugar into thin strands. You will then hold your stick at an angle in order to pick up the candy. This is called angular motion.

Created by: Emma Brian, Brianna Holt, Randi Brannan

Airplane Launcher

T C H B J S B E Y G W U Y K B
V I N X D H K T R I V G M T T
L M R K Q Q I N N O D L N T H
Z A T F A V O G D Z E B A R K
W N L O A V S F V A Y Z V C V
D Y A R L S R O T Y V W S T N
N D G R H I X R R R H H P X X
T O F M V O P C R I T O U X G
B R I L S T Z E K J F P I A B
P E M E I D E E P S I B R Z E
R A D G G G I V N Q L D R N K
H F X T C L H K A F J B X I C
R U O T B E H T M P O H B E G
L J C W F J R R O F M N L P L
T H R U S T O Z M T Y E Y H W

AERODYNAMIC
DRAG
FLIGHT
FORCE
GRAVITY
LIFT
PILOT
SPEED
THRUST
WINGS

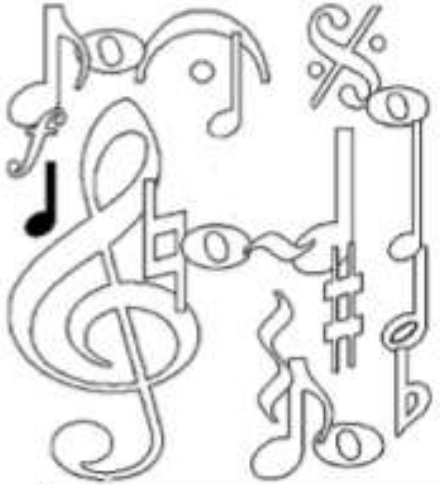
Air planes and paper air planes work kind of the same. Paper airplanes use thrust to take off and their wings cause lift so that they stay In the air just like real air planes.

Created by: Luke, Brayden. Edgar

MusicBot

V F U F I O F T G M R A B E S C T A I N
G C N M U S I C L H N U T D R X O M T A
Z D D H T Z D T S I M A R G O R P L M N
D Z E O X K E K M N E K W D S T N L O Z
Y F R T I L B A H R R V Z R N E J P J R
U W S B F T L S C W A W A F E Q Q F G R
D W T A N S L O F I F H M K S J W X Z J
U O A A L E Q I F C N A L A I B D Q O H
Y W N B L R C G Q E R N X H U A E J I O
J Q D G U U F D R W B U H U L K N Z H U
Q F S I W J K U L W E M C F O L G C K V
P P G J D U O V P D N L D F W B W K T K
I T Z F M R J V O U F B B U V H M W O W
M G V E C E Z G O W Y K C A I I G A U S
G P T G L S S S H P Y T M Q V G Q N C P
O M U O M I S P C S H D B K Q O Z Y H S
N C M W Q K X E M Z Z P N Z W R M E E V
K E U T G Z O C S G W A Q Q P M L E W H
M O Q R I D S L Q V B E A Z T U S L C M

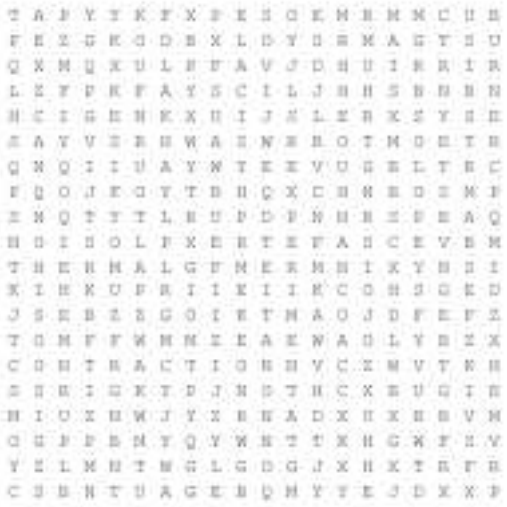
ANIMALS
COLOR
CREATE
MOVABLE
MUSIC
PROGRAM
SEES
SENSORS
TOUCH
UNDERSTANDS



The MusicBot is a robot we have created to read music or animal noises with the colors. When the color in under the robot the MusicBot will play the note that we have program it to say. We can switch the to play music or to make animal noises.

Created by: Kirstiana and Jackson

Shattered Marbles



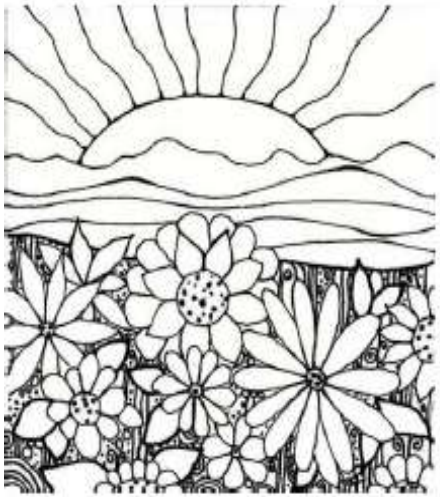
BUNSEN
BURNER
CHANGE
CONTRACTION
EXPANSION
EXPERIMENT
EXPLOSION
MARBLES
PHYSICAL
PRESSURE
SHOCK
TEMPERATURE
THERMAL

Our project is shattered marbles. Shattered marbles are created when you take a normal marble and heat it up and then quickly cool it down by water. The expansion from the heat and the contraction from the water causes the marble to shatter.
Created by: Emma Miller, Dakotah Galbraith, Autumn Galbraith

The Growinator

Q	M	K	M	F	T	P	V	S	R	I	E	L	E	Z	Y	U	D	Q	U
J	A	R	T	S	P	K	H	J	O	N	L	X	F	E	E	O	A	I	M
U	Q	I	K	L	S	D	X	O	E	I	L	K	F	J	O	R	E	O	D
X	F	N	G	R	S	X	V	R	T	G	L	C	I	F	N	Z	Z	U	A
U	Z	Q	D	S	P	A	G	T	Y	O	R	O	C	X	I	K	E	A	F
C	B	R	X	Q	B	Y	E	Z	Q	K	S	Z	I	F	L	Q	Q	O	W
O	R	H	L	V	G	R	Y	L	I	T	Z	Y	E	U	Z	D	D	P	W
N	Y	O	G	B	M	R	X	F	T	A	L	O	N	Q	B	V	J	O	J
S	V	J	O	S	T	N	A	L	P	H	K	W	T	T	D	X	T	B	W
Y	E	J	Q	B	Z	T	C	R	D	O	G	K	C	A	H	L	A	L	T
K	D	T	K	E	B	N	R	Q	B	M	W	I	Y	M	K	E	A	G	T
I	D	J	E	D	B	Z	K	C	D	Z	V	Y	L	P	X	M	S	Z	S
X	S	R	O	U	B	E	Y	H	Z	G	R	O	W	K	K	R	L	I	E
U	R	G	S	T	K	T	J	P	U	B	L	Q	B	D	O	T	K	T	S
L	Z	J	N	P	K	S	S	K	X	R	W	F	A	T	K	O	J	K	L
Z	X	J	D	N	S	W	E	A	R	U	H	H	G	H	I	B	Y	G	O
Z	X	U	T	B	X	Q	G	T	E	P	B	M	V	L	M	O	O	W	V
D	L	Y	O	D	D	F	D	N	T	G	O	Z	N	N	E	R	X	V	Z
E	H	Q	R	Y	P	D	D	X	D	R	L	L	D	U	Z	J	Z	S	E
F	P	Y	O	A	E	D	G	O	F	H	G	K	O	C	N	L	Y	R	A

EFFICIENT
ENERGY
FOOD
GROW
LIGHT
LIGHTBULB
PHOTOSYNTHESIS
PLANTS
ROBOT
SOIL



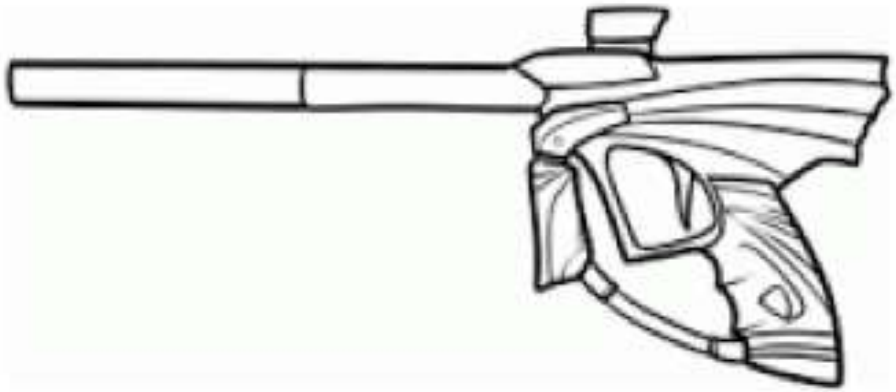
The process of photosynthesis provides food for plants to grow. Sunlight is the energy that starts the process, and by increasing the energy that plants receive the plants will grow more.

Created by Lizet and Haylie

Paintball Pressure

Y R Y A C Y I S N F V L A Z E P W M S H
N T T K D N Q R T M H C G W V O V M D M
N O I T C I R F Y N Y N P S R M G S R V
K Y Z C Y C W R W K X U P Z G G O R K G
I I X R O J I P X F O E X K Y Z Y N B O
X O F K P L Z R D G E W R M Q V Y H G X
A P F V C Y E S R D Q F K M D I L H Y M
L L P M V C C V N J B V V E Q J A N Y Q
M K Q P W Y K Q B K A V J A E V X X P A
U B U N J R I X H Y R U I Y R Q H T E U
T A N L W U K N T P B C E R U Q L B S X
R S T A T I C K R T S Q V W S N B B Q Z
K A D Q M E T O R U C Q K W S H A N W H
D Y O Z G N J E C I M D S Q E R H T G W
V B W T H E D V A W X O B K R A O D K R
S K U D C I T J R R I T T W P E C R O F
C O Z T X Q L W B J A F B I K A Y X D O
K H I O R A D D O K Z X E K O E B Y V W
H L I L W I L Q N U P Z G G K N D D X R
E D W M F U Q O P K S L O R N K O F Q E

CARBON
DIOXIDE
FORCE
FRICTION
MOTION
PRESSURE
PROJECTILE
SPEED
STATIC
VELOCITY



Paintball guns are powered by carbon dioxide that makes pressure to launch the paintballs at a high velocity with decent accuracy.

Created by Christian and Brett

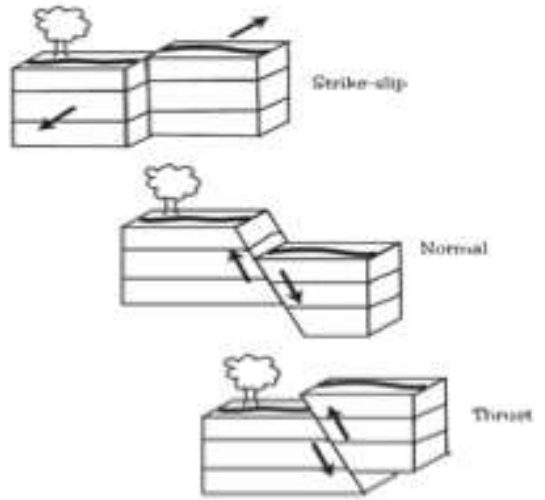
Earthquake Machine

X H Z F D E Z S I R Y Y E N K
E G W F O M Z N W E T T J U E
U K T S M R T S L T I S Y T I
A E A P M E E P M N V U P D M
G N B U N S P S H E K R M L W
P D O S Q V B Z H C T C A J I
Z O I S B H M Y O O V E I G Y
L T X P K R T H M P C H N G U
Y S H O E W S R Z Y H K S S L
F D L H T R Y H A H H K H H O
E P I C E N T E R E T K O J I
T M U T E Z Y L N X H Y C U K
E G F H B Z U W U Y Q Z K D U
K A Y O S F C T O A W Z X F V
E L T N A M H O O A F I T D A

AFTERSHOCK
CRUST
EARTHQUAKE
EPICENTER
FAULT
FORESHOCK
HYPOCENTER
INTENSITY
MAINSHOCK
MANTLE

USGS

Types of Faults



I'm going to teach about earthquakes. An earthquake happens when tectonic plates rub against each other. Southern California has about a thousand small earthquakes every year. Created by Luis Melo and Steven McCartney.

Grill 'in & Chill 'in

F R B O I N T C D V W T C H G S V U V H
O M H G S Y O N C V B H Z E M O M C G E
Z R A D I A T I O N V E N H L E S U A M
U V A F H G G H T Z S R P R G S E U K C
P Y Y R Q W K V T C W M K A R U I A N T
G V Q X G O P U T N U O T D Z X T U P Z
N Q I T C E V N O C T D N E S G I Z S Z
W G V G A Y B I G E U Y N O R N E C Y Q
W N F I S T T P M T A N L O D E H M Z L
S U V Z E C K P C I C A G Z C F N Q J U
P I Z Z E B E V D M R M C M O D E Q Q H
R A J L M R D Z A I H I V U Y N R D C P
B G F V A N J N K N R C K B F I H O J F
T E D T L B K U Y G F S H N W I A R P E
R A U Y Z W W S U G O H G K J F F V B U
F R H L O J O R X K K H W N O W C Y B G
E U N R R X R B E N I N R T T L T K O X
W M F O D J T O V U L X M N D H H U P M
K P A U V M E F K M G A C H M Q L S S R

CELSIUS
CONDUCTION
CONVECTION
FAHRENHEIT
RADIATION
REFLECTION
SOLAR
TEMPERATURE
THERMODYNAMICS
TIMING

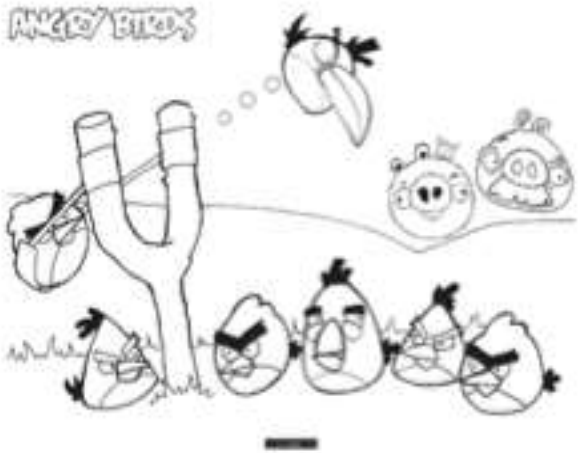
Cooking works by heating an object to the point where it is safe to eat by using one of three cooking types. Conduction is the process by which the object comes into direct contact with a heat source. Convection is another type of cooking process that involves heating the air around an object. The final cooking process is solar, called radiation. This works by using the sun to heat.

Created by: Noah, Dalton, and Dylan

The Spring Fling

T J J Q I Z P P S V E N Z D K
D H A I Y V Q O W P K Q Z I S
A N O I S N E T P E E G N F N
P C T H R O W E D N Y E B O E
X J C W Y L G N O Y T T D R F
Y T E E B N Q T O I N Y W C T
X G D Y L S W I C Q O I M E X
A U R P N E O A C F I H O I Y
Y C I E N C R L H E T I U H Y
S R T P N E O A T A O Y L T C
L W W B D E I B T B M O B D D
P E M K E S K G Z I I M F R A
K Q A D T B T N I J O A G O P
V H E V F L G E S T I N H J V
Y A T X E H I N U E V B J G J

ACCELERATION
ENERGY
FORCE
KINETIC
MOTION
NEWTON
POTENTIAL
SPEED
TENSION
THRON



The slingshot works by pulling back on the sling. This creates tension, or potential energy. Then you release the sling which turns the potential energy into kinetic energy and launches a projectile. Created by Bailey Mischnick, Josh lee, and Austin Witt.

Diffraction Glasses

"See the Rainbow"

N S Z T O V S A R G N U E Y B
O X P H H E T O A O T C A O O
I H U E P G Y J I Y G R E N E
T E V D C G I T N F X C Z R Q
C O V R B T C L B D B X F N B
A M Z I D A R U O S Z F O S N
R F V D R T J U W Z V S I Q R
F M S F B T J S M P Q K Q O Y
F U E T N X H M B I C W L O C
I R V F K N K Q H Q F O B W Q
D C A I W S D O D D C K J I C
F D W L Q D Y R E U H S Z H P
V X Q G X S O T Y E M I O T V
G B L M L H T R V M D U S I O
R E F L E C T I O N X P L G A

COLOR
DIFFRACTION
ENERGY
LIGHT
RAINBOW
REFLECTION
REFRACTION
ROYGBIV
SPECTRUM
WAVES

Diffraction glasses work by creating a "diffraction grating." When a white light enters this diffraction grating (Plastic lenses) it separates into the colors you see in a rainbow.

Created by: Kiley Banks and Kaleigh Sauer

Up, Up and Away

N G X P S V C O P G W O V F X
O V Y S D M E I E R Q P M I L
I V A G A P T R I A M P W X V
S M I P K R T C T V D V C O T
N A L T I T U D E I Y E L R A
A C Q P D Q Q A U T C U E F E
P H A D J S N N E Y M A R P H
X M C J V J V T K E J E L N S
E H B B A M U N X Z E U D Q V
L L W O X H H X C W D P T C F
M W K M C L E P O R P B H C W
W G G A Q K M N E U K J W F X
B K R X Z J D F Z E U D R R M
S A G M W G R G Q B D J E I E
P Z L G H I L J W E K G D Q O

ALTITUDE
EXPANSION
GRAVITY
HEAT
MASS
PARACHUTE
PROPEL
SPEED
VERTICAL

Hot air balloons work because hot air rises., By heating the air inside the balloon with the burner, it becomes lighter than the cooler air on the outside and rises. Then when the air cools the hot air balloon sinks.

Created By: Grant Woods and Noel Lovett

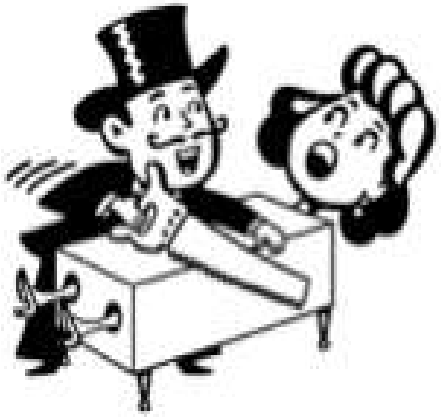
Hovercraft

N F O O Z O P C C R U F M B G L B R L Y
L O R B H T D D U L M P D Q R E G I X J
T E I I U U I D S B Z W M J G Y Y A D R
Q J P S C R B K H S T R Y M L O N D M T
I A H O L T H C I P Z Q T H G I E W L O
K F K V R U I J O M I Z M Q P I E O H G
R M J J N P P O N Y I W D Q S N V W K J
S E T Z J A A O N Z H A H Q U C M A G G
L X L H R M E W R Y Z D X J O E E A S N
L P U Y J T R K C P E H G E P R P Z X O
J B D B H R Z U T C T I H Z Z U X U X J
X S U R C U K B N L Q J X A V S H S Z V
T K U S C I M A N Y D O R E A S X D V G
K S V G Q N T Z P L Y P U L R E M W Y B
T X C V S S Y D U D H N O E M R O X X C
H J A L I P Q X G A T K Y H E P X U K I
B M Y D E P C N I S D O B B S J C T J I
V A Q M S P J F D T W H H H P G G D Y S
Q W H H V E L O C I T Y F O K O T A Y J
L E I F D N V D H J U V P R L P M O K E

AERODYNAMICS
AIR
CUSHION
DISTANCE
FRICTION
PRESSURE
PROPEL
PROPULSION
THRUST
VELOCITY
WEIGHT

Hovercrafts work because of air currents pushing beneath the hovercraft and the curtains of the craft traps the currents keeping them underneath the hovercraft making it hover. Created by: Carson Jones and Jacob Lee.

Physics Magicians



Q F E W X O W L U E O T V L F
E P H L N A D D A U T G W L L
M L Q H R N I I T N H B P P A
F B P X O S O S H J S R V T M
K A D I S P L A C E M E N T N
T F T O L Y X I U I C A O W A
U O L R A L U G N A S T L F B
M V Y I R T J X U P C Y I G L
E E T Y M Y D O L X T L H Q E
Y G I Q X E D M P D H C Y P N
Q F D G N E G Q L H J M H J N
O N I C G V A X G A B Z N R T
D R C S P E E D R T L H S G H
V A A X X O I W T W Y J L V M
B T T F G A N J V B P A Q F P

ACIDITY
ANGULAR
DIRECTION
DISPLACEMENT
DISSOLVE
FLAMMABLE
LAWS
MOTION
PHYSICS
SPEED

Our Magic Show demonstrates the laws of physics in a fun way. By using the laws of physics, what appears to be magic takes place. These experiments are simple enough for home, yet still amaze others. Created by Jordan, Ela, and Dillon.

Creating BUBBLES

Y	T	H	I	P	S	F	P	Y	M	V	I	S	Z	P
S	V	N	J	Z	I	U	R	T	Z	J	V	O	C	U
T	P	Z	E	U	Z	T	R	E	T	A	W	A	T	R
K	K	M	I	M	S	Z	G	F	Q	S	R	P	E	Y
O	E	D	I	I	I	J	X	M	A	B	P	M	N	S
J	S	P	M	P	T	R	P	G	O	C	U	O	S	N
Z	W	E	T	L	V	D	E	N	Q	A	E	L	I	R
R	H	X	R	F	L	X	D	P	X	B	R	E	O	O
C	E	O	T	S	E	I	T	G	X	H	D	C	N	C
T	P	I	A	F	O	A	W	H	D	E	Q	U	J	B
F	G	F	U	X	P	O	P	P	I	N	G	L	Q	L
M	S	W	I	W	Z	A	V	X	N	V	G	E	I	K
W	I	D	S	E	L	U	C	E	L	O	M	S	A	G
P	E	E	B	R	B	P	M	I	N	D	O	I	B	E
P	D	G	Z	I	S	I	Q	B	P	U	J	T	E	I

- Experiment
- Corn syrup
- Soap molecules
- Carbon dioxide
- Popping
- Gas molecules
- Chemistry
- Water
- Fluids
- Surface tension

When you mix materials for bubbles it causes a chemical reaction. Nessa, Ashley.

Petting Zoo

H	E	R	B	I	V	O	R	E	C	S	D	E	D	F	B	O	O	P	R
B	M	F	B	O	G	K	G	L	Z	A	L	J	H	F	M	E	M	J	W
F	Y	H	J	Z	E	J	A	H	A	I	R	X	T	K	B	U	N	H	O
S	W	J	T	Y	W	M	H	O	T	C	V	N	M	W	S	U	I	M	O
A	V	P	W	O	M	H	I	P	P	O	V	I	I	G	T	W	V	O	S
F	Z	X	T	A	G	P	E	B	O	Q	W	A	O	V	B	Y	O	Z	X
B	I	A	M	F	G	R	S	Z	U	E	X	D	I	R	O	W	R	W	K
Z	V	U	U	T	T	I	E	S	L	Y	Z	C	P	J	P	R	E	S	R
Q	Q	J	K	O	O	S	M	O	T	F	X	V	Z	T	E	I	E	P	V
Q	I	R	R	E	R	A	X	W	R	V	K	C	A	N	I	N	E	G	G
L	G	F	R	K	B	L	P	U	Y	X	J	O	L	F	R	D	R	T	L
W	T	J	I	L	N	V	A	C	Z	J	Z	Y	U	N	G	D	G	Z	J
P	Z	Z	E	S	W	E	N	G	S	S	Y	D	R	A	Q	H	Y	P	C
S	N	K	E	L	H	S	U	O	Y	N	P	P	S	V	K	I	F	H	E
S	H	X	C	A	K	N	N	X	L	W	N	B	P	O	H	V	R	N	Y
K	M	S	U	V	N	X	M	X	Y	Y	S	M	U	A	Y	X	L	I	M
Z	G	B	Z	S	Q	L	U	V	B	D	X	C	T	Y	A	E	F	Q	Y
S	P	E	C	I	E	S	R	G	D	Z	J	D	V	X	R	D	I	B	M
E	G	P	D	R	M	B	T	Z	I	H	Q	Q	N	M	E	E	U	J	S
A	C	B	Y	T	D	R	H	L	V	K	W	O	H	A	I	R	Y	H	C

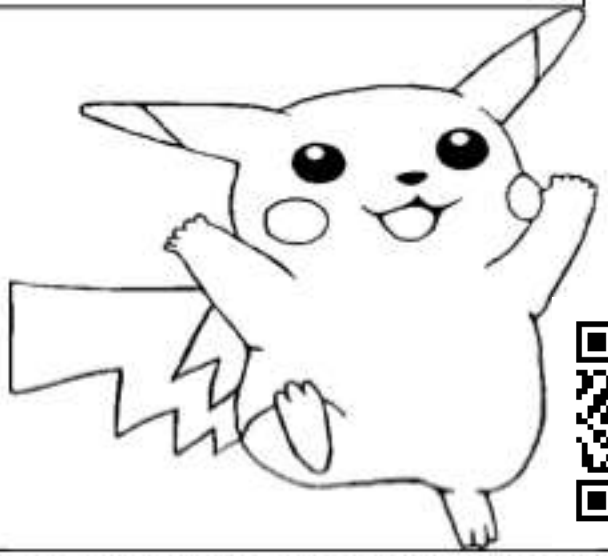
- CANINE
- CARNIVORE
- DOG
- FISH
- HERBIVORE
- MAMMAL
- OMNIVORE
- POULTRY
- REPTILE
- SPECIES

The petting zoo shows different species of animals and their positions in the food chain. The petting zoo also allows people to learn about the environments in which all the animals live. Created by Alexia, Isabelle, Tristen

TESLA COIL

C V W I B O K K T W T D Q C I R P W H A
H X J X F Q I T W L A T T L F R E V L Y
A R J M W E P F U F D Y X H I C O N Z J
R Y G N V M V L J D M V M M Q O F V A Q
G O I C T P G L R D W N C C R Z C G H C
E A L Y W Q Y V H K V O D F U Z H P B B
N V Y W E B F U P M A C M I A T S L R H
Y C O R F S U A L J Z Z C H Z H N Y K A
N C M H E Z Z Q T K G I I E V F H S A N
Z Z N M O O G Y P L D C W T X T T E N J
Y K C E H U K Y D O N J P X N P K F O I
P N P I U B A Z M Z T N T E M L V W I H
A T O G R Q K R A P S J R D P B K R T B
P K H Q S C E K K K O R L Z S L P J C E
I L R D F O U R G X U I R I S G M M U U
P V O Q C P U I P C G I Z F G Q O G D Y
B W W S C B Z V T H R S Z E B S Q L N U
V O L T A G E C T F Y W F W G M G H I G
Y T I C I R T C E L E O Z R R V P R N G
Z Y V H D S X X Y U Q I A M X P A E R W

CHARGE
CIRCUIT
COIL
CURRENT
ELECTRICITY
FREQUENCY
INDUCTION
LIGHT
SPARK
VOLTAGE



A Tesla coil works by creating really strong electricity at a very fast speed. When you produce this kind of electricity, you can do really cool things like light up a light bulb without a wire

Jacob

Illusion Magic Show

Illusions work by using light in different ways to make our brains see something different then what is actually there.

Created by JaMichael Brown and Cameron Sorenson

N Q Q D U C K W Y W Q X Y C S Q D N I M
Z F S Z L V I A Q T F J S N B S E T W Y
P K J G K D E G E A I R R Q I K P X Z K
D B J V Z F Y D A H A Q A B K K D Y T B
N W A H T K Q X D M D A E B E W A S D K
M E G Y N K M U T C X R B G H K O X G E
T F U E E I Y E S L G D G O Z E B W C Y
L W F P R G R U O G X R I D A G F W T M
K X H R G K A J V B O Z Y R E G A M I T
L Q O L M B N R W H O J O V J L L Y B B
X R D J M V Z M I R V K E X A L A W A B
S G T O Y F H Z R M G Q T C K I U B R E
N O I S U L L I L S F I I Y J W S U L L
C V L M G Z P O U H B T F Y T E I N I A
I I B J D B Z T S F P E O L S S V B W C
T J S F S X J X U O L O E V E D L E L G
I E D V E I W B H M Y M J N E X X U D Z
B O P S T T E N B D K C S H W C X L P P
E C N E I C S K Z L I G H T X B Z Q G L
T Q L Q H G D Y K S M G U X C Y I Y J H

ILLUSION
MIRRORS
MAGIC
VISUAL
MIND
IMAGERY
OPTICAL
MIRAGE
LIGHT
SCIENCE

Mentos and Coke

H L B L D C F C D S T L J K T N K Z F M
B Y N F Y Q G S O T N E M B O K J B U F
D J P O F R M Z T U D O S I B C K C M K
D I V O K C C P P M X N T P C P A Z Q O
T H G A T O M S M H C C V R L V S R C J
P U A H M H I O Y W A K Y E E J U I O V
Y R I B I A E W W E S E G S K S B U H Y
Y M U D T E Q S R G K G A S P H N L Y S
Y S N C M F L L I O B O B U X Z Z P I X
T R B H A R A B C S R E T R Q G B I M I
K Y V X U C P B B D T Z G E Q H T V H G
Z Z R D I U P X A U H P Q A Y A Q P V W
Y L K M Y E L P B D B Z U G R M J O Q B
N Y E J Z P A H C D M Z Y D Y I X M K Q
E H J W Z F U P L Y I B A S D P Q J Q W
C U A T I V J D W A H A K Z U W N Q B S
O E T Y F C A R B O N D I O X I D E Z T
S J H N T K Y O A T S A H C H R Q J T O
H X Y W V C M J L E I O V L R P V I T F
P G H V F H Y C B E B M W X R L U B W K

BUBBLE
CARBONDIOXIDE
CHEMICALREACTION
COKE
COMBUST
FIZZ
GAS
HYPOTHESIS
MENTOS
PRESSURE

When you drop the mentos in the coke it causes a chemical reaction. The coke starts to bubble and fizz which causes pressure. Created by Angel, Rosalio, Jr.

Refraction Action

S P W L C P C M J I Q L J N A S W Z M S
Z E M O G R D T R S B K G O Q A K E T P
F Y V B F I B I N G X J O I L S J R B F
E P K A C S B E R A Y P K T Y A J O M V
B O M V W M L D J H Z G G C E E O C J M
C G A I K L G P D P A K N E U P F L E M
Y B E N D I N G L T E O Q L G V N D L P
K B A V F Q P L N J I R T F D F H O E E
S S O Q R Y T N P T T U G E F U G F J I
Y M C B L M Z Y C D I T U R L F A M E X
L W I U A T Z A X R G O J A D E A Q R M
J E U M P Y R E L G N A C V D Z N B W C
F G D Y Z F J X N R G S E V P L X C V W
I C I B E Z T R G W R J B E W S S P H R
L Y D R D A R A O U L Q F Q R N T N W U
E I Y Q R N N K C G P S W B W E A W M P
A K G Q G Z W I D P Q M L T H L N O W V
K N H H N O X C O F R X L D M B F F J I
D T F I T N S D P B G I V A P Y H Y D Q
M P R S F S Z E H O Y K V S N A A F C C

ANGLE
BENDING
SNELL
LAW
LENS
LIGHTS
PRISM
RAY
REFLECTION
REFRACTION
WAVES

Refraction is a change of direction in light waves. When light passes from one medium to the other, it's speed and direction changes. This causes the object to look like it "bends" or changes.

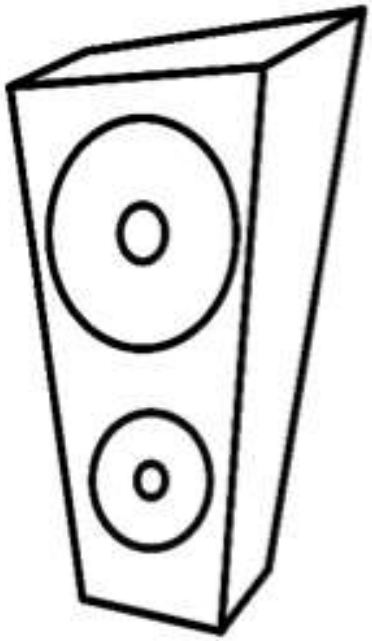
Created by Lili and Juanita

Bass

The speakers are playing music. When they play music they vibrate. When they vibrate the water begins to "dance." Created by Ian and Kourtland

A V I V B P Z R Y I V Y R L T U Q G K Q
W S Z Q A B T M F A X J B L U N N S P N
K S Z P S V Q P U M X S K Q X W N V Z J
X R Y G S B Y C G S P Y V L R E V C X X
K O G F U K Q F L R I S D A P V J E Y R
M V I I I D K A E S G C P Y K X O M N R
G I R H S M F S J M E F H D I U P O J V
H B D S C X S D Q S C W E Q K H U O Q Y
C R I O K U D Z J Z S C P V C B T E X I
F A E Y R J V K H P N Q V S G E U F W I
W T V E V Z G R O A J M A O I C C W Z T
Q I V O Q Z A U D Z H K Y V D X R G F Y
Y O R E K A E P S O J O R S L I M E A X
X N M Y E Z R G A O Y R E D F A L Z P R
P S K T D R Y B X P X E T P H G G F J D
P P I D F C W N B O V Z A D M S Y D B M
R A X C U Z B O W R Q E W J P X A P M F
D S Z M N M G D L E U S D W V R H L Y G
L B K Q I N T S F Z N A M W E T P P P S
Z P B G W U Z D O B S W V X G A J K N S

BASS
DANCE
MUSIC
PRESSURE
SLIME
SPEAKER
SPLASH
VIBRATIONS
WATER
WRAP



Wii

X X R G P H A N C J E G P V R W D F M P
C V E D A C R A I M G V E E U Z T C G N
U H A F T Q E H A N V W L O Z N U H V G
E H I I K X S G J N T L F K S I N R X F
L A O M U E R F P V O E U Z H H G K W F
P N E K I G J T Y R Y B N P Q K J Y I K
H N P V M R S C T H N P K D Q D I Y A A
P K D O P A E N Q D Z Q S I O H L H U M
K B V T T X O Y Y A D V E N T U R E Q R
T T H L K C E E A P U S T N K F R C A P
A V Q E X E S A K L V O B O S S M M R B
C K T R X G N P R W P K E N U S M S Y R
N I V Y K G X J H E K J W Z X E I W T N
A R Y E O T V K M J E E A O H N Y S P B
F F G Q B L U W A S U N G P O S H A M P
H D X G W A Q Y J W K I O T E O R S V R
U A E D F Q X K D U A Y J Y M R B M Y G
R D J F T N V D C C H J S S I O Q A B H
B N K V G W U N U U V H F Q N F L W R J
Y R D C M E Q Y G E Y D L Q A Q G B E C

ACTION
ADVENTURE
ANIME
ARCADE
BAR
BOSS
CONTROLLER
GAME
NINTENDO
PLAYER
SENSOR

A Wii works by sending a signal from the remote to the Wii. This signal is in the form of a wave called an Infrared Wave. Created by Todd and Brandon

Drones

G Z H L X G T F O L D O T F S
N C B I F Y I M L D K Q S U J
I A C W X N X S H I G P R Z V
R T H E P A H Q C N G V C M X
E B X A G K O N A M E H N P M
E K Y P V O A E R I A L T T D
N I B O R A M E L F F W G R S
I E F N U L U L C D E D D E P
G G N I M M A R G O R P N D T
N P S O W N R O C O F I C L H
E I W Y C R Q R N K H O H W Q
W R E E V G V E D C W N J S P
G Q V T R X N R A Z X F U J V
E T F I L T B M I J K W V H P
P C M K G B W P V Z N L A R W

AERIAL
DRONE
ENGINEERING
FLIGHT
LIFT
MACHINES
PROGRAMMING
SURVEILLANCE
UAV
WEAPON

The materials for drones are made extremely light so it is able to cause lift. The motors of the drone spin fast and that's how it is able to fly. (Gustavo, Jeremiah, and Aaron)

Jenga Launcher

S G I B I U Q Y T F R E E F A L L A A R
W S C N V N T H B J U X Y M G F G J L I
Y X A O S I C C S I P D I R H F Z A E U Balance
V G H M C L W X B E W M X I M T C A W N Force
G H R O C I C U R T A O G U Y Z M Q B W FreeFall
R X L E B Z N V I A P P J B G S K D X A Gravity
A E O M N T C E F F E L L U P H S U P L Inertia
V D L F W E H I R X B D O D X I A V X S KineticEnergy
I K Y U X W C S M T Z K X U R Q L L E N Mass
T Y G I F J W I E S I A Q Q B V W L O O NewtonsLaw
Y B I T W R B Z T B N A K S U W G X L T PushPullEffect
I M H C Z W F E O E B K S B H Q B Q E W Velocity
E C R O F N N R D L N K C T I A A X U E
I B A E C V K X M I J I V I L D E C W N
Y U N B D A N I U V Z N K A R X P D T O
K Q R R N I X D A I Q J N N N G E K G A
V S A A I C G B C G S C J S F T Y A E F
S N Q G L U N Q I M E V B L G F Y V G E
L K O H M Q B O K W P L N M E R C X P R
R Z I W H S M Q M A G G X B M E W J H N

A Jenga Launcher works by using built up potential energy while loading it and to shoot the Jenga block, it uses kinetic energy to push the block out. Potential energy is energy that is built up and kinetic energy is energy as the object is moving.

Created by: Zachary Shaw, Cameron Davis, Carty Heim

Elephant Toothpaste

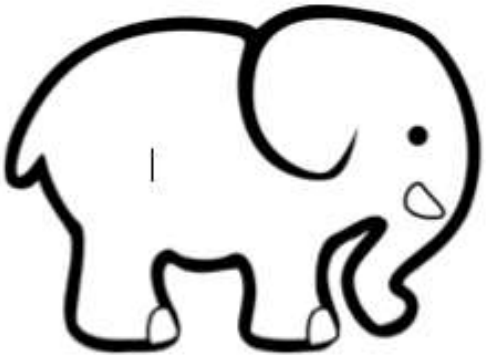
T K L E J W F Q Z S D X W U T P M M R I
N Q X Q F L Q G A P F A L A P O T D C U
D S S B W E A S Y Y C Y D H R F E Y R E
R F E N A W N X G T T P Q Y B M G O Y Y
C H M J W H W Y Z C M G T D O D M F B Y
G X X N T Y A J Y D W L N R G Z J D B T
O E F P I O T M D A A A E O V W G S I E
G N B F Q I E L F Q T C G G H E H K L F
G M A V C B R U Y V E I R E K O S N I A
L F C I O E A S A Y R M E N G C Q O D S
E P X F O O D D R R B E T K C H M I V B
S V J O W Y V J T R W H E T O J W T O Y
E N D O T H E R M I C C D P L T W C N H
Z L H Q C Z A J Z L A B Q E O V C A O Z
J Z X J A E M I E K T C C R R M D E I P
Q R B P C S A T T W A A G O I T P R T C
R P N A E A U C Z P L R V X N S F B C Y
C K G B O T T L E K Y P X I G A Y B A V
W W N L X R I D T F S O U D S E D B E T
X W R K B S E S P M T H G E J Y L T R A

water bottle food coloring safety

goggles endothermic reaction chemical reaction

warm water catalyst detergent dry

yeast tray hydrogen peroxide



Elephant toothpaste is an exothermic reaction (chemical reaction) that releases energy by heat. Created by Gwynn, Audrey, and Eli

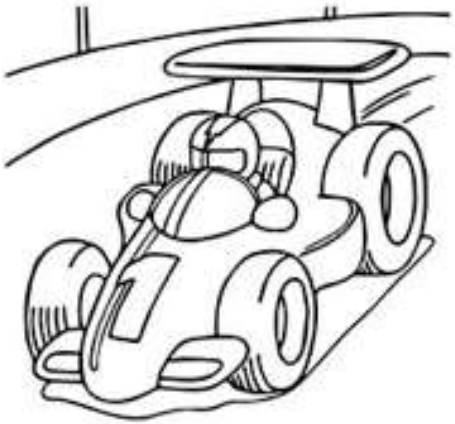
Slime Madness

B B B O D X M S S P Y A X H Q T B M P R
E V R K K X L T R R M I A T Z E Y F G L
C H E M I C A L T E V V S E N X K N Q D
O L V G M R S S F O A D C E A T S P D E
M B P O C K I G R U P C D Q E U B O L T
E R T H W M Y F W O C L T I I R T R I M
B A X D E F I U B V L Z K I J E L H R Y
P I H H I F N X E U P L P P Q E M I L S
E B C Y F R O R R N V W R L J N U M E D
Y N I Z T J X W K V V P O U A H H U X D
R C S M W D C E H Q O Z L L O Q L J V F
V V S I O N C U L Q G S O T U G S X V V
X B T P U P W I P J J Q C H Q R L Z S H
G A U U Z X C D C G F R I I W M P N N A
B L R J B O K A G J W I Y Z J D X G K T
S T F O N D O S J V B Y A H Y Q B C X Z
S H Z U B J F Q T U H W C E I M G V A W
F W L W M I H W B G X E Y J S T J S A B
D U X C C U L A B B E M Y X T V V N Z B
X M X E Z Z J A U U S A C E P H Q G L E

BORAX
CHEMICAL
CHEMISTRY
COLOR
GLUE
ION
REACTION
SLIME
STARCH
TEXTURE

Slime is a chemical reaction. A chemical reaction cannot be reversed. The attraction makes the two ingredients form chains, and tons of these chains together form the slime we love! Created by Mercedes, Jessica, and Peyton

RC CARS



T Q A F I A Y P Z Q M C G Q G F S D W G
J O E O D R Z B S P G O L J N P Z W Q P
I D Z F I N E R T I A N U G E R M N V S
Z F F J Y Z K O G N P T V E E Q T I C V
M F K L I C X Q W C G R D B R R T R K A
D F I Z D R V A D N J O P L J U R S J J
R M V L E A H K O I F L B H S U K J A K
G B N A L I D K C C R V P B Y F U J L F
Z R D O G G H L U G R T Q U E R P E J J
B L A R E L B D E M B V E N D B K P U P
K Z U V O A Y V C S S U M S H D O L N K
I S H O I J R A M P S A C G Q H I V B A
J E B F L T F H Z E A Y X A D B H A B V
V C W I O G Y M N Z M C U L K V B O O D
Y P P S I L F Q Q K W J K M S T X I F H
I A L X Y I L M K C A R T Q D V H Q D T
Y S X E X J D Y B G M F S J F U T X U Y
Y V C X D Z Z Y S I Z X J E O F F G I E
D A Q H I W B E I C A S X D T C E H T Y
R B F J K G P Q F X I O R H I I D Y K B

CONTROL
DIRT
FAST
GRAVITY
INERTIA
MASS
RACE
RAMP
SPEED
TRACK

Radio controlled toys have a transmitter, which sends a signal. It has a receiver, which accepts the signal. These signals are sent using infrared waves.

Created by Cameron Hays, Daniel Sparkman

BB8

C V V Y H D A Q G S P T H T O D D A G J
P J E J F A S N M H R M T O O K K Y H A
L Q A L S D I D E E P S O N P B J E Q V
H Y X T O T N S E C S J O V K C O P I U
T L S Z U C K O E O J O T Z S N J R V M
R A U C X N I F I L R I E U P P Q J A E
I H E Q N B C T L T E B U O R R R Z A U
Y X T B V O P O Y I A G L D I O F I I Z
E Z D U B G Z M Q G G C B C V G U P L X
J P M N M S A Y N A G Z I H X R Z X O L
T N B H N S J S E E V Y U L I A M W U N
Q O L L K S R Y T A V I K A P M G G Q P
M O V E M E N T C X K S V B P P L C G M
V E O B V Y B O J P Y Q G N O S A P D E
Q P T T D P D R L P W V S I N O R E Y O
E N Q Q S I P E K R X N J P W R D Y F A
H H B A N A J W J O C C N I E X F F C N
I D S G T N A O U R R C E Z S K H R R P
W Y C V V H P P E P W P C J H N D Z H B
B W B U Z C O X Z A C M W W J P D R L A

BLUETOOTH
MOVEMENT
VELOCITY
SPEED
ROBOT
POWER
PROGRAM
CODING
EXECUTING
APPLICATION

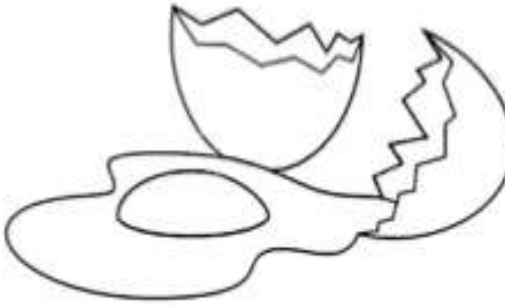
When you connect a BB8 robot to an iPad via Bluetooth and program the robot through the iPad the robot will execute it's code. The RC robotic ball uses a gyroscope to determine which way is down and two wheels to move the sphere from inside.

Created by Tristan Mosher

How Strong is An Eggshell?

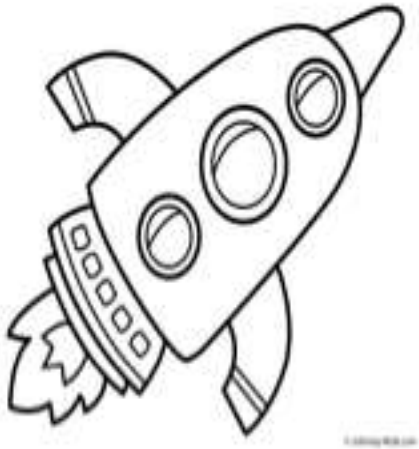
E Y T P R N Z Y K K E Q U W E U B N
X L N S E Q J T H M C R V L D H O J
S C I V Q Q B A E I N E D N N I M C
H T E G K F Z X J L A H F W T R I Z
C N R S A P G H P R L X X U D C W Q
U H S U C R W C F E A E B T V Y J X
J M O H C O F F P L B I L E Q Q Z F
A R C H I T E C T U R A L G P C Q F
R U E G C G U S X T Z H M G Y W Q S
P A I S S M T R S P A S Y S E R P E
D B F K N R A I A Z G X L H N M Q O
A R J E E E D G R L Q E R E L E E D
W R Q N E T X M M R I R V L G X E S
R W G T H E R U S S E R P L B T O O
I T B G K O F O R C E U Q G T L C O
H W I F R I G D B A Z Z U P I A R D
H E G P P Q R O M V R X J P F W D Q
W O G V B V Q L F M K H P D L H M U

ARCHITECTURAL
BALANCE
EGGSHELL
FORCE
FRAGILE
PRESSURE
STRENGTH
STRUCTURAL
UNEVEN
WEIGHT DISTRIBUTION



By applying a balanced force to the top of an egg, the weight is distributed evenly throughout the egg shape. Furthermore, the egg has a naturally strong shape being that of a 3 point arc. Created by Hunter, Rubi, and Caitlyn

Slingshot Rockets



A slingshot works by building tension when it is pulled, which builds potential energy (store energy). When it is released the potential energy turns to kinetic energy (energy of motion).

M X H R Q L D T W W I S K Z L
J A L Z M I E L L X C Q I D W
T F T H Q N D M R I H E N R M
E H W E S A J R M Y B Q E M N
J U G I R S R A N Y P B T O T
Q U O I N I N A L M M K I K K
Q N B I L Y A V A P I Y C B C
I O F A D F S L Y G R E N E O
C K E O I H A A V R L O G T T
G A R K S K O Y D O L P F E S
F E V K K M J X V N K T T P T
A Y L A P O T E N T I A L N Z
C O N E U A Q K G G B A C G Z
T M I I M L O O I O G P B E L
F W U R N D R E Q Z U E V F Y

AERODYNAMICS ENERGY KINETIC MATERIAL TENSION
CONE FINS FLIGHT POTENTIAL STOCK

Inside a Bubble

E W N S R K E A B S J S T X E
L G P O Y M R S P U R C L J D
A O L Q U E D H N U B A Y H I
S D J L T G E U U L B B G X S
T P O A C R U L A J W Y L O N
I V W R I S O L U T I O N E I
C G E C S X S E O Q G R Y W N
I H A O W R X B X S M L Y J R
T L A R I R Z V Q X D Y R X D
Y P Z A O N Q X W M H K F F B
S W I R L I N G M C O K O T A
W T M D A J Z A I P D M R Q V
X W Y L U L S X J U O U N L U
Y U Q K X Y F R H N R A K T K
Y L P L H I I D U N B H T O N

AIR
BUBBLE
ELASTICITY
INSIDE
SOAP
SOLUTION
SPHERICAL
SWIRLING
VOLUME
WATER

A bubble is just a wrapped in soap film. The film has 3 layers.

Each soap molecule is oriented so that it's polar head faces the water

Created by Irma and Kayla

Black Light

B	Q	E	R	U	T	A	R	E	P	M	E	T	P	X
D	N	B	W	R	V	S	U	L	B	X	N	W	Q	L
T	O	Z	S	E	L	C	I	T	R	A	P	F	I	S
M	I	D	S	J	J	C	U	O	G	U	D	G	I	C
S	T	Z	A	V	O	Q	H	N	P	K	H	P	W	B
P	A	I	S	B	S	I	Y	A	R	T	T	R	O	P
E	I	N	M	E	L	E	C	T	R	O	N	S	V	S
C	D	Y	E	M	M	E	Q	R	Q	G	F	H	D	T
T	A	G	D	G	J	H	V	V	F	V	E	R	N	V
R	R	Z	I	R	T	I	F	Y	H	S	R	V	R	U
U	X	R	L	X	E	N	X	M	X	K	T	F	E	C
M	L	H	L	L	H	P	E	L	I	V	Q	L	G	W
T	A	Q	O	P	H	O	T	O	N	S	J	B	I	M
W	S	N	C	M	E	U	O	P	R	R	L	P	F	Y
E	M	M	Y	A	S	D	C	K	D	F	Q	N	M	Y

ROENTGEN
LIGHT
CHARGE
XRADIATION
ELECTRONS
PARTICLES
COLLIDE
PHOTONS
TEMPERATURE
SPECTRUM

A **black light** looks dark purple, but most of the **light** it emits is in the ultraviolet (UV) range of the spectrum, which is invisible to the human eye.

Created by Taylor and Madison

Thermal Camera

S T U K D K Q I M N D P S J N
V E H U T M N L F E T R H H O
Q K S E Y F X R S X M O H X N
F S Y L R S Y A X M B C L H B
R P I A U M H Z Z R N E A K B
T U R M E F O Q B T Q S M V R
B E O R L B M G Y T T S R P M
D K Z V Z A B I R A W I E L A
I O S J Z U R Z F A A N H I O
A E B S N U E R U L M G T U M
T G X J S I G N A L Q H T N F
C I R T C E L E O Y S G S I I
U C B O O S O I M L I M Y T M
C T O S N L E A H F P P D G H
T K K G W I Y M N N K L Z J L

ARRAY
ELECTRIC
IMPULSES
INFRARED
PHASED
PROCESSING
SIGNAL
THERMAL
THERMOGRAM
UNIT

Thermal cameras are infrared cameras that are used to determine temperature. Red shows as the hotter temperature and blue shows as the colder temperature.

By Brandon, Hugo, Devon

Microwave

E D U T I L P M A O L F O P C
D C A G C O Z M C Q R I U U F
S C I S Y H P W S Q T C G N F
S C I E N C E T A E H Z I H E
E Q U I L I B R I U M H L M T
A B W G K X S Q Q K Y E M P G
E L E C T R O M A G N E T I C
Q H U Z Q U E Q R S E V A W T
X B F M F I E K C A O H P E R
F R E Q U E N C Y E L M B I O
V D O L U T S E R C K S M O U
Y T V Y T I C I R T C E L E G
H T G N E L E V A W M J B H H
E V A W O R C I M E N E R G Y

Word Bank

AMPLITUDE
CREST
ELECTRICITY
ELECTROMAGNETIC
ENERGY
EQUILIBRIUM
FREQUENCY
FUN HEAT LIGHT
MICRO
MICROMAVE
PHYSICS
SCIENCE
TROUGH
WAVELENGTH
WAVES

Microwaves cook food by sending electro-magnetic waves through the food and heating it up. Michael, Sam, Russell

Lemonade Stand

s	x	g	j	j	k	j	o	j	q	z	s	v	k	e
q	u	k	k	p	n	m	n	e	c	o	u	c	q	n
h	u	b	f	b	y	f	r	o	l	d	p	q	l	o
z	a	u	s	w	b	u	w	u	i	w	i	g	a	d
k	r	p	c	t	t	o	t	a	k	t	g	z	c	t
n	g	g	d	x	a	i	s	l	t	l	c	i	i	e
f	l	g	i	c	o	n	m	v	w	e	b	a	m	j
z	z	m	g	n	r	u	c	v	j	m	r	p	e	p
d	n	u	o	p	m	o	c	e	z	o	h	s	h	r
t	h	e	b	s	t	a	n	d	s	n	c	d	c	j
r	t	x	e	b	f	w	l	e	u	a	t	d	j	m
w	x	x	m	f	a	e	f	s	g	d	r	b	g	t
m	h	t	u	t	o	z	h	y	a	e	a	t	t	m
y	n	y	t	u	j	q	j	f	r	m	h	r	s	u
e	p	f	v	v	n	a	x	l	q	c	k	t	m	n

chemical
compound
lemonade
mixture
reaction
solution
stand
substances
sugar
water

Lemonade is a mixture because sugar, water and lemons are combined together without a chemical reaction taking place. The bonds of the substances can't combine with one another, instead the three items are mixed up.

By: Sean and Fernando

WE SCREAM FOR ICE CREAM

I	T	E	L	M	J	F	F	D	L	O	C	Z	C	P
G	R	D	M	U	V	U	R	C	H	I	O	O	G	L
R	A	V	M	U	O	R	G	O	K	H	N	U	M	I
U	N	X	V	Z	S	N	Q	L	Z	D	E	F	E	Q
F	S	F	U	A	I	N	F	A	E	E	X	B	R	U
B	F	W	O	T	Z	D	O	N	P	W	N	V	U	I
M	O	C	L	Y	W	R	S	C	R	X	L	C	S	D
L	R	E	R	U	T	A	R	E	P	M	E	T	A	Z
E	M	A	I	H	T	M	Q	C	J	G	Q	R	E	I
S	A	M	R	I	B	U	U	H	S	L	Z	P	M	J
Q	T	L	O	E	T	D	F	E	U	Y	O	F	E	F
R	I	N	T	H	E	R	M	A	L	I	E	C	G	N
A	O	P	W	K	P	I	J	D	N	D	C	H	W	L
R	N	L	D	T	P	E	O	T	S	J	C	G	M	V
T	J	E	V	U	U	T	Y	F	E	R	Y	C	H	K

COLD
CONDENSATION
CONSUME
FROZEN
LIQUID
MEASURE
MELTING
POINT
TEMPERATURE
THERMAL
TRANSFORMATION

Ice cream is made of milk and sugar, but to get it to the point of frozen liquid you have to use rock salt to drop the liquid below freezing point.

Created by Dallana and Garrett