

Adventures of Sphero

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

circular
energy
force
geometric
gravity
kinetic
potential
revolution
robotic
sphere



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The RC Sphero talks to the Ipad using infrared waves and it tells it where to go. Seth Hudgins, Cameron Davis, Brayden Stehman

CO2 cars

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

CAR
CARBON
CARTRIDGE
DIOXIDE
FORCE
KINETIC
POTENTIAL
PRESSURE
PROPEL
PUNCTURE



The CO2 car uses the pressure built up from CO2 (carbon dioxide) in the cartridge to propel (move) the car forward.

Created by Liz, Liz, and Tony

CONDUCTION

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



CONDUCTION
 CONTACT
 DENSITY
 ENERGY
 HEAT
 MOLECULES
 MOVEMENT
 TEMPERATURE
 TRANSFER

Grilled cheese sandwiches are made by using Conduction.
 Conduction is the transfer of heat through contact.

Created by Jordan and Stacie

Cotton Candy

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

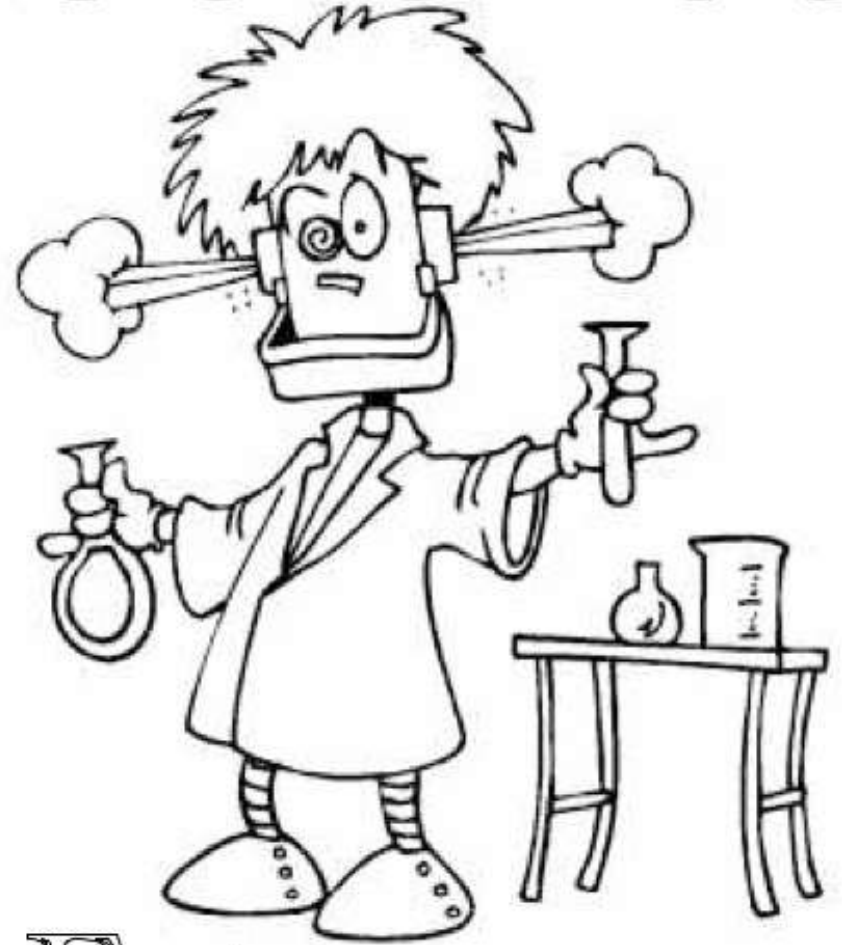


CENTRIPETAL
 COTTON
 FORCE
 HEAT
 LIQUID
 PHASES
 PHYSICAL-STATE
 SOLID
 SPIN
 SUGAR

Heating sugar causes the molecules to go crazy,
 transforming it to a liquid. When the cotton candy
 machine is spinning, it's called a Centripetal force.
 The heat and the Centripetal force causes thin
 threads of sugar to form, making cotton candy.

Araceli, Leslie, & Jessica

Mineola Science

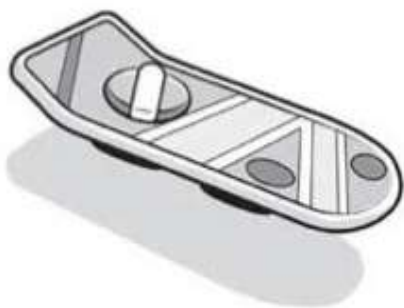


Extravaganza Activity Book

HOVERCRAFT

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

MOTION
FRICTION
GRAVITY
HOVER
NEWTON
MOVEMENT
SPEED
FORCE
ACCELERATION
ENERGY



The hovercraft follows Newton's third law. For every action, there is an equal and opposite reaction. When we push the hovercraft it stays hovering unless friction slows us down.

- Vera Hasting, Sydney Stewart, Brianne McCalla

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 Tristan, Kea, and Jennifer

Inside the Bubble

STOEZRJKQSLTXCVWJORHDB
COHPWTJGNZHBELJWIGZXSS
CNLENSUPERFUNLVOIIXOXW
UYCUFRUGTDKLJROBQDCMW
UPZPTWOLLEYNGUEITNSFYQ
LQRMGITDWCEHJZMDVIBRZI
OPKUUEOGWEBGLDZMGOLH
IZHSSFSNREDVORPOOGGHIK
SKJOAJEGIBOKHPDRRLITKLI
XZLIUWGRIURBAQACTDTOFI
FLBDJWLNYBBHSNEBFKAYRB
MAIYCSOMCBZLGBTAIROXCI
EBZLKTSLWQLXEDFSREJAPBB
WDHOAQBOJEABHHGKEYJEI
VHSIIQSOASGSZSNDKTWWH
FQLVPTQATHGOKUMAWINE
VMFVWIYBAPAKPJWTCPAZI
VKTHGEROYZTWBLUEPQJNI
IMBEJQWCVSPARKUVIPLVG
WMGCGIFBBZDOADTTOJVSI

BLUE
BUBBLES
GREEN
INDIGO
ORANGE
RED
SOLUTION
SUPER-FUN
VIOLET
YELLOW



A bubble is air wrapped with soap film. –Julisia, Jovani, Sunnie

Super Duper Laser Show

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



ELECTROMAGNETIC
ENERGY
LASER
LENS
LIGHT
LUMENS
OPTICS
REFLECTION
REFRACTION
TRAVEL

Light is emitted through lenses that make the light very straight and clear.
Lasers are very cool, but never shine them in your friend's eyes because the concentration of the lights is very strong.

Marco Antonio Reyes & Carty Wayne Heim

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.

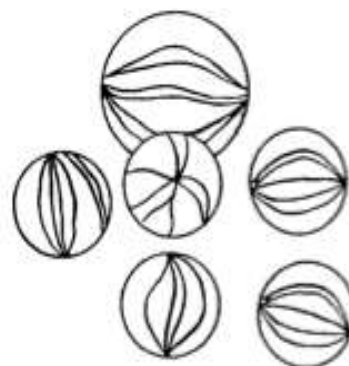


By: Gracie Castleberry and Hannah Mckinney

Shatter Marble

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

CONDUCTION
CONVECTION
ENERGY
EXPANSION
GLASS
HEAT
MARBLES
RADIATION
SHATTER
THERMAL



The marble gets hot and expands. Then placed under cold water and it contracts which causes it to shatter. This is known as thermal dynamics.

Created by: Michelle Ley ,Claudia Martinez, Itzel Guzman

Mentos and Coke

MENTOS DZMOE CRPN
NOITULOSFXPHRIO
ECOMBUSTIONEZUI
DXCOPSHOPESSMCT
XNPOSXDZZSVIMWC
YGULKJZKUTPCJJA
AQYOOEZRLAHAP EE
REMEPSEVJERLRSR
SCAIYMIQGOUURQI
EUKRITONOTFYVH
FKHVFWPCNXVRJAJ
CNLLUTVGIVINKDP
IFBWNBTBMDETPHRU
KMOXWUSJVCPOLEV
RKFALNIWODMNPKR

CHEMICAL
COKE
COMBUSTION
COMPOUND
EXPLOSION
MENTOS
MIXTURE
PRESSURE
REACTION
SOLUTION



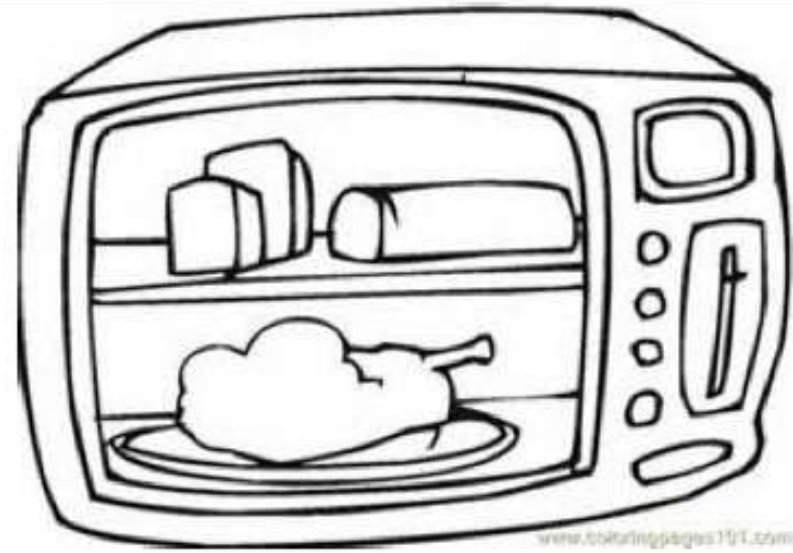
When you drop the mentos in the coke it causes a chemical reaction and the coke starts to bubble causing pressure, which causes the coke to combust. Frankie, Chantz, Max

Microwave or Micro-waves?

EDUTILPMAOLFOPC
DCAGCOZMCQRIUUF
SCISYHPWSQTCGNF
SCIENCETA EHZIHE
EQUILIBRIUMHLM T
ABWKGKXSQQKYEMP G
ELECTROMAGNETIC
QHUZQUEQRSEVAWT
XBFMFIEKCAOHPER
FREQUENCYELMBIO
VDOLUTSERCKSMOU
YTVYTICIRTCLEEG
HTGNELEVAVMJBHH
EVAWORCIMEENERGY
ELTQAMFVABZGTZY

Word Bank

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



Microwaves cook food by sending electro-magnetic waves through the food and heating it up. Caitlyn Hudson and Edgar Gonzalez

Double Bubble

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



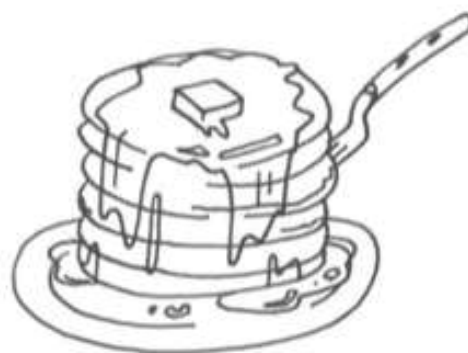
BLUE
BUBBLE
COLORS
GREEN
LIGHT
RAINBOW
VIBRATION
VIOLET
WAVELENGTH
WAVES

The color you see in the bubbles happens because white light reflects soap film, which shows all the colors of the rainbow. Some colors get brighter, and others disappear.

Created By: Sydnie, Holly, Lauren, and Hannah

PANCAKES

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



ACID
BATTER
CARBON-
DIOXIDE
CHEMICAL
GLUTTON
HEAT
INGREDIENTS
PROTEIN
REACTION
TEASPOON

The heat causes the pancakes to rise forming bubbles as a reaction. The pancakes go through what's called a physical change. – Ana , Taylor, Rayven, Landan

POPCORN

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



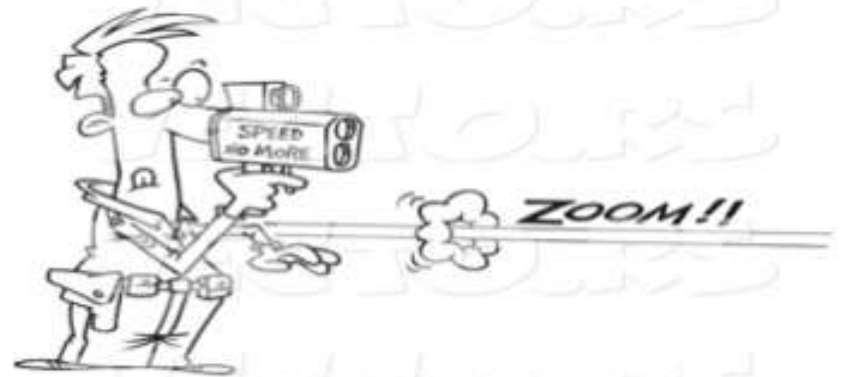
COMBUSTION
CONDUCTION
EXPLOSION
GAS
HEAT
MOISTURE
OIL
PRESSURE
STARCH
STEAM
WATER

Popcorn is any of several varieties of corn whose kernels burst open and puff out when subjected to dry heat due to pressure. - Christian, Dalton, and Luke

RADAR GUN

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

CONE
DOPPLER
ECHO
FAST
LIDAR
LIGHT
SHIFT
SONAR
VELOCITY
WAVES



A radar gun works by sending a wave to an object and then bouncing back and the radar gun calculates how fast the object is moving! - Tracy, DJ, Steven

R/C Vehicles

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

ELECTRICITY
ELECTROMAGNETIC
INFRARED
POWER
RADAR
RADIO
RADIO-FREQUENCY
RECEIVER
REMOTE
SIGNAL
SOURCE
TRANSMITTER
WAVES



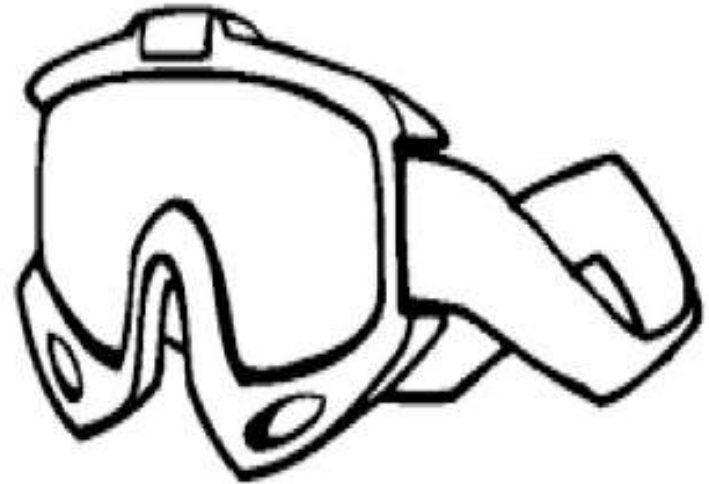
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Remote control vehicle is defined as any vehicle that is controlled by a remote. This remote is using radio signal or infrared signal. – Eric, Tristan, Brett and Spencer

Refraction Glasses

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

BEND
CONCAVE
CONVEX
ELECTROMAG
NETIC
LENSES
LIGHT
PRISM
RAY
REFRACTION
SPECTRUM



The lenses in the glasses bend the light. This is called refraction.

By: Trace Goldthorn and Erick Arango.

Slime

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

BOND
CHEMISTRY
CRYSTALLINE
HYDROGEN
MIXTURE
MOLECULE
MONOMER
POLYMERS
SLIME
SOLUTION



Slime is a mixture that bonds the chemicals together making a gooey substance. Sandra and Davion

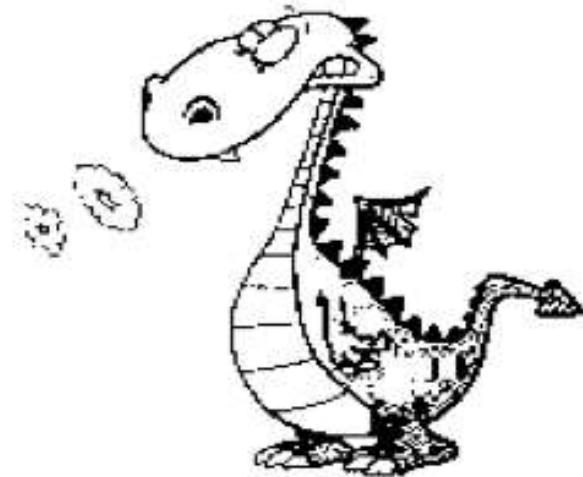
DRAGON SMOKE RINGS

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

AIR
DYNAMICS
FLUID
FORCE
MEMBRANE
MOTION
PRESSURE
SMOKE
VORTEX
VORTICES

When you hit the cannon, it forces out air out by creating pressure. This leaves a ring of smoke behind

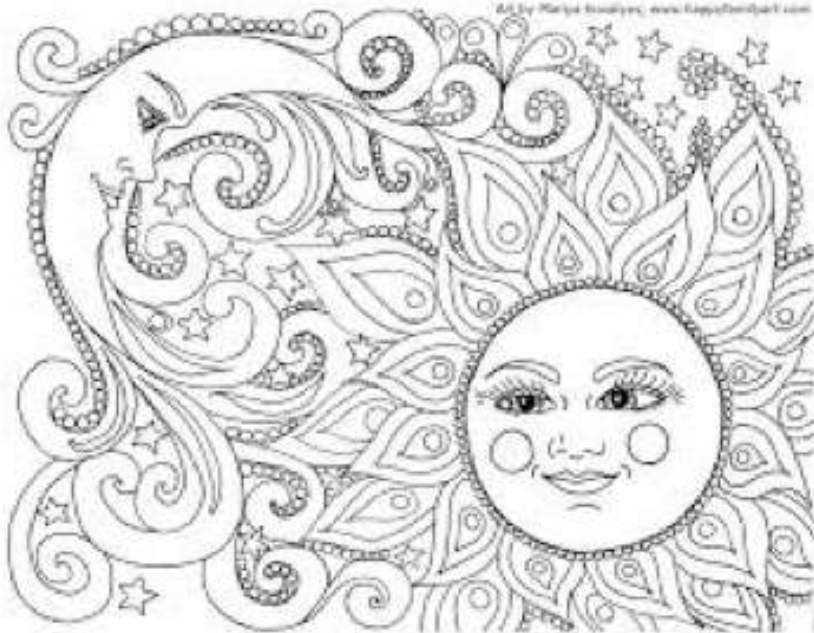
- Zach and Tucker



Solar Cooking

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

CHOCOLATE
ENERGY
FOCAL
GRAMCRACKERS
HEAT
LIGHT
MARSHMALLOWS
POINT
POWER
RADIATION
RAYS
REFLECTION
SMORES
SOLAR
WAVES



A solar cooker is made by concentrating sun light to a spot that directs all the UV rays causing the marshmallow to catch on fire. Matt, Spring, Lauryn

All about that bass

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

AMBLITUDE
BASS
FREQUENCY
HERTZ
PITCH
SOUND
SPEAKER
TONE
VIBRATION
WAVES



The vibration creates sound waves which produces or makes the sounds we hear. Bass is the lowest frequency you can hear.

Created by: Daniel Sparkman and Linzey Shey

Stomp Rockets

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

ACCELERATION
ENERGY
FORCE
KINETIC
MOTION
NEWTON
PRESSURE
PROJECTILE
ROCKET
SPEED



Stomp rockets work by releasing the sudden rush of pressure caused by the stomping on a connected bottle, which makes the rocket fly. This is due to Newton's Third Law, every action has an equal and opposite reaction.
Created by: Ryan, Riley and Terry

Super Slingshot

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

ACCELERATE
ELASTIC
ENERGY
FORCE
GRAVITY
KINETIC
NEWTON
POTENTIAL
PROPEL
TENSION



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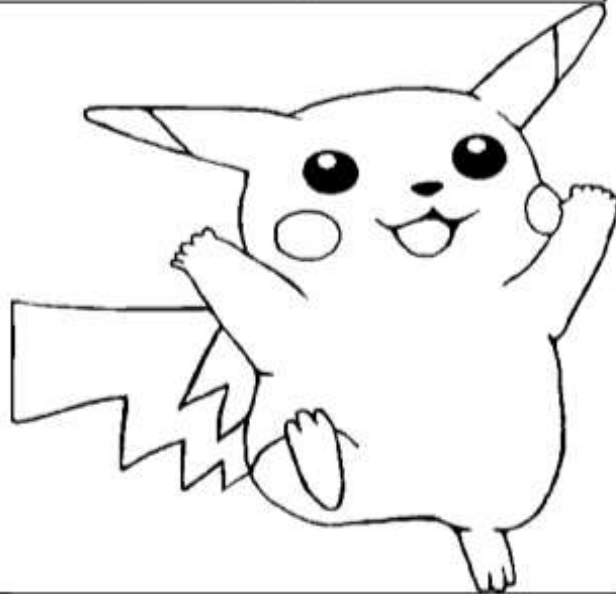
A slingshot works by creating elastic potential energy (known as tension) when it is pulled back and then it releases this energy to push something forward.
Created by Blake, Jason, and Travis

TESLA COIL OF FRIENDSHIP

(AND DOOM)

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
B V O Q C P U I F C G I Z F G Q O G D Y
P 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

Created by Michael Quilloso and Billy Roberts

The Magical Magic Show of Magic

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

APPARITION
DECEPTION
ILLUSION
LIGHT
MIRAGE
MOTION
NEURONS
OPTICAL
SOUND
VISUAL



The brain is a wonderful part of our bodies, however our eyes and ears can still trick our brain! Watch us use light and sound to perform illusions that will blow your minds.

Created by: Brian Lyke, Austen Walls, Hunter Seaton, and Dylan Godwin

Thermal Camera

STUKDKQIMNDPSJN
VEHUTWNLFETRHHO
QKSEYFXRSXMOHXN
FSYLRSYAXMBC LHB
RPIAUMHZZRNEAKB
TURMEPOOBTQSMVR
BEORLBMGYTTSRPW
DKZVZABIRAWIELA
IOSJZURZFAANHIO
AEB SNUERULMGTUW
TGXJSIGNALQHTNF
CIRTCELEOYSGSII
UCBOOSOIMLIMYTM
CTOSNLEAHFPDGH
TKKGWIIYMNNKLZJL

ARRAY
ELECTRIC
IMPULSES
INFRARED
PHASED
PROCESSING
SIGNAL
THERMAL
THERMOGRAM
UNIT

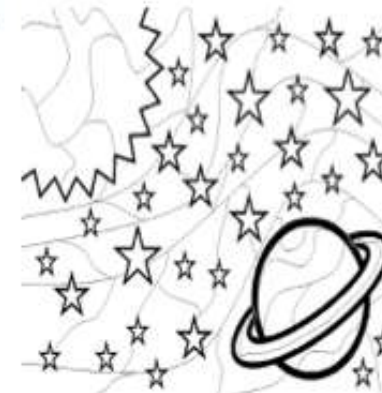


Thermal cameras are infrared cameras that are used to determine temperature. Red shows as the hotter temperature and blue shows as the colder temperature.

By Noah, Cameron, and Dylan

BLACK LIGHTS

IOMTBELQDVBPNOPIQZB
RSVTHHYRQTCBKBUMVDSI
RNSZOIYXKAKBVQOMHXYT
IMYRCSJXXNPDLICWAFWV
MNAYBIVZOOYUUPS ZTNEI
PLRGVETIKPDKHJYIAVSO
BLQOSCTESPECTRUMBWTL
FITTUANRNARTLUEBVLHE
YJAQIBILEGOQCKFTQGET
QRYDCAGXGAAGBLRTHZSB
SPAPKLHGGNZMFCEQMTBT
DRWURITVTOOUOAO KZNMG
FEKGEMGACVIOKRITUMFQ
TZURHANWZXWLJTTS PQQM
CHQTOCETBTMVL EYCTBMX
NYGKUILTRWMLKOA AEKXH
OBEITREMWEAMXEDJCLNL
LWJTTLHVDERXQEMCFBHEO
QUGNOUA EHRGLRFXZSNWO
TGSOPGWWOHJKQMWSLWNW



ELECTROMAGNETIC
LIGHT
RADIATION
RAYS
SPECTRUM
STARS
SUN
ULTRA
VIOLET
VISIBLE
WAVELENGTH

Black lights give off light just outside what humans can see called a UV wave and when the UV wave hits certain objects they glow. Created by: Hannah Joy VanDover and Ashley Davenport

Van De Graff

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

ACCELERATOR
CONDUCTOR
ELECTRONS
GENERATOR
GRAAF
HYDRO-ELECTRIC
INSULATOR
STATIC
STRICTION
VOLTAGE

The van de graff is a machine that produces static electricity by rubbing a belt on a cloth object. This is similar to you rubbing your feet across the carpet to create a shock.

Created by Joey

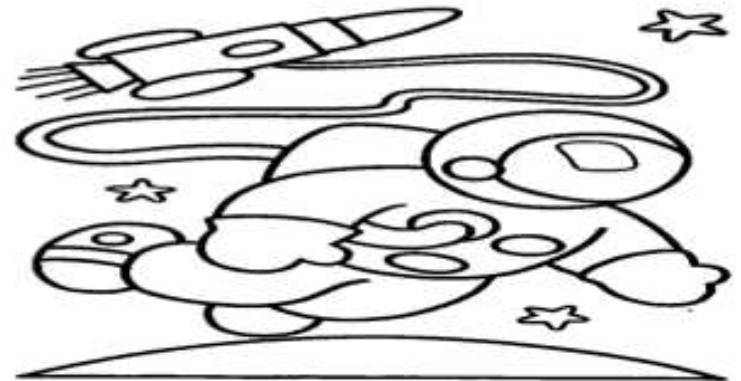


www.Vedto.rs - 18125

Bottle Rockets

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

Altitude
Pressure
Thrust
Kinetic Energy
Potential Energy
Angle
Speed
Acceleration
Gravity
Force



Bottle Rockets work by building up air pressure and releasing it all at one time. Newton's 3rd Law says Every action has an equal but opposite reaction.

- Jaeden and Brian

TREBUCHET OF TERROR

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

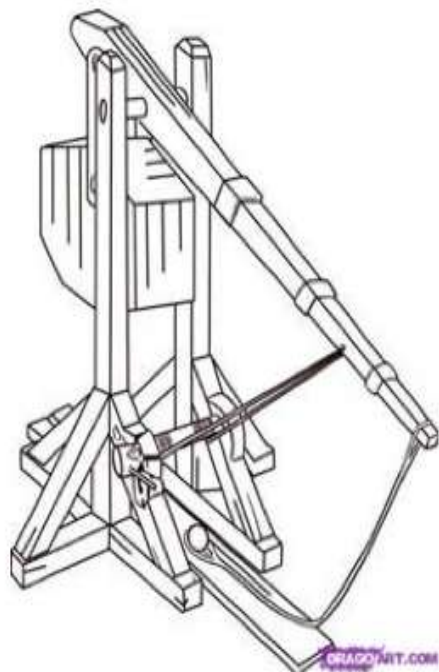
ACCELERATE
COUNTERWEIGHT
ENERGY
GRAVITY
MECHANICS
MOTION
POTENTIAL
PROJECTILE
ROTATION
TREBUCHET

A trebuchet works by using the energy of a falling counterweight to throw an object.

By:

Brody Taylor

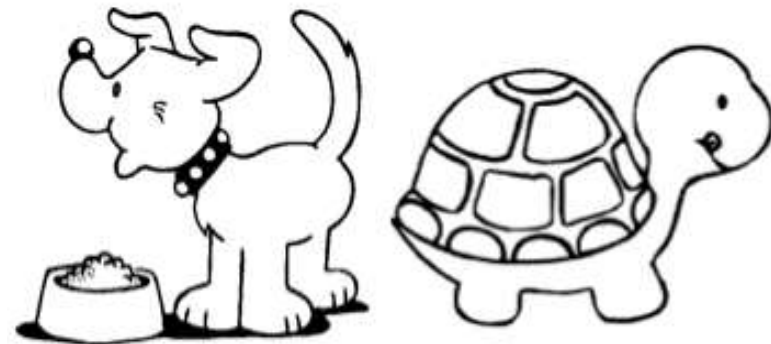
Brandon Seeton



Petting Zoo Puzzle

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

AMPHIBIAN
BIOLOGY
CARDIOVASCULAR
MAMMAL
NERVOUS
REPTILE
RESPIRATORY
SCALES
SKELETAL
SYSTEMS



Mammals are warm blooded, have fur, and feed milk.
Amphibians have slimy skin, lay eggs, and are cold blooded.
Reptiles have scaly skin, lay eggs, and are cold blooded as well

Created by: Hailey Kratzmeyer and Sara Browning

Wii Play Games!

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

COMMANDS
CONTROLLER
ELECTROMAGNETIC
INFRARED
INVISIBLE
LIGHT
RADIANT
SIGNALS
SPECTRUM
THERMAL
WAVES



A wii's wireless controller sends signals through infrared waves so the wii knows what command is being applied to games.

Created by Jacob Hanson, Catherine, and Oliver

Electric Go-Cart

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



ACCELERATION
DECELERATION
ELECTRIC
ENERGY
FORCE
INERTIA
KINETIC
MOTION
POTENTIAL
SPEED

The electric go cart uses electricity instead of gas to run the electric motor.

Created by: Oscar, Luis, Willy

Wind is a **DRAG** !

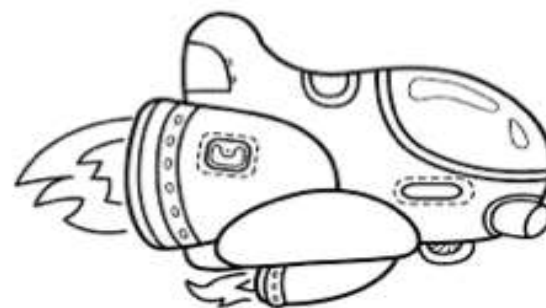
I H T P R F E Z C P Y H F Y I W E L O A
K X N Y A O X R E R D T R C O V L Z X N
H X R E S I S T A N C E I Q C U N S Z D
M X L W Z I R N T L D Y C V P G U T S I
J R M A Z B Z B S R E Q T U A E M C O P
F E F X B X M S B V E J I U M R I R U G
J O W E M W W H H W B T O X C E G F W X
J Y F P K P Q V X J N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

AIR
FRICTION
PULL
DRAG
RESISTANCE
GRAVITY
FRICTION
SCIENCE
PHYSICS
PARACHUTE



When you run while dragging a parachute, it will slow you down. Just like it can slow a pilot down when he jumps out of the plane. That happens because of the air resistance working on the parachute. By Sunni and Selina

Water Rocket Cars



Water Rocket Cars

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

ACCELERATION	GRAVITY	HYPOTHESIS
INERTIA	LAW	NEWTON
PRESSURE	REACTION	ROTATION
VARIABLES		

Water rocket cars are powered by pressure. By pumping air into the bottle full of water, pressure builds and the rocket car shoots off one way while the water goes out the other. Newton's third law is demonstrated because for every action there is an equal and opposite reaction.

Made by: Mallori and Reagan

Extreme Earthquake

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

AMPLITUDE
MAGNITUDE
PLATES
PRESSURE
RICHTER
SCALE
SEISMIC
SEISMOLOGIST
TECTONIC
WAVES

If you're indoors during an earthquake,
drop, cover and hold on.



An earthquake is a sudden and violent shaking of the ground, sometimes causing great destruction, as a result of movements within the earth's crust or volcanic action.

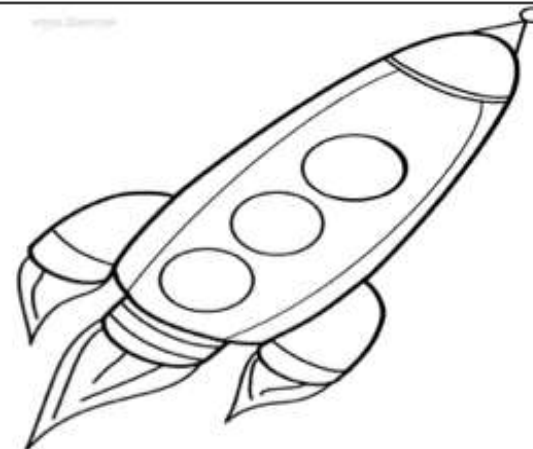
—Arian, Zach, Matt

FUEL ROCKETS

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

AFT
FINS
FUEL
IGNITION
LAUNCHER
MOTOR
NOSE
RECOVERY
STABILITY
THRUST

The fuel in the rocket causes a lot of downward force. This pushes down and makes the rocket lift. Newton's 3rd law says that for every reaction there is an equal but opposite reaction. Created by Jake and Bryce



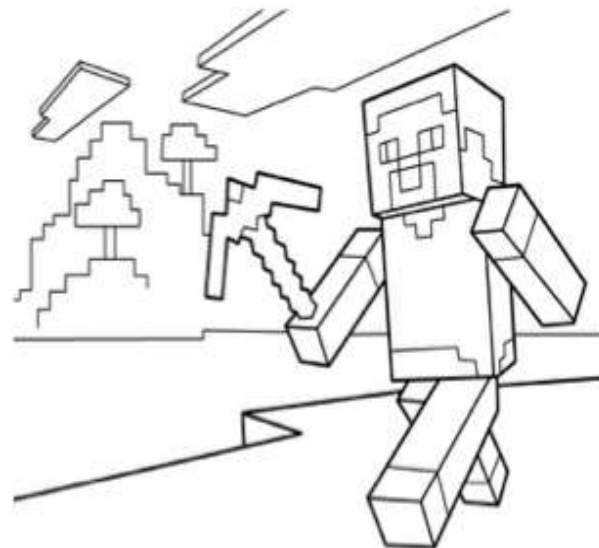
3D PRINTER

LEDYQSRBHSXNUZLYQELK
VOUEKJTHHHIOPTMGSOUN
LANOISNEMIDIDCFRRBFP
NAGHRZBEJFRTEETERKFQ
FODPBTXPYSPAPJZNPWUB
CZIDJQKLLLANOBQEAPSF
DLTSITYTRQNIISOVOZRIA
CHHAUTAWPYXMIQKOEWOA
YHPTKRILYLHATEXLPJNH
VKQVNRVTVSHLIMMIHENC
MBTWVEJXEXDDOKEWSTGL
QARZEEEMFEMIENVWVAMRF
MNNETLEFJGGVAYIKJAUE
XDMTDAENQWSDMOJDWOWF
DJIIYYHEUPAJONUPGPOQR
BNCCXNJTXCJUCCUKSTQZ
GABFWVJHAMOQMTARKHQI
DFZLOTWBVRFGGFFVWEZWA
LAIRETAMXNJIUQWRNNNF
YLHLTOOXXZWNCVYOCPL

ADDITIVE
DEPOSITION
DIMENSIONAL
ENERGY
EXTRUSION
FUSION
JETTING
LAMINATION
MATERIAL
OBJECT

A 3D printer gets
commands to print an
object and starts putting
melted plastic into the
shape of the object!

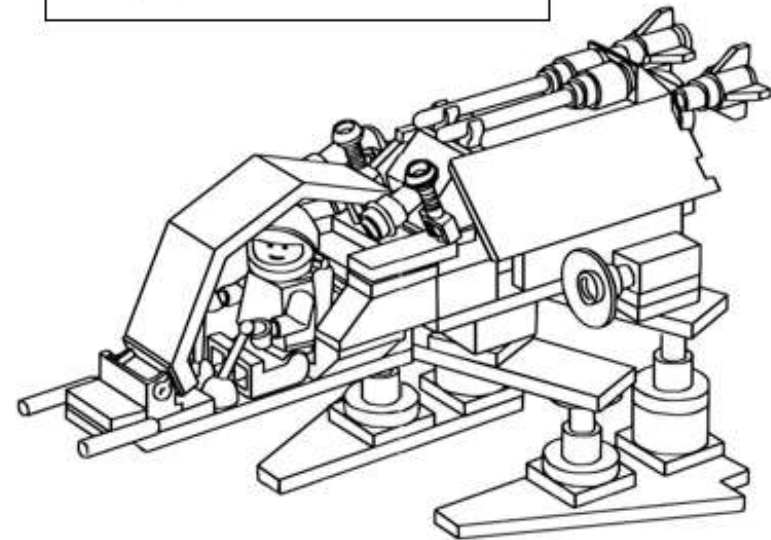
Created by:
Steven Le and Chris



LEGO ROBOTICS

LOFWSXYRLZITDLY
CUOMAPOWEJMBQPD
MOTORBEFGFZYBXH
FEFWOIEEOQUMMBW
JTSTTCJDDWSMBLA
SFIYRHZFMCNDRJR
GCTOOFQHRQYLELA
SYFSLCSJPOFNWPD
IOQUFOCKVQSKODZ
JREREWOLLOFNPIC
RWGNCTMOBAQJEVH
FSZGPTFILNNMKSH
TJEHFKKNVXCASQD
NATWOFZQXDIJZNS
RDGOPREFNMFTZBT

FOLLOWER
FORCE
GEAR
LEGO
LIFT
MOTOR
POWER
ROBOTICS
SENSOR
SPEED



Lego robots are used in two types of competitions. The first kind is called Arena. The robot has to accomplish 4 tasks including line following, lifting, climbing, and pushing. The 2nd kind is called Inventions. The students create anything they want using Legos and then they present their creation.



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