Lake Compounce Amusement Park

Discovery in the Park

Lake Compounce proudly presents "Discovery in the Park." This is an exciting adventure in which students in Grades 4-7 can explore the subject areas of art, English/language, science, social studies, psychology and math.

The Lake Compounce Time Line:

1684 A group of settlers, including John Norton, band together to purchase land from the Tunxis Indians. The lake is named "Lake Compounce" in honor of the Tunxis' Chief Compound.

1846 Local resident families begin arriving at daybreak to witness an explosion of the lake. Botsford gives a lecture on the "Movements of Electricity in Heaven and Earth," followed by a series of experiments that are to culminate in the explosion. Despite several attempts, the explosion does not occur, and Botsford is run out of town never to be seen again.

1875 The Crocodile Club Banquet tradition is born to thank the legislature for changing the boundaries of the communities of Southington and Bristol.

1896 The Bristol & Plainville Trolley initiates service to Lake Compounce, traveling four miles to the Park from the center of Bristol.

1911 The current carousel is purchased and a new building is constructed. The carousel features 47 horses, one goat, and two chariots carved by Loof, Carmel and Stein & Goldstein.

1914 The Green Dragon, the first roller coaster at the Park, is built.

1927 The Wildcat Coaster is built by the Philadelphia Toboggan Co. to replace the Green Dragon.

1944 The Gillette miniature railway is purchased from the estate of William Gillette, the actor best known for portraying Sherlock Holmes. The Gillette train circles the lake on a mile of track.

1979 The Carousel is named to the National Register of Historic Places.

1987 Construction is completed on the Big Splash Log Flume.

1996 Kennywood Entertainment Corp. takes over the park.

1997 Ten Major rides are added including the Thunder Rapids Raft Ride, the Mt. Southington (Compounce Mt.) Skyride, the Zoomerang Coaster, the Flying Scooters, the Bumper Cars, the Rotor, the Ferris Wheel, the Top Spin, the CP Huntington Train (replaces boulder railway), and the Lakeside Trolley, an original 1911 trolley that once brought patrons to Lake Compounce from New Haven, CT.

1998 Splash Harbor, an exciting family water park featuring a sixty-foot lighthouse and an array of slides, sprays, pools, and water fun for all ages; and the Skycoaster, offering guests a high flying, free fall type adventure, are opened.

1999 Ghost Hunt, an interactive dark ride incorporating animation, black lights, and sound is introduced. Two person vehicles equipped with booblasters transport guests through a 15 room three story mansion, complete with water spouting gargoyles. The Mark Twain, a 70 ft authentic sternwheeler that can carry 65 passengers, now cruises the Lake replacing the classic Lakeboat tour vessel. Youngsters are treated to their own Kiddie Bumper Cars, and the Big Splash Log Flume is renamed Saw Mill Plunge.

2000 The amazing Boulder Dash welcomes the new century at Lake Compounce! This one of a kind wooden mountain roller coaster, also billed as the largest and fastest in the East, carries guests over 4500 ft of track at a speed of approximately 60 mph. It races between boulders and trees from the north end to the south end of the Park, across the Bristol and Southington town lines, and back again.

2001 Mammoth Falls, a 551 foot long family raft ride, debuts at Lake Compounce. This Splash Harbor attraction transports guests in 4 person rafts through twisting chutes and tunnels, under a waterfall and down a 50 foot drop. The Flying Scooters are taken out of service. Boulder Dash is voted #1 world's best wooden coaster by the National Historic Parks Association.

2002 Guests enjoy season passes and unlimited free soft drinks. The Crocodile Club tradition ends with what is to be its final banquet.

2003 Clipper Cove, an interactive splash and play adventure area, adds to the enjoyment of wet family fun. The Carousel receives handsome new housing. The Top Spin is retired and the Flying Scooters return as the American Flyers.

2004 Downtime, a 185 foot drop tower, joins the thrill rides at the park.

2005 Splash Harbor expands with the addition of Anchor Bay, an 800 ft lazy river complete with its own special water activities and slide.

2006 Thunder N' Lightning, a two arm, 32 passenger "screaming swing" takes guests soaring to new heights and angles. Garfield's Drop tower is added to Circus World.

2007 On Zoomer's Gas N' Go, a 1956 corvette ride, guests experience and enjoy a scenic blast from the past. Rainbow Riders allow children and parents to share an uplifting experience together. The Compounce Cabana Boat replaces the Mark Twain.

2008 Ghost Hunt was remodeled with larger cars to accommodate more people per car, allowing them to enjoy the ride together.

2009 A new set of slides known as Tunnel Twisters were added to Splash Harbor.

2011 The Rotor is removed and the Rev-O-Lution is brought in to replace it, rocking, rolling and spinning riders at a full 360 degrees on a giant platform traveling on a track 50 feet high.

Use the Lake Compounce Time Line to answer these questions.

1. **How many years ago did each of the attractions open at Lake Compounce?**

   _____Revolution _____The Wildcat Coaster _____Ghost Hunt _____The Carousel

   _____Tunnel Twisters _____Mammoth Falls _____Saw Mill Plunge (Big Splash)

   _____Compounce Railway _____Zoomerang Coaster _____Sky Coaster

2. **How much older is the Carousel than the Wildcat Coaster?**

3. **What attractions were built in the first half of the 20th century?**

4. **Choose three dates listed on the Lake Compounce Timeline and identify who was President of the USA at that time.**

5. **How long was Lake Compounce in existence as a park before the Crocodile Club Banquet tradition was born?**

6. **Calculate how long the Crocodile Club tradition lasted and compare it with how long the park has existed. What percent of time have they shared this unusual bond?**

7. **When was the Gillette Train retired?**

8. **How many rooms are in the Ghost Hunt mansion?**

9. **Assuming everyone meets the height requirement, could your entire class swing on Thunder N' Lightening together? Don't forget your teacher!**

10. **Approximately how many miles long is the unique mountain coaster that ushered in the 2000 season at Lake Compounce?**

11. **About how many years before the Civil War was the Park land purchased from the Tunxis Indians?**

12. **What is the potential number of guests that can ride the 551 ft family raft ride when it's run at full capacity, if up to 15 rafts can be accommodated?**

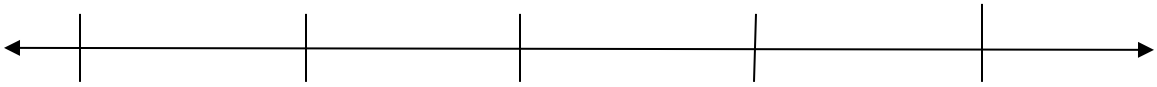
13. How long was Boulder Dash in existence before being named #1 wooden roller coaster in the World?

Extra! Extra! Read All About It!

*****Construct a time line to note important milestones in your life (ex. birth, first steps, entering school, learning to ride a bike).**

*****Construct a time line to commemorate important events in the history of your school.**

My Timeline



The Native American Connection

Lake Compounce enjoys a unique importance in terms of its **geological features** and its **historical background**. Some 20,000 years ago, the New England area was facing the end of the last **Ice Age**. In its wake, a mile thick **glacier** created our body of water when large pieces of ice slowly melted and sediment was deposited around them. Lake Compounce is therefore considered a **glacier kettle**. Compounce Mountain was also created at this time, with its large boulders dropped by the glaciers as they melted.

Amazingly, some of the rock formations that were created made ideal shelters where prehistoric peoples and **Native Americans** could live. Historians believe several tribes of Native Americans lived near the Lake and in the surrounding hills for 7, 500 years.

In the 1600s, a tribe of **Tunxis Indians** and their **chief, Jon a Compound**, lived on the land bordering the Lake. Historical records show that the chief's name appears on **three original deeds**, along with several other tribal names. Through these deeds, a group of white settlers who had migrated to central Connecticut from Massachusetts, were given title to Compound's Lake and the surrounding land. This area was then known as Farmington and Waterbury (also called Mattatuck).

The Tunxis Indians affixed their **waxed fingertip marks** or totems to the deeds to serve as their signatures. In the written part of the deeds, Chief Compound's name appears with different spellings. At times it may be Compas, Compaus, Compowne, Compounce, or Compound. Here's a brief summary of deeds.

May 22, 1673 deed: Confirms previous grants of land made to the settlers (33 years after Farmington was first settled); includes a map of the land, which is said to have covered 165 square miles of central Connecticut, and the names and marks of 26 Tunxis Indians, arranged into 2 columns, one headed by Nesaheagun who was the Sachem of Poquonock, and one headed by Jon a Compaus. The chief's squaw and other women also signed, indicating that Native American women shared an important part in the process.

August 26, 1674 deed: Conveyed a large tract of land in Mattatuck (Waterbury) to the first settlers for 38 pounds; records the names and marks of Nesaheagun, John a Compowne, and 12 other Tunxis Indians.

December 2, 1684 deed: Original found in one of the oldest homes in Waterbury in 1890; gives another tract of land in Mattatuck to the settlers for 9 pounds. The mark of Chief John a Compound is listed first. This deed also includes the signatures of famous men from Connecticut's early history, including Thomas and Benjamin Judd, John and Timothy Standly, John Wadsworth, and John Hopkins. They were representatives for the 84 proprietors of early Farmington, which encompassed over 10 of our current towns.
The Native American word "**acompown-tuk**" reportedly meant "falls of water on the other side." Therefore, it is believed that Chief Compound was named because of his connection with the body

of water on the other side of the mountain. Other writers suggest that John a Compaus could mean John at Long pond (Compo).

Whatever the exact derivation of the name, the lake connection is very strong. **Legends** even tie Chief Compound's death to water. Several versions of the legend are floating around. One of the earliest recorded by Alice Norton in her 1902 book *Compound* tells that his cave was near the shore and that he drowned while crossing the lake in an iron kettle. Other versions embellish the story by adding that he was celebrating after the land exchange and was dared to cross the lake either in the kettle or carrying it as he swam. Interestingly, some of Compound's signature marks resemble the shape of a kettle. This has caused many to wonder whether the marks inspired the legends or whether they foreshadowed the tragic end of Chief John a Compound. A glacial kettle lake, kettle signature marks, a kettle caused demise…coincidence or creative tale? What do you think?

You are invited to view the Lake Compounce **Display** of historical and geological artifacts and materials related to the park. They are located in the foyer above the Croc Pot.

Decipher the Deed

Here is a portion of the deed that sealed the future of Lake Compounce. Note the original Old English script. Can you decipher what it says?

"This indenture made this second December in the yere of our lorde one the six hundred eighty four betwene John a Compowne hackatowsucke manto warun compowno atumtuckco spinning squaw patuckoos squaw: one the on party and Thomas Judd and John Standly order and in the name and behalfe of propiators of Mattatucke in New England of the other party witnessath that we the aforesaid John a Compound for the summe of nine pounds have by these presnets frely fully souly absolutely given granted agerred and soald unto the aforesaid Standly and Judd with the rest of there asosiats their heirs execketors adminestrators and asigns parsell of lands of Mattatucke situate on the east side of nagatucke or Mattatucke river. The said John Compounce dos clerly fuly holy remitt releas relinquish all there formor title claime pour intrest and intrests the land and emunitys…for ever more:"

Now that you've made the Native American connection, challenge yourself to remember what you have discovered without looking back for the answers.

Who Wants To Be a "Wampum" illionaire?

For 100 in wampum: Mattatuck was another name for which of the following towns?
a. Farmington b. Southington c. Waterbury d. Bristol
(Is that your final answer?)

For 200 in wampum: When were Compounce Mountain and Lake created?
a. 2000 years ago b. 20,000 years ago c. 300 years ago d. 1000 years ago

For 500 in wampum: How many Tunxis tribal members "signed" the deed of May 22, 1673?
a. 33 b. 12 c. 26 d. 15

For 1000 in wampum: Who was the Sachem of the Tunxis tribe in 1673?
a. Poquonock b. Compaus c. Nesaheagun d. Atumtucko

For 5000 in wampum: Which of the following was NOT a deed spelling of Chief Jon's name?
a. Compas b. Compaus c. Compowne d. Compo

For 10,000 in wampum: In what year was Alice Norton's book *Compound* published?
a. 1902 b. 1890 c. 1875 d. 1908

For 20,000 in wampum: Which is another name for the waxed fingertip marks of the Tunxis tribe?
a. autographs b. signs c. totems d. sachems
(Is that your final answer? Are you sure?)

For 50,000 in wampum: When was the original Dec. 2, 1684 deed found in a Waterbury home?
a. 1902 b. 1890 c. 1980 d. 1875

For 100,000 in wampum: What was the purchase price of the land deeded on December 2, 1684?
a. 12 pounds b. 38 pounds c. 9 pounds d. 10 pounds

For 200,000 in wampum: Which of the following men was NOT a proprietor of early Farmington"
a. John Wadsworth b. John Standley c. John Hopkins d. John Judd

For 500,000 in wampum: What does the Native American word *acompown-tuk* mean?
a. falls on the other side b. long pond
c. from Compound's lake d. over the mountain

For 1,000,000 in wampum: How many years total do the three land transfer deeds cover?
a. almost 10 b. almost 11 c. almost 15 d. almost 20

(Is that your final answer? Have you thought this through? Are you positive?)

If you've answered all of the questions correctly

CONGRATULATIONS! You're officially a **"WAMPUM"ILLIONAIRE!**

Search a Word: There are at least 25 Lake Compounce words here. Can you find them?

A C F E Y K L P B H F E T H M B O L D F A M I L Y F U N R U
T H U N D E R R A P I D S E T U O O L K M N G A R F I E L D
Z O O M E R S G A S N G O K I M S T S L L A F H T O M M A M
G H S O P N R B N M M I P S W P Q I A A P A I A M M R E T I
W I R A A M E R I C A N F L Y E R S K F E R O D F G M D O N
I L S C W E R A T S N I L C F R T R R E I H L O M C I I T I
L E E O C M T Y U I Z R Z T R C R O A C X F O J C E V D H J
D Q P T R R I N R X I T A A O A A A Z R E S I R P R E T N E
C U I T O K O L W G O N E R Z R M D Y K C E R T H O O E C E
A E R O C F H C L G P I P T E S D X D I A B P C U L I H O D
T U A N O U E I W P T W I S T E R R U D R O T R N L C S L I
R E T C D T D R A I L S D F C C H A D I O T H Y T E E A L R
O L E A I U I C V K R U I W A A E C E I U F C U I R C D E Y
L I S N L R L U E M O P N A R O U S S E S U L M N B R R G K
L N H D E E O S S C U L S G Q R H A S C E N I B G O E E E S
E E I Y P E O G W A S T T E E F Y R E O L N P S T M S D K N
R P P U E U Q K I R E N O M T E I W R A Y E P F O R M L R O
C K C H R I S L N E L T I M A R U K P S R L E E N C C U T T
O Y D F G Y U I G W X T F G K R N M X T R C R R T E O O G G
A T D F R O M O E O N H H D B I I N E E D A C T R Y N B H N
S T J O R E V O L U T I O N K S O I K R J L O M A U A B N I
T T T M T I O O O I R I M B N W P U T N U E V K I C N E F T
E O O N V G Z D E N R D U F O H G Y S Y U B E I N E C S G H
R C P A N I C K T V R D R F P E H T U R W Q X P F K H H W G
S S D C T O P S P I N I D E D E J U M P D E K A T R 0 A K U
T F U N A N D S A F E T Y J H L C U H C T R A M I J R W T O
E N D I N G A Q W V Z O O M E R A N G C O A S T E R B G T S
R B E G I N N I N H G S M I K R K R A P T A E R G A A I H T
L A K E S I D E T R O L L E Y E U H N O D R R M A T Y T A M

Here are some words to look for:

Clipper Cove
Boulder Dash
Mammoth Falls
Wildcat Roller Coaster
Family Fun
Bumper Cars
Compounce Railway
Zoomer's Gas N' Go
Thunder Rapids
Saw Mill Plunge
Ferris Wheel
Zoomerang Coaster
Twister
Pirate Ship
Wave Swinger
American Flyers
Revolution
Carousel
Lakeside
Crocodile
Cotton Candy
DownTime
Anchor Bay

Capturing Your Creativity

1. **Write a newspaper article telling when and why families first started coming to Lake Compounce. Use the Park Timeline.**

2. **Chief Compound deeded the Park property to a group of settlers on December 2, 1684. According to legend, he drowned rowing a kettle across the lake shortly thereafter. Expand the legend with your version of what happened.**

3. **Conduct a survey among your friends to discover their favorite rides at Lake Compounce. Create a line, bar, circle, or pictograph to show your findings.**

4. **Observe the reactions and behavior of guests of different ages as they exit Boulder Dash. Describe what they might be experiencing.**

5. **As a reporter for an historical digest, write a descriptive article on The Lake's famous Carousel. Remember the time line, your observations at the park, and other research on carousels if desired.**

6. **Pretend you were one of the first people to ride the Wildcat Coaster when it opened in 1927. Describe what it was like to experience such a thrilling ride you had never seen before.**

7. **You are promoted to General Manager of Lake Compounce. What are your plans for the future of the park? What new rides would you add? Write a letter to the guests who will visit The Lake in the year 2040 describing what the park looks like.**

8. **Imagine you are an employee at Lake Compounce. Write about what a day working in the park would be like.**

9. **Create your own song lyrics about Boocifer, Prof. Phearstruck, and what you discover in the many rooms of Ghost Hunt's haunted mansion. Put the words to the music of a favorite tune.**

10. **Can you really learn about math and science at an amusement park? Remembering the how, what, when, and why (or why not), write a convincing statement that answers that question.**

~~~~Poetry in the Park~~~~

A very important characteristic of poetry is that it tries to **involve** us in experiences, emotions, moods, attitudes, or ideas rather than just telling us about them. It appeals directly to the senses, (sound, smell, taste, touch) so we can feel and share what the poet wishes to convey. To do this, the poet relies on imagery or word pictures to get the idea across.

One special type of poem that uses imagery is the ***haiku***. It is a Japanese poem of three lines (usually having 5, 7, and 5 syllables) that creates a picture which arouses an emotional response and some further insight or thought.

1. **Look at the examples and compose a *haiku* that paints a word picture of an experience or feeling that you have during your visit to Lake Compounce.**

   Examples:

   Gray clouds float over
   bringing children time to rest
   from splashes in the waves.

   On the dragon swift
   I gasp breathless and hold tight
   senses, soul, fire of life.

2. **Use the following fantastic figures of speech to describe some of the things you notice while at the Park.**

   Onomatopoeia: the effect when words are made to sound like the thing they mean (ex the "buzz" of bees, the "whirr" of the motor)

   _____

   Personification: animals, things, ideas are given human qualities (ex The gourmet ice bit my tongue).

   _____

   Simile: a comparison of two things using "like" or "as" (ex The coaster flies like a bird).

   _____

   Alliteration: first letter of words are the same (Silly Suzie Sunshine sang six songs while sitting on the Wave Swinger).

   _____

3. **Choose your favorite poet and try to imitate his/her style as you compose a Park poem. Pay attention to the use of verb forms, adjectives, nouns, adverbs, figures of speech, and the poem's setup.**

4. **Create an illustrated poetry book that goes along with each ride you go on while at Lake Compounce.**

Psychology: the study of the mind.

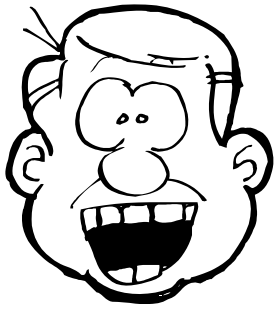
Are you afraid to ride?

Are you sometimes afraid to ride a ride for the first time? Part of the fun of riding is the excitement and even the bit of fear that you feel. Which rides do you fear? Why? How do these rides affect your body? What can you do to control your fears?

1. Name a ride that you are afraid of:_____

2. Which of these symptoms do you feel when you ride the ride or think about riding the ride?

_____Dizzy	_____Weak knees
_____Sweaty Hands	_____Dry Mouth
_____Cold Hands and Feet	_____Trembling
_____Big Eye Pupils	_____Fast Breathing
_____Stomach Butterflies	_____Tense Muscles
_____Pounding Heart	_____Nausea



3. Now try to cure your fear by trying one of these methods. Check the one that made you feel less tense.

_____ Identify what seems to cause your fear (like seeing the roller coaster). Try to think of something other than your fear when you see the object (like looking at the beautiful landscaping in the park).

_____ Relax. Take a deep breath. Hold it for 7 seconds. Release the air slowly while thinking of a pleasant scene. Think about relaxing your muscles as you breath.

_____ Gradually build up to the feared event (like riding the Saw Mill Plunge before riding the Zoomerang).

_____ Force yourself to feel the fear again and again until you are much less afraid (like riding the Wildcat over and over again until you have very little fear).

_____ Copy the behaviors of someone who does not fear the ride and behave as though you are not afraid.

_____ Ignore your fear by keeping your mind busy with other thoughts (like watching the motions and forces on the roller coaster instead of thinking about the feelings you might have).

4. If you are afraid to ride a ride, you are not alone! Most people, however, find that once they ride a ride they have been afraid of, they are no longer afraid of it. In fact, they are often surprised by how much fun it is!
Match the following rides to one or more of the fears that someone might feel while on that ride.

FEARS	**RIDES**
A. Aquaphobia (water)	_____ Ferris Wheel
B. Illyngophobia (Spinning)	_____ Downtime
C. Siderodromophobia (Trains)	_____ Venus Vortex
D. Barophobia (gravity)	_____ Compounce Railway
E. Acrophobia (heights)	_____ Revolution
F. Tachyphobia (high speeds)	_____ Phobia
G. Phonophobia (sounds)	_____ Thunder Rapids
H. Roundaphobia (circular rides)	_____ Boulder Dash

Bonus: Whether you have no fear of phobias or phobia fever, see if you can match up the following:

	Phobias:	*Fear of:*
A.	Agoraphobia	_____ Cliffs
B.	Amasophobia	_____ Mechanical objects
C.	Anemophobia	_____ Roller Coasters
D.	Chremnophia	_____ Open places
E.	Epistemophobia	_____ Movement
F.	Gephyrophobia	_____ Narrow places
G.	Kinesophobia	_____ Places of learning
H.	Mechanophobia	_____ Being in vehicles
I.	Stenophobia	_____ High winds
J.	Coasterphobia	_____ Bridges

RIDE EFFECTS

Try any three rides on for size, noting your body's responses. Record them in the table below.

Ride Name	Motion: Vertical, horizontal, circular, other	1. Pulse rate (beats/min) while waiting	2. Pulse rate on exiting ride	Difference in rate (1-2) Include + or -	Body symptoms see Q #2 above	Emotions you experienced on the ride

1. Which ride in the table did you enjoy the most? Why?

2. Which ride in the table did you enjoy the least? Why?

3. Is there a correlation between the data you collected and how well you enjoyed the ride?

Science is FUNdamental

THE FIVE SENSES

SIGHT

What you see affects how you feel. Experiment by riding part of a ride with your eyes closed and part with your eyes open. Record the difference:

_____

_____

_____

_____

Your eye has difficulty seeing colors in low light levels. Notice the bright colors of clothes outside. Then notice how much harder it is to see these colors when you are in a dimly lit area of the park.

Look for a red flower surrounded by dark leaves or a yellow flower with light green leaves. Anyone who has difficulty telling the difference in color between these flowers and the leaves may be red/green color blind. **Most color blind people are males.**

Because you have two eyes, you can judge distances and shapes of objects better. Try riding a motion ride with both eyes open and then with one eye open. What is the difference?

_____

_____

_____

_____

_____

_____

_____

How fast are your eyes? When you observe the rides, **notice the speed of each ride**. Are there rides which go too fast for you to see clearly without just seeing a blur? Do your eyes have trouble focusing when you are accelerating rapidly? Name the rides that look blurry to you.

_____

_____

The colored iris of your eye contains a pupil which closes to a small dot in bright sunlight. Watch a friend's eyes and notice any changes that occur when the **light level changes**. Which eyes seem to be more sensitive to light?

Brown eyes _____ Blue eyes _____

TOUCH

Your sense of touch can tell you the strength and direction of any force you feel. By the feel of the wind against your face, for example, you can guess the speed of a ride.

Notice the downward pressure that you feel against your body when you ride a fast ride and are pressed into the seat.

1. What force is acting upon you to cause this pressure?

   _____

2. The pressure you feel tells you how strong the force is. What ride has the strongest force of this kind? What ride has the weakest force?

   Strongest force _____

   Weakest force _____

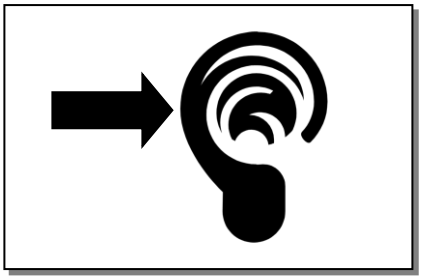
3. Notice the pressure of your body on the seat when you are riding the Zoomerang loop. Your sense of touch tells you that you are right side up. Your eyes tell you that you are up side down. The result of this is a sensation that the world is upside down.

   Do you agree with this statement? _____

   Why? _____

   _____

   _____



HEARING

Listen to the Wildcat Coaster as it speeds by. Does the sound change pitch from higher to lower?

Yes_____ No_____

This sound change tells you how fast the ride is moving. The change in pitch (from higher to lower sounding) is called the **Doppler Shift**.

When the Wildcat Coaster rider feels the most force, the coaster is also pushing hardest on the track. Most tracks creak, squeak, or groan more at this time. Listen for track sounds from a walkway near the roller coaster and see if the strong forces and the loud noises come at the same places. Where is the train (cars) on the Wildcat when you hear the loudest sounds?

_____

_____

_____

Light waves travel in straight lines, but sound waves can go around corners. Pick a loud park noise and listen to it all around the park. Mark the noise maker and the places where you can hear it on the park map.

List 5 sounds you hear in the park and where you hear them.

Sound	Location
1	
2	
3	
4	
5	

TASTE

When you have your lunch today, take two bites of food and notice how the food smells as you eat it. Next, eat two bites of your food while you pinch your nose closed with your fingers. Does the food taste different when you cannot smell it?

What are the differences?

_____

_____

_____

_____

_____

_____

Search through the various food and snack items and find something from each of the taste categories: salty, sweet, bitter, sour.

Salty _____

Sweet _____

Sour _____

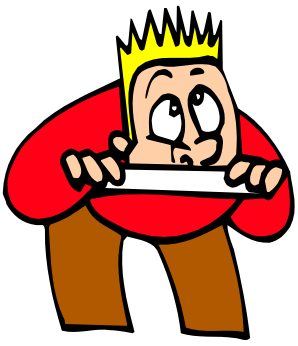
Bitter _____

Smell

Your sense of smell is one that your brain uses to gather much information about your environment. Oftentimes, however, we do not think of smell as one of our most valuable senses.

When you are in the park, sniff for the following scents. Record where you find them. See if you and your friends have the same sense of smell. Can you smell some things better than others?

Item	**Location Found**
Hamburgers	
French Fries	
Flowers	
Water	
Pine Trees	
Popcorn	
Gasoline	
Cotton Candy	



REV THOSE CRANIAL ENGINES!

Amusement Parks conjure up visions of chills and thrills and moments of magic and excitement – breathtaking speed, hanging upside down, plunging to earth, or facing the heavens. **Who masterminds such marvels!** Would the answer surprise you? Architects, engineers, designers, planners, surveyors, geologists, carpenters, electricians, plumbers, sound technicians, mechanics, construction crews, landscapers, artists, marketers, accountants, personnel directors, and yes, even educators --- all of the inventive, creative, problem solving men and women who rely on science and math (the queen of all sciences) for their inspiration and know-how are the brains and brawn behind creating and operating a wonderful park. Now, will you ever again ask your teacher "what is math good for anyway?" Not if love for amusement park fun is your cup of tea! Consider using math and science to help strengthen your mental muscle.

Want something different to help you get started? Put on your thinking cap, rev those cranial engines, and warm up YOUR problem solving skills with these mental barbells.

Warning! Decode at your own risk. May promote serious synaptic activity, including but not limited to inventive outbursts, spontaneous creative combustion, and feigned mental anguish characterized by murmurs of "oh brother, geez, yeah sure, I'm working on it, leave me alone, oh no, haha, aha, and I knew that."

Hi GOOD ***!***

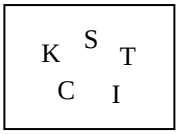
You've had your Twink Twink Twink Twink ***, now it's time to*** T E G O ***.***

No more ZZZ JOB ***. This*** THING US US ***. Math and science are involved in every aspect of life as we know it.*** *Script* ***.***

Studying and exploring math and science could be somet bi ***.***

Build your brain power little by little, and soon you'll see the

TUNNEL . *Reach for the* SπKY *and surely you'll* T U CROWD *and be* HEAD SHOULDERS ARMS BODY LEGS ANKLES FEET TOES . *Now let's not* BE BUSH AT . *If you want to experience math and science in action, make* BBBBBBBBB *for Lake Compounce. It's* . *The* **Zoomerang** *will put you* track *to discovering why the shape of the curve for a looping coaster is not a circle. Take a crash course in how not to drive on the* **Kiddie Bumper Cars**, *where Newton's Law of Motion will seem like* spuds *by the time you're done. Put* TOTOO *and decipher the* **Pirate***'s pendulum action. And, if you've ever wondered what it'd be like on* NINE CUMULUS , *head for the* **Downtime**. *Millions of years of geologic processes will flash before your eyes as you ride the upthrown face of a normal fault and literally be* TOUCH EARTH . KJUSTK *water is your passion, check out force and motion on the* **Saw Mill Plunge** *or on the* **Thunder Rapids**

Raft ***ride. But***  ***, there's more. The absolute*** 

will be **Boulder Dash,** ***the longest wooden roller coaster in the East and,***

from  ***, the only one ever built into the side of a mountain.***

 ***, this unique terrain coaster will garner a huge*** 

as it races between boulders and swishes through trees in its boundary

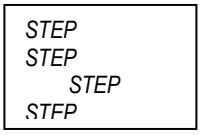
line hopping journey from Bristol to Southington and back again.

 ***, we can even offer you***  ***to keep you in gear***

for all of this excitement. Shhh!  ***, there's an awful***

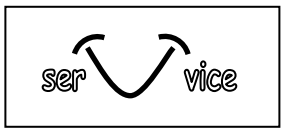
lot of fun to be had exploring math and science! 

Benefits?  ***! We'll try to***  ***as we "round"***

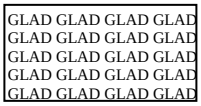
out your hands-on educational experience, bring you 

in your studies, help bridge the  ***as students and***

teachers begin  ***and reach a***  ***, provide***



and generally encourage you to feel

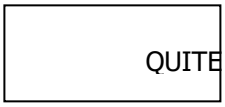


.

? You'll be

with The Lake and with learning. Are you still with me bright eyes? If you're

about now, you're



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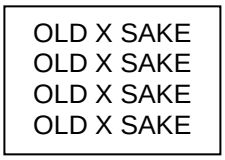
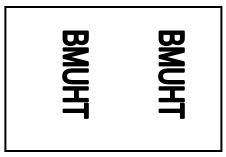
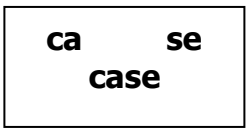


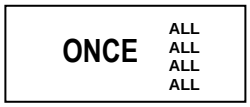
and for new times sake, we love our park and think you'll give it



too. It's an

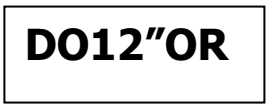


. The E in education stands for excellent.



, get that science and math thing going. There's

. Put your



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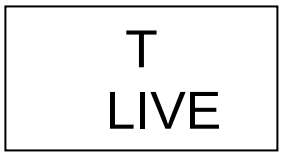
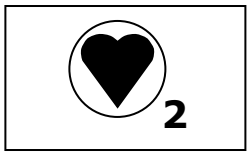
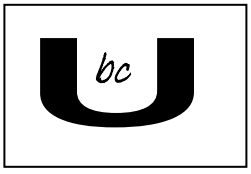


. Face the music. Take your medicine. And wipe that grin into your face!! Okay, Okay, now that our

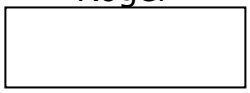


fest is over and you're pleading cranial overload, I'll sign off with a to



in all the old and young familiar places at Lake Compounce. Farewell…au revoir…auf wiedersehen…adios…arrivederci…zaijian…

Roger



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Agent M alias 00 3.14

Science Behind the Rides

What do you like best about amusement parks? Perhaps it's the exciting rides that take your breath away, send you streaking down steep hills, or turn you completely upside down. Have you ever wondered just how fast that roller coaster goes or why you don't fall out when a ride has you standing on your head?

Here's a chance to "unmask" the magic and discover how science and math are the real secrets behind the chills and thrills of a fun park!

Let's begin by investigating the "g," a common unit to describe the forces we feel. **One g is equal to the force of Earth's gravity.** The force of gravity causes falling objects to accelerate at 9.8 meters per second squared. This means that the downward velocity (speed and direction) of a falling object increases 9.8 meters per second for each second it falls.

Living on Earth, you normally experience 1 g of acceleration vertically. In comparison, the astronauts feel about three g's of force when the space shuttle takes off. Three times the force of Earth's gravity makes them feel three times heavier than normal.

You can **make a "g" meter to measure the forces you feel** while on your bicycle, on the playground swings, in a car, or on an amusement park ride if permitted (dependent on park or attraction). Here's how it's done.

Construction:

1. Cut out the g meter on the next page.

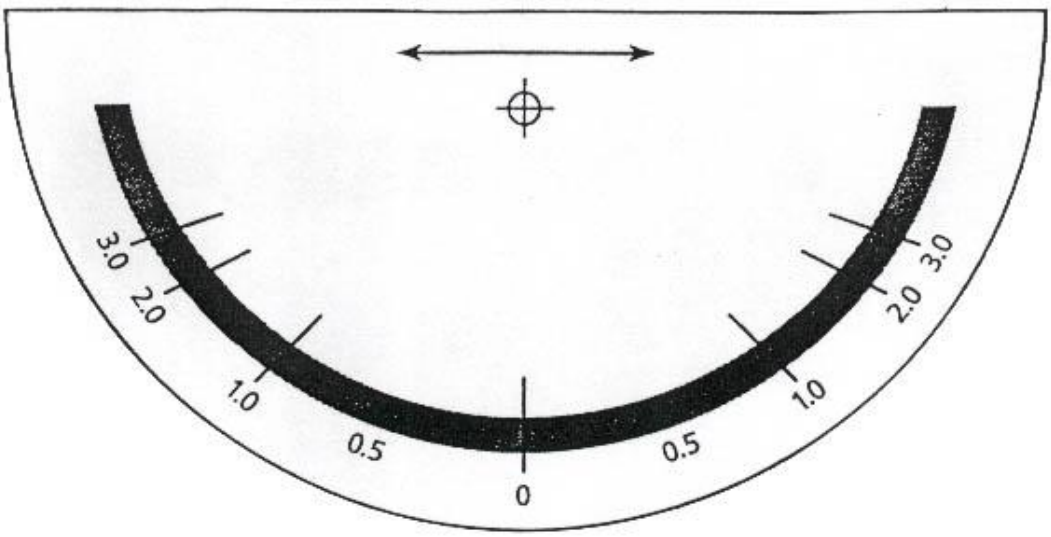
2. Glue the g meter to a thin piece of cardboard and trim to size if needed.

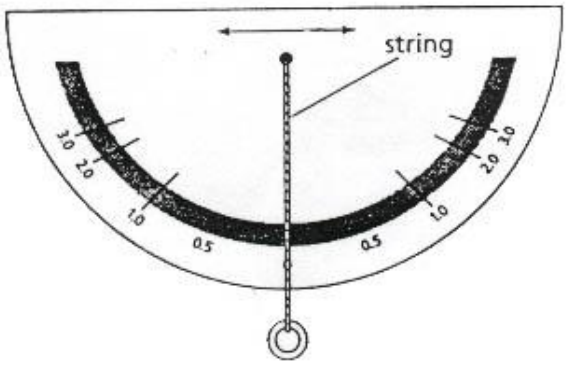
3. Take about 15 cm (6 inches) of heavy black thread and tie one end to a weight such as a washer, a fish sinker, or a key. Tie the other end through the hole and the top of the g meter.

4. Holding the g meter in front of you, let the thread hang down so that it lines up with the 0 g mark.

5. For the g meter to work properly, the top edge must be held horizontal or level with the horizon.

6. When the line formed by the string and weight move in the direction of the arrows, you will be able to read the force in g's.





When your g meter is done, try it out.

* While you are on a swing in your yard, hold the g meter so that the arrows point in the direction you will be moving. How many g's do you feel as you swing?

* Use the g meter on the "merry-go-round" at the playground. While sitting on the outside edge of the ride, point the arrow toward the center. How many g's do you feel? Does the number of g's change if the ride moves faster? Does the number of g's change if you sit closer to the center of the ride?

* When you are riding in the family car, hold the g meter in front of you as your parent drives around a corner. How many g's do you feel? Is there a difference between going slowly around a corner or going quickly around it?

* <u>If permitted</u> to use the g meter to investigate g forces on any rides at the amusement park, try to determine how the ride creates the force and whether speed or turns are used to create large forces.

Important safety note: Your g meter should be attached to you by some type of wrist tether so that it will not fall off the ride and cause injury or damage.

The Wildcat

One of the first amusement park rides invented, the roller coaster operates because of **gravity**—the force of attraction which the Earth exerts on all objects on or near it.

As you ride The Wildcat, you will be the experiment. Notice when you feel increased and decreased forces. They may push you into your seat or lift you off of it. They may push you left or right. After the ride is over, try to answer the following questions.

1. Describe what happens to the size of the hills during the ride? Why do you think this is so?

   _____

   _____

2. When you are at the top of a hill, are you moving faster or slower? Why?

   _____

   _____

3. When you are at the bottom of a hill, are you moving faster or slower? Why?

   _____

   _____

4. Do you gain or lose speed as you go up a hill? Why?

   _____

   _____

5. Do you gain or lose speed as you go down a hill? Why?

   _____

   _____

6. Do you feel heavier, lighter, or the same as usual when you go up a hill? Why?

   _____

   _____

7. Do you feel heavier, lighter, or the same as usual when you go down a hill? Why?

8. Are you pushed inward or outward when you are in a turn? Why?

9. On the curves, do the tracks tilt inward, outward, or are they flat? Why?

10. Can you identify where you:

Are accelerating or speeding up? _____
Are decelerating or slowing down? _____
Are feeling weightless? _____
Have the greatest speed? _____
Have the slowest speed? _____
Have the most potential or stored energy? _____
Have the most kinetic or energy of motion? _____
Are in a backward leaning zone? _____
Are in a forward leaning zone? _____

11. How fast do you think the coaster goes?

12. What simple machines are used on the roller coaster ride (ex. lever, wheel and axle, pulley, inclined plane)?

Math Link

Measure the time it takes for the coaster to make one trip by using a watch with a second hand or a digital watch with a stopwatch mode. If the coaster track is about **800 meters** long, what is the **average speed** of the trip? For linear or straight line motion, to find the average speed divide the distance traveled by the time for the trip. Give your answer in meters per second. (Try converting your answer to kilometers per hour.)

time for trip_____seconds

$$\text{average speed} = \frac{\text{distance}}{\text{time}}$$

An Explanation

The Wildcat Roller Coaster works because of gravity and the **Law of Conservation of Energy**. The Law of Conservation of Energy says that energy can change from one form to another, but it cannot be created or destroyed.

Think of using a playground slide. After climbing up the steps to the top of the slide, you have **potential energy**. It is called potential energy because it is a stored energy that can be used later. As you get on the slide's surface and start to slide down, your movement shows **kinetic energy**. Kinetic energy is the energy of motion, energy that is being used.

The Law of Conservation of Energy says that energy cannot be created out of nothing. It has to come from someplace else. It comes from changing some of the potential energy into kinetic energy. The farther you slide, the more potential energy you convert into kinetic energy. By the bottom of the slide, just before your feet touch the ground, all of the potential energy is changed into kinetic energy and you have the greatest speed.

A roller coaster is similar to a slide, except you ride in a vehicle with wheels that reduce **friction**, a force that resists motion. (It's easier to roll an object than to drag or slide it.) You also don't have to climb to the top of the first hill. A motor does that work for you. At the top of the hill you have potential energy. It is stored energy because gravity wants to pull you down to the ground. This potential energy is changed into kinetic energy as gravity pulls you down the first hill. The farther you go down the hill, the more potential energy changes into kinetic energy, which you feel as speed. Therefore you will be going fastest at the bottom of the hill. Going up the next hill, your kinetic energy will change back into potential energy. More energy is changed the higher you go. The conversion of kinetic energy to potential energy continues as you go up and down hills. Your total energy will not increase or decrease. It will just change from one form to another.

Wind resistance, the rolling of the wheels, and friction in the coaster ride will use some of the kinetic energy. Therefore, to make sure there is enough kinetic energy to reach the starting point for the ride, coaster designers must build each successive hill on the ride lower than the first hill.

When you make a turn, the force you feel is called **centripetal force**. This is a force on an object that acts toward the center of a circular path. So all rides that move in a circle generate centripetal force.

Think of using a playground slide again, but this time one that is curved. On a curved playground slide, your body still tries to go down in a straight line. You think you are being thrown to the outer edge of the slide, but you are just trying to go straight.

On a coaster, when you make a turn it feels like you are being forced to the outside of the car. To account for centripetal force, coaster designers "bank" the turns, tilting the track and therefore the car, so that you are forced down into your seat rather than being thrown out.

The Zoomerang

Many people find a roller coaster ride that loops and goes through a corkscrew very exciting. It gives the thrill of speed and a feeling of falling from great heights while being turned upside down. The Zoomerang has the added feature of repeating this process while taking riders backwards.

After riding the Zoomerang roller coaster, see if you can answer the following questions.

1. On the loop or corkscrew part of the ride, do the "circles" get wider, narrower, or stay the same as you go through the ride?

   _____

2. Are you pushed down in the seat or lifted off the seat when you are turned upside down in the corkscrew part of the ride?

   _____

3. Do you feel heavier or lighter at the bottom of a loop?

   _____

4. Do you feel heavier or lighter when you reach the top of the loop?

   _____

5. Does the force feel greater at the top or at the bottom of the loop?

   _____

6. Does the car slow down or speed up when you move up a loop?

   _____

7. What design in the ride keeps you from being thrown out when it turns?

   _____

8. What forces do you feel on the Zoomerang?

   _____

Math Link

The distance traveled on the Zoomerang is **286 meters** one way. Measure the time it takes for the Coaster to complete the ride from start to finish. What is the **average speed** of the trip in meters per second?

time for complete trip_____seconds

average speed = distance/time

An Explanation

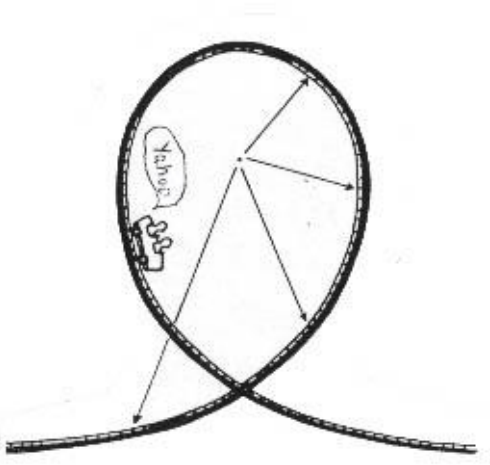
The shape of the curve for a looping roller coaster is not a circle. It's more like a teardrop shape called a *clothoid loop*. First described by Swiss mathematician Leonard Euler in the 18th century, it is the perfect shape for somersaulting riders on a roller coaster without having them fall out.

Over the years, coaster designers have discovered that a perfect circle is not a good choice for a loop. Centripetal force is generated by all rides that move in a circle. This force presses riders into their seats in a vertical loop on a coaster. When the coaster and its riders are upside down at the top of the loop, the centripetal force has to be greater than the force of gravity or the riders will fall out of their seats.

Designers first thought that making the ride faster and the circle just large enough to create about one g of centripetal force to counteract the one g of gravity at the top of the circle would solve the problem. But that would mean that riders would have to face over eight g's when entering the loop!

This would not work considering that at six g's many people get nosebleeds and at nine g's they can black out and lose consciousness. (Space shuttle astronauts only experience about three g's of force.)

The clothoid loop, on the other hand, levels or smooths the forces on the riders and still keeps them safe because its radius keeps decreasing on the upward swing. The decrease in the radius produces a higher centripetal force, permits vertical loops to be very large, and allows riders to undergo only three to four g's when entering the loop. Wow! All of this because of math and physics!



The Kiddie Bumper Cars

When riding the kiddie bumper cars, do you try to bypass being hit or are you looking for the crash? Do you drive calmly around the perimeter or do you bang into everything? Actually, the bumper cars offer a fun, hands-on experience in learning **how not to drive**. Try to answer the following questions as you investigate the **crashes!**

1. While you are waiting in line, look at the kiddie bumper cars. In what ways are they different than normal cars?

   _____

2. Which way are you pushed when you first start up your car?

   _____

3. Which way are you thrown when your car stops?

   _____

4. If you were in a head on crash, which way do you think you would be thrown?

   _____

5. Which way are you thrown when hit from behind by another car? Why?

   _____

6. What happens to you when your car is hit from the side?

   _____

7. When you crash into someone else's car, in which of these situations do you feel the greatest force?

   You are moving and they are stopped _____
   You are moving and they are moving away from you _____
   You are moving and they are moving towards you _____

   Why?_____

8. What form of energy is used by the cars to make them move? How do you know this?

   _____

9. From what you have discovered, explain why it is important to wear a shoulder harness and seat belt when riding in a vehicle during your real world travel.

   _____

   _____

Math Link

If you are traveling in a Kiddie Bumper Car at **2 meters per second**, what is the **distance** you can cover in one minute under the following conditions: you have ten collisions which result in a loss of 5 seconds four times, 4 seconds three times, and 3 seconds three times?

An Explanation

The Kiddie Bumper Cars follow ***Newton's Three Laws of Motion***.

Newton's first law of motion states that an object remains in a state of rest unless an unbalanced force causes it to move, and that an object continues in motion along a straight line unless a force stops it or causes the object to change direction.

Newton's second law of motion states that the acceleration of an object (the rate at which the velocity or speed and direction of an object changes) depends on the size of the force that produces the acceleration and on the mass (amount of matter) of the object.

Newton's third law of motion states that for every force there is an equal and opposite force.

According to Newton's first law of motion, objects want to keep traveling in the direction they are going. When you are riding in your bumper car and it hits someone else's car and stops, your body follows the first law of motion and keeps going forward. When you are stopped and someone else hits your car from behind and moves it forward, your body tries to remain stopped. So it feels like you are being thrown backwards.

Newton's second law of motion relates to *impulse and momentum*. Simply put, it says that when you crash into another bumper car that is stopped, some of your momentum will be transferred to the other car from yours. This is the reason that the other car moves. To keep riders safe, it is important that energy is transferred from one car to the other slowly. The rubber bumpers that surround the cars cause the collision between the two cars to take more time. Energy is then transferred more slowly and insures safer collisions.

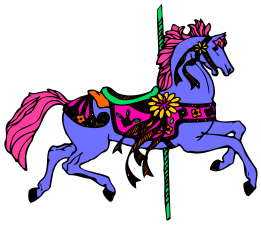
The Carousel

The Law of Conservation of Energy and Newton's Three Laws of Motion help to explain how many amusement park rides operate. They are especially important in describing centripetal force rides that move in a circle, such as the Carousel. Remember, centripetal force is what causes you to feel like you are being thrown to the side of a ride as it moves in a circle. You however are just doing what comes naturally—trying to move in a straight line, being acted on by an outside force (centripetal) that moves you along the lines created by it, and exerting an equal and opposite force on your horse. Try to feel the forces that are acting on you and note where you are on the ride when they occur.

1. Is your body thrown slightly inwards or slightly outwards as the ride turns?
2. Does the floor appear to be level? If not, which way does it tilt? Why?
3. Do all of the horses on the Carousel go up and down at the same time?
4. Does the horse next to yours move in the same or in the opposite direction?
5. When your horse is moving down, do you feel slightly heavier or slightly lighter?
6. When your horse is moving up, do you feel slightly heavier or slightly lighter?
7. Which horses appear to be moving faster, those on the inside or those on the outside?
8. What simple machines (ex. lever, wheel and axle, inclined plane, pulley) are used on this ride?
9. Estimate how many g's the Carousel creates.
10. Count the animals (the horses and the goat, but not the chariots) on the Carousel. How many move up and down? How many are stationary? If you hopped on an animal without checking to see if it could move, what is the probability you would end up on an animal that moves? What is the probability you would end up: on a moving horse? on the goat?

Math Link

Measure the time it takes for the Carousel to make one complete turn (rotation).
If you are on an outside horse **7 meters from the center**, find the average **speed of rotation**. For circular motion (motion in a circle), find the average speed for one rotation by dividing the distance traveled (which is the circumference of the circle) by the time for one rotation. Remember: **Circumference** equals 3.14 (or 22/7) times the diameter of the circle.



time for 1 rotation_____seconds average speed = Circumference/time

The Wave Swinger

For another experience with centripetal force, ride and observe the Wave Swinger in action. Then answer the following questions.

1. What moves higher: an empty swing or one with a person in it? Why do you think this happens?

   _____

2. When the ride increases speed, what sensations do you feel?

   _____

3. As the ride increases in speed, what happens to the seats?

   _____

4. Identify the forces that act on you during the ride.
   Draw a diagram to show the direction of these forces as they are acting on you.

5. If permitted, use your g meter to determine how many g's the Wave Swinger creates.

An Explanation

An empty swing chair and one with a person will both reach the same height. Both the force of gravity (which pulls the rider and/or the chair downward) and the centripetal force (which makes the rider and/or the chair move in a circle) depend on the mass of an object (the amount of matter in the object). In other words, an empty chair has less of both forces acting on it, so it rises to the same height as a chair with a person.

Math Link

Measure the time it takes for the Wave Swinger to make one rotation. If you are on a swing chair in the middle row **10 meters from the center**, find the average **speed of rotation**.

time for one rotation_____seconds average speed = Circumference/time

_ _ _ ((((. . . === Boulder Dash

This mountain coaster, new in 2000, is a marvel of engineering. It is the longest wooden roller coaster on the east coast and the only one of its kind, built on a 750 ft. mountain which forms the western boundary of Lake Compounce Park. The course is determined by the mountain topography and designed to disturb as little of the natural setting as possible, including the trees, bushes, ledges, and boulders.

The coaster ride begins in the north end of the Park near the Ferris Wheel (located in Bristol) travels to the south end of the Park near ~~the Skyride~~ (located in Southington) and back again over 4500 plus ft. of track. For a breathtaking two minutes, guests race through dense woods, past rugged rock facings, and between large boulders at up to 60 miles per hour.

The unusual design tries to keep the coaster a hill hugger and very fast. The speed doesn't change greatly during the ride as with most roller coasters. Heavily dependent on gravity from the top of the first initial drop on, it maintains a high range speed throughout the ride. For true coaster lovers (as well as everyone who dares to ride), a deluxe assortment of other specialties complete the unparalleled ride. In amusement park lingo, your experiences might include sideways jogs, bunny hops, ejector or floater airtime, laterals, and a feisty 180 degree turnaround.

In short, Boulder Dash may be one of the coolest psychologically thrilling rides in the world. Because you are actually riding on a real intact mountain, many unexpected "blind" surprises may have your hair standing on end.

Now that you know the scoop, give it a try!

1. As you watch: Does almost the same speed appear to be maintained throughout the ride? _____
   How about when you're a rider? _____

2. Did the speed seem to be faster because of the boulders and trees? _____

3. Were there any backward leaning zones? _____ Any forward leaning zones? _____

4. What percentage of your ride seemed to be airtime? _____
   Compare your estimate with those of your classmates.

5. Compare your adventure on Boulder Dash to that of the Wildcat and/or the Zoomerang.

   a. On which coaster did you experience less sideward g forces? _____

   b. On which coaster did you have more airtime? _____

   c. Did you experience differences in speed? _____

Congratulations! You are now officially a bold, brash, brave, bona fide Boulder Dasher!

DOWNTIME!!!

A heart pumping, adrenaline flowing, white knuckled, and literally hair raising experience, DownTime is a vertical drop tower with *attitude* and turbo action.

After the guests are seated, the cart is raised slightly and weighed. Then it is steadily lifted to the top of the tower where it is locked in brakes. Stationary for a few seconds, the cart is then abruptly launched toward the ground with chilling negative g-force acceleration. The ride softens with a bungee like bounce before reaching the bottom of the tower and rebounds for a few soft bounces before descending slowly back to the ground. Air pressure, power cylinders, pistons, and air powered brakes work in harmony with each other to provide guests with some exciting ups and downs.

Whether you're a watcher or a rider, DownTime is an interesting phenomenon to investigate.

1. How many guests can the ride accommodate? _____

2. Why do you think the cart needs to be weighed?
   _____

3. Measure the overall cycle time of the ride from start to finish to give yourself perspective about the ride. You'll need a watch with a second hand or one with a stopwatch mode. _____seconds

4. Measure the time it takes for the cart to be lifted to the top of the tower. Start measuring at the end of the weigh sequence. _____ seconds

5. Measure the time of the cart's turbo descent Start immediately after release of the braking mechanism. Hint: Don't look away or you'll miss it! Stop just as the cart is ready to bounce.
   _____ seconds

DownTime is 185 feet tall (without the flagpole). The dynamic distance is 165 feet (the distance through which all the action occurs). The first bounce occurs about 40 feet up the tower (from total height).

6 Using the information above, calculate the average speed of the cart moving up the tower.
_____ feet/second

7. Calculate the average speed of the cart moving back down toward the ground.
_____ feet/second

8. If DownTime was a free fall drop tower rather than a turbo drop tower, what differences would you expect to find in the ascent and descent? Consider time, speed, and g forces.

You're done?! Had fun?! Then you've earned some Down Time!

THUNDER N' LIGHTNING

Packed with power and flash, this new ride will light up your life and send your screams rumbling through the skies like roaring thunder. The ride motion of Thunder N' Lightning is that of a pendulum - a body which is suspended from a fixed point and which swings freely. The arms of Thunder N' Lightning are suspended from an axle, swinging in an arc, back and forth as in a playground swing. But you've never had a swing ride like this!!! Air pressure, power cylinders, and pistons all work together to rotate this mega swing up to 115 degrees from vertical in each direction and give a sky's the limit feeling.

Whether you're a watcher or a rider, check out Thunder N' Lightning and try to answer these fair weather questions.

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1. How many guests can ride Thunder N' Lightning?

2. At what part of the ride would you feel weightless?

3. Where would you have the greatest speed? Why?

4. If the length of an arm is 43 feet, estimate how high Thunder or Lightning lifts its passengers?

5. Measure the time it takes for the riders to complete one full arc. Observe several cycles.

6. Estimate the speed of the ride.

Weather Link: To develop, thunderstorms need the following three conditions: 1) moisture to form clouds and rain, 2) unstable air, which is relatively warm air that can rise rapidly, and 3) lift (fronts, sea breezes and mountains have the capability of lifting air to help form thunderstorms).

Mini Math Link: Every thunderstorm has lightning. You can estimate how many miles away a storm is by counting the number of seconds between the flash of lightning and the clap of thunder. Divide the number of seconds by five to get the distance in miles. *Give it a try*. If Jace sees a flash of lightning at 2:04 pm and hears a clap of thunder at 2:05 pm, how far away is the storm? Why does he see the lightning before hearing the thunder?

Zoomer's Gas N' Go

Though the power they're supplyin' is electrifyin' and your chills are multiplyin'
You won't be losin' control on the Zoomers – the cool new ride of the season.

Ten 1956 style Corvettes are greased up and ready to go and will keep guests on track for a spin down memory lane. The guide unit and steering are designed to allow guests to maneuver the car around the course, but still prevent driving off the roadway. The steering system utilizes a specially manufactured rack and pinion unit acting through steering springs.

Equipped with a sound system, these replicas of the famed car which came into its own in the 1950's, take guests back in time with sights and sounds that will revive memories, as well as create new ones. And, it's sure to be a very pleasant reminder that the 50's still impact us today.

So, what's up with the Corvette?

The famed Chevrolet Corvette was the first all American open top sports car built by an American car manufacturer. The very first Corvette rolled off the production line in Flint, Michigan on June 30, 1953 and cost $3490. The outer body was constructed with fiberglass, which was a unique new material at the time. It had a 6 cylinder truck engine, a two speed transmission, drum brakes, and a triple carburetor intake.

From 1953 to the present, the Corvette has been a sought after, sporty, and all over cool car with special appeal. For example, movie legend John Wayne owned a Corvette made on October 1, 1953. And, the oldest surviving Corvette, which was the third one off the assembly line in 1953, was sold in Scottsdale, Arizona for one million dollars on January 12, 2006.

We're All Shook Up

1. Approximately how old is the oldest surviving Corvette?

2. A Chevrolet Corvette cost $3631 in 1958 and the average price of a basic car was $2550. What is the percent of increase of the Corvette over the average price of a car for that year?

3. Compare the selling price of the oldest surviving Corvette in 1953 with the its selling price in 2006. Taking only sell prices into consideration, what

was the gross percent of profit?

4. In 1951 a loaf of bread cost 16 cents, bacon was 52 cents a pound, and a dozen of eggs cost 24 cents. How much would a typical 2006 breakfast consisting of two eggs over easy, 2 pieces of toast, and 2 pieces of bacon (12 slices to a lb) cost in 1951?

5. If a pound of coffee sold for 85 cents in 1956, and you need 2 ounces of ground coffee to make a carafe of coffee that holds 6 cups, what would it cost to serve one cup of coffee in 1956?

6. Gasoline cost 18 cents a gallon in 1950 and 25 cents a gallon in 1959. Calculate the percent of increase in the cost of gas from the beginning to the end of the 50s.

Zoomer 's Gas N' Go Connections:

1. What songs representing the 50's do you hear on the Zoomer's car radio?

2. List all of the components of the Zoomer's ride that relate to the memories and images of the 50's?

3. The Zoomer's Gas N' Go ride consists of 1015 feet of track. Measure the time it takes to navigate the track on your scenic journey. Start from the second you leave the station until the time you return.

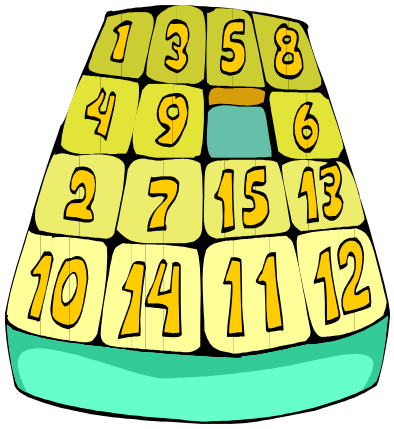
4. Calculate the approximate speed of the ride in miles per hour.

5. Estimate the capacity of the station queue building if it contains 960 square feet of space. Assume each person requires his/her own four sq.ft. of standing room and that space for entry, exit, and other function occupies 300 sq. ft.

6. Though the Zoomer's cars travel with the help of a guide system, does the track need to be designed a certain way for the ride to function correctly? Explain your theory.

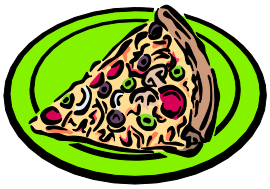
Now it's time to put on your shades and rock around memory lane again☺ Zoom, zoom!

Math Counts



A visit to Lake Compounce can put your math skills to the test. All around you, every aspect of the design and construction, maintenance and upkeep, and daily operation of the park entails the use of math skills for the people who work here. For visitors, a good understanding of basic math is really all you need to make good decisions and determine how far your money will s-t-r-e-t-c-h during your visit.

Please show your work for each of the following questions.



1. A class of 23 students eats pizza for lunch. There are 15 boys in the class. Each boy eats 4 slices and each girl eats 2 slices. There are 8 slices in one pizza.

   A. How many total slices of pizza will the boys eat? _____

   B. How many total slices of pizza will the girls eat? _____

   C. How many total slices of pizza will be eaten by the class? _____

D. How many pizzas will you need to buy to feed the whole class? _____

2. The Pirate Ship seats 54 people at a time, and your grade consists of 144 students.

   A. How many people will be left in line after the first ride cycle? _____

   B. How many ride cycles will the Pirate Ship run for everyone to get one ride?

   _____

   C. If six people can sit in one seat, how many seats will be used on the Pirate Ship's last ride cycle with only your classmates?

   _____

3. Your bus trip takes 20 minutes to get to Lake Compounce from your school. Your bus driver drives at 55 mph for 15 minutes and 20 mph for the rest of the trip. How many miles is your school from Lake Compounce?

   _____

4. 205 class members visit Lake Compounce. Each student wants to ride the Thunder Rapids Raft Ride. The ride has 10 rafts each holding 8 people and the ride lasts 180 seconds. What is the actual ride time for the entire class to go on the ride once?

   _____ minutes.

   If it takes 40 seconds for a raft to move through the station, plus the time on the ride, how long will it take the entire class of 205 people to ride 3 times?

   _____ minutes.

5. Choose which combination of the following items you can purchase if you have $25.00 to spend at Lake Compounce. (Don't forget to add CT State Sales Tax of 6%).

   ☐ 1 tee-shirt for $15.00, 3lbs. of candy at $1.19 per lb., and 1 balloon for $2.98.

   ☐ 1 sweatshirt for $24.95

   ☐ 3 balloons at $2.98 each, and 1 tee-shirt for $15.00

6. Zoomerang Coaster

A. How many riders are on the Zoomerang Coaster with all seats filled? Find the average number per ride from 3 cycles.

1st trip number _____
2nd trip number _____
3rd trip number _____

Average number per trip _____

B. Use your watch or a stopwatch to determine how long the ride lasts. Start with loading and end with the train (cars) unloaded.

Time = _____seconds = _____minutes = _____ hours

C. Based on the time for one ride, calculate how many rides could be run in an 8 hour day.

_____ rides.

Geoscape Scavenger Hunt

Search the Park for objects (buildings, signs, etc.) or parts of objects that resemble the geometric figures or concepts listed below. Record the name of each discovery and place where it was found.

	Name	Location
Circle:	_____	_____
Triangle:	_____	_____
Rectangle:	_____	_____
Square:	_____	_____
Trapezoid:	_____	_____
Parallel Lines:	_____	_____
Cone:	_____	_____
Cube:	_____	_____
Cylinder:	_____	_____
Pyramid:	_____	_____
Sphere:	_____	_____
Rectangular Prism:	_____	_____
Triangular Prism:	_____	_____

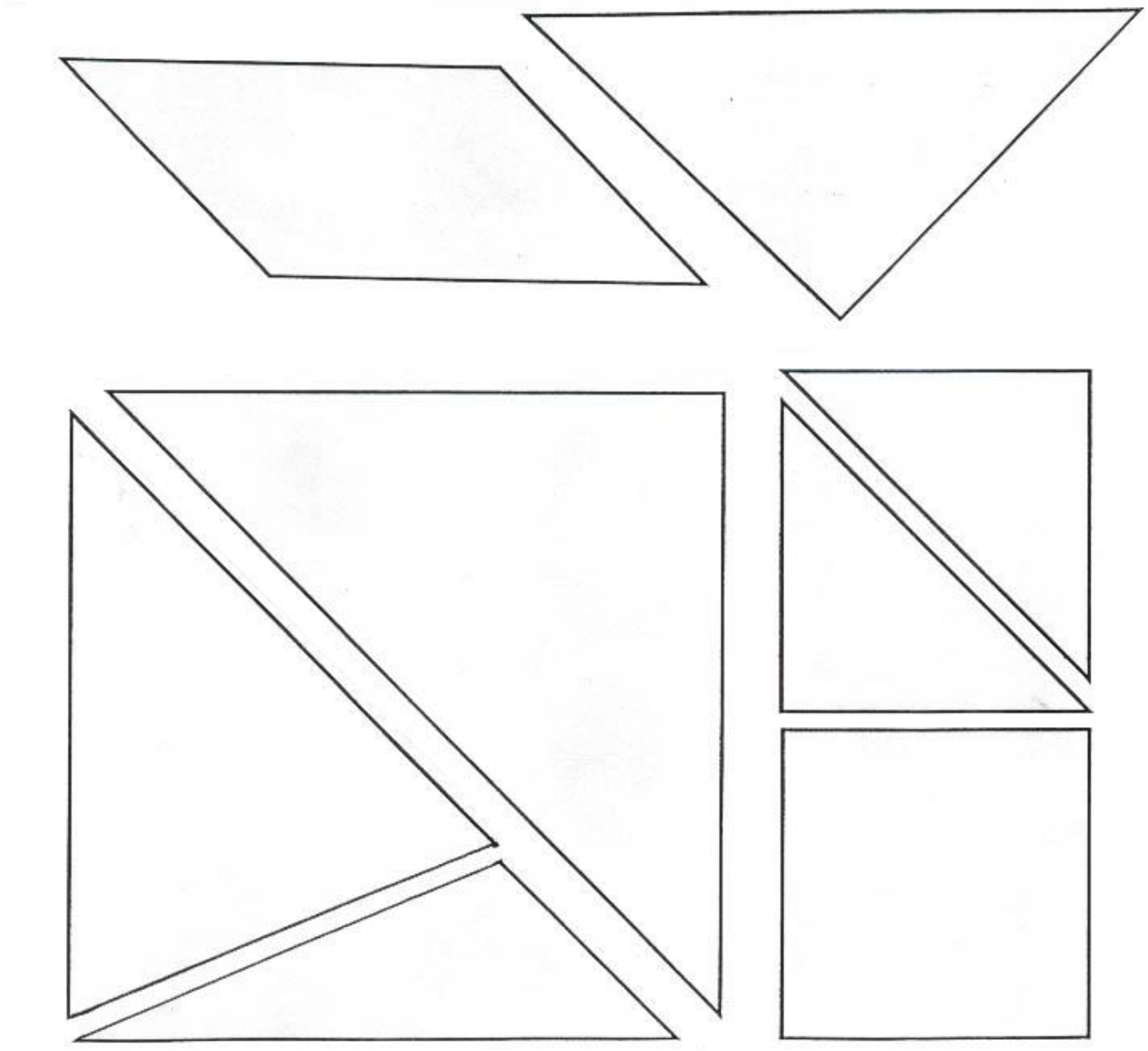
Study the list of discoveries with your classmates and discuss the following questions

1. Which is the most common figure found in the park? Why do you think this is so?
2. Would this figure be the most common one found in all types of amusement parks? Why or why not?
3. Which figure do you think is found most often in the "outside world?" Why?
4. Which figure is found most often in your classroom? Why?

Tunxis Tangram

Cut out the shapes below. Arrange all of them to form one large square.

Many other figures or designs can also be made using the given shapes. Experiment and see how many you and your classmates can create. Do they resemble the basic designs behind the construction of any of the park rides or attractions?



To Be or Not To Be Challenged…What is the Question?

1. ***Who gets the monopoly on fun?*** Todd and Kristin have season passes to Lake Compounce and want to visit as often as possible. This year Todd has a part time job and projects that he will be able to go to the park for 5 days from 11 am to 7 pm. On all other days, he can visit for 3 hour intervals. Between babysitting and basketball camp, Kristin's schedule shows that she will have 3 days off to visit the park for eight hours each day. On the remaining days of summer, she hopes to visit for 4 hours at a time.

   a. Write equations to express the total number of hours each can be at the park.

   b. After how many days will Kristin spend more time at the park than Todd?

      1) Solve the problem algebraically.

      2) Solve by graphing the equations. What does the point of intersection represent?

2. ***Investigation:*** Who are you more likely to find riding roller coasters – males or females. Try this investigation with the Phobia, Boulder Dash, or the Zoomerang. Or, join with your classmates and do all three.

   a. Stand to the side of the roller coaster entrance or exit and count how many males and how many females enter or exit the ride. Use tick marks to keep count. Do this for 3 ride cycles.

   b. Were there more males or female riders? What percent of the total riders were male? What percent of the total riders were female?

   c. Considering the data collected, out of 10 riders how many would you expect to be male? female?

   d. Do you think counting additional ride cycles would affect the percentages?

   e. If you investigated several coasters, compare the data. Create double bar graphs for each coaster. If you use different colors for each coaster, you can place the three double bar graphs on the same grid (space in between). Do you think the type of coaster makes a difference in who rides?

For Further Investigation – Consider the following: Who is more likely to ride roller coasters – people under 18 years of age or those over 18 years of age?

3. ***Investigation:*** What type of thrills do guests your age prefer?
   Most guests have specific preferences as to what type of thrill brings them the most enjoyment. They make their choices based on rides that might have one specific thrill factor as well as those that may have a combination of thrill factors. (For example, the Giant Ferris Wheel travels in a circle but does so at great heights.)

   a. Circle the answer that best describes how you feel about the 7 types of ride/thrill factors listed below. Gather additional responses from 19 of your classmates (20 in all).

   b. Using the data collected, make triple bar graphs for **each** of the categories. For example, for roller coasters: how many people chose column A, how many chose column B, and how many chose column C?

   c. Compare your graphs. What do they tell you about thrill preferences?

   d. Turn your results into percentages for the type of rides/thrills preferred.

Category	A	B	C
Roller coasters	I love all the wild things.	I'm very choosy about my coaster.	No way, no time, never.
Water rides	Drench me, soak me, I'm a sponge.	Spray me, but no splashing.	Keep every inch of me dry.
Flyers/lifters	The sky's the limit.	A little lift goes a long way.	My feet are firmly planted on the ground.
Spinners	Round & round I go; where I stop no one knows.	Just a turn or two is fine.	Spin anything but me.
Controlled	I have to be in the driver's seat.	I'll come along, but someone else has to drive.	I prefer a predictable ride every time.
Droppers	I need "down"time. Bring it on.	Anything over 8 ft and I'm leaving.	Ouch, ouch, ouch!
Scenic/leisure	I can do this all day.	It's a nice change of pace.	This is way too tame for me.

Having a problem deciding who will sit next to whom or who gets what when?

Permit me to introduce you to Permutations.

No, permutations are not something your favorite monster might experience, but they do involve change. ***Permutations are possible arrangements of a set of items in which order is important.***

For example: Jim, Sue, and Bill will be riding Downtime together. They will be seated next to each other in the front chair. How many possible seating options exist for the three friends?

A tree diagram can be used to show the possible arrangements. The permutations would include: Jim-Sue-Bill, Jim-Bill-Sue, Sue-Jim-Bill, Sue-Bill-Jim, Bill-Sue-Jim, and Bill-Jim-Sue (six in all).

But if you would like to determine the ***total number of permutations*** without writing them out, the ***multiplication principle*** offers a speedy answer. It can be more efficient for many items. Notice in the example, that for each choice for the first place, 2 choices remain for the second position. For each pair of choices for the first and second places, only 1 choice remains for the third position. Therefore, there are 3 x 2 x 1, or 6 permutations.

Multiplying a whole number, ***n*, by every positive whole number less than itself is abbreviated as ***n!*** In the language of math, this is read as ***n factorial***. (Sorry, it's not a surprised n.) So, 3 ! = 3 x 2 x 1 = 6.

Ready? ***It's your turn to flip.***

1. Last season Gerry, Jane, and Liz joined Jim, Sue, and Bill for some fun on the Downtime, a drop tower ride that plunged riders from a height. How many possible ways could the friends have been found experiencing the thrill together at the peak of the drop?

_____

2. Too easy? Try this one. If the six friends were waiting in line together but only four could ride at one time, how many arrangements would be possible now?

_____

3. Suppose Sam, Mark, Jane, and Sharon will be riding Ghost Hunt together and it's been decided that Mark will sit in the front left. Will this increase or decrease the number of permutations. Why?

_____

4. You have already calculated 6 ! How can you use that answer to calculate 7 ! ?

_____

It's Just Logical That You'll Love Lake Compounce!

Using ***logical reasoning*** helps you to solve problems and to make sense of information that seems to bombard you from every direction. ***Venn Diagrams*** are especially good aids for solving many problems that require logical thinking, because they help you to visually organize your data. They're fun too! Here's an example that will put you on the logic railroad. All aboard!

Example: Members of the Learning Can Be Fun Club visited Lake Compounce to explore the Science Behind the Rides. Eleven tested the Wildcat, fifteen tested the Zoomerang, and twelve tested the Boulder Dash. No one in the club rode all three rides, but six of them rode the Zoomerang and the Boulder Dash. **How many members does the club have?**

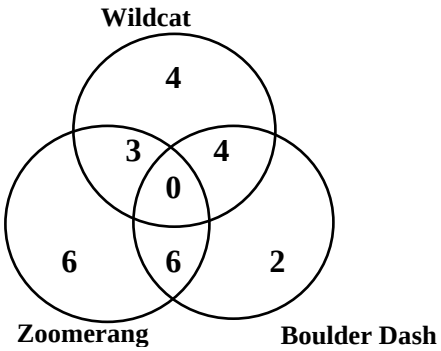
Before you start to say, "are you kidding," try a **Venn Diagram** to solve the problem.

A. First draw three intersecting circles. Label one for each ride.
B. To show the number of members who rode all three rides, write the number 0 in the region that is inside all three circles.
C. Next, to show the number of members who rode the Zoomerang and the Boulder Dash, write the number 6 in the region that is inside both of those circles.
D. Write the number 3 in the region that is inside the overlapping circles for the Wildcat and the Zoomerang.
E. Write the number 4 in the region that is inside the overlapping circles for the Wildcat and the Boulder Dash.
F. To find the number of members who rode only one ride, you can now subtract using the total number of members who tested each ride.

Wildcat testers:	11 – (4 + 0 + 3) = 4	rode only the Wildcat
Zoomerang testers:	15 – (3 + 0 + 6) = 6	rode only the Zoomerang
Boulder Dash testers:	12 – (4 + 0 + 6) = 2	rode only the Boulder Dash

So, how many members ARE there in this club anyway? Do you know the answer?

Working from the small center region outwards, we add



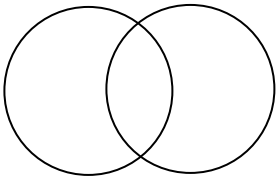
0 + (3 + 4 + 6) + (4 + 6 + 2) = 25 members in the club!

Logically speaking, now it's your turn to be the engineer!

Solve the following problems using Venn Diagrams.

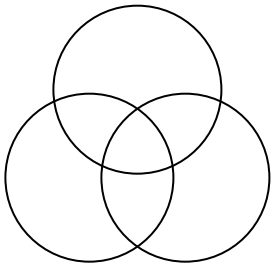
1. Warmup: Use two circles.

Mrs. Murphy's fifth grade class made a beeline for the water rides. Fourteen students went on the Saw Mill Plunge and nine went on the Thunder Rapids Raft Ride. Six of the students went on both water rides. How many members are there in the class?



2. Full speed ahead: Use three circles.

Each of Mr. D's seventh grade students purchased food for lunch at the Park. Of the three food choices offered, nineteen ate hot dogs. Eighteen had pizza, and eleven had chicken. No one ordered both pizza and chicken. However, twelve students bought hot dogs and pizza, and seven had hot dogs and chicken. How many students are in Mr. D's class and had at least one of these three items for lunch? (Hint: How do you know that no one had hot dogs, pizza and chicken?)



It's Mathalicious!

At Lake Compounce, the Master Chef and his helpers depend on math everyday not only in preparing foods for our guests, but also in ordering the right amount of fresh and tasty ingredients and the supplies that are necessary for serving these foods. They have to keep their math skills in tiptop shape, because it's like preparing for a really big party attended by thousands of guests!

Use your math skills to try these delicious treats. Be sure to ask for mom or dad's okay before you get started.

Circus World Snowballs

Ingredients:

2 teaspoons of colored jimmies
½ cup of shredded coconut, regular or toasted
1 pint of your favorite ice cream Serves 4

1. Measure and mix together the jimmies and coconut in an 8-inch square baking pan.
2. Using an ice cream scoop, make four round balls of ice cream and place in pan.
3. Take two spoons and roll the ice cream balls around in the mixture until coated.
4. Place the pan in the freezer for ten minutes so that the ice cream can harden. You can also place the ice cream balls in separate dessert dishes that are freezer safe.
5. Serve your Circus World Snowballs by themselves or on top of a slice of cake or pie. What would you need to do to feed 8 people?

Wildcat Waffles

Ingredients:

8 frozen waffles
1 small can of pineapple tidbits (about 8 ounces)
1 carton of frozen strawberries (about 10 ounces), thawed
whipped cream or non dairy topping
chopped nuts (optional) Serves 4

1. Toast the waffles in the toaster. Place two on each plate.
2. Drain the liquid from the pineapple tidbits.
3. Divide the pineapple tidbits and strawberries evenly over the waffles
4. Top each of your creations with whipped cream and chopped nuts if desired.

Helpful hints: Fresh fruit in season is extra scrumptious. Cherry or blueberry pie filling or fruit cocktail are also good substitutes. Add a scoop of ice cream and you have a great Wildcat Waffle Sundae.

Enjoy your Mathalicious Desserts!

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Compounce Island Survivor

Welcome to Compounce Island. You are about to embark on an unforgettable journey, where the thrills and chills are not for the faint of heart, where brains count as much as brawn, and where the fun may raise our laugh quotient to astronomical proportions. Your mission will be to survive the series of challenges that await your thoughts and actions. Will intelligence, cunning, boldness, observation, clear thinking, research, or just sheer endurance be the survivor's claim to fame? Only time will tell. Only you and you alone hold the answer! Good Luck!

The Tribal Council

Note: Challenge components vary in degree of difficulty. Your master leader is to determine whether you will attempt to meet any or all of the challenges as a team or individually, whether time restraints will be required, or whether other limitations will be imposed. Please proceed according to her/his directions. This most excellent teacher is authorized by the Tribal Council to make all decisions concerning the challenges and to determine who is the ultimate survivor.

Challenge 1: **Fractured Powerlines**

ID the types of energy using the clues. Beware of high voltage!
(Hint: Fractions are reduced to lowest terms)
ex ½ of a soft drink (soda) + 3/5 of spacious (large) Answer: solar

A. 5/7 of the central part of an atom + 2/7 of ancient _____

B. 1 relative + 1/3 of manners + 1/3 of a vehicle _____

C. 3/4 of a negatively charged atom particle + 2/3 of frozen water + 1/4 of the height of a thing _____

D. 3/5 of molten rock + 1/4 of the opposite of positive + 1 spasmodic muscle contraction _____

E. 3/5 of gladness + 3/7 of a minute organism + 1/5 of loyalty _____

F. 1/3 of to think deeply + 3/7 of stress on a material + 3/5 of a woman's headdress + 1/2 of an interjection (!) for see _____

G. 3/7 of a proposition that can be proved + 1/4 of scarce + 3/7 of a common wild duck _____

H. 1/3 of the measurement of light intensity + 1/3 of a large ox from Tibet + 2/7 of a brother or sister + 3/7 of the unit of energy produced by a food substance _____

I. 2/7 of to wander + 4/7 of a waterway + 2/5 of frosting + 2/9 of a large lizard _____

How many of these types of energy do you think are found at the park? Where?

Challenge 2: **Scienceologies**

How do your island relationships stack up?
(Hint: Relationships take many forms. Don't make snap judgments.)

ex.	Fire is to hot as ice is to cold.	Hot is to fire as cold is to ice.
	Ice is to cold as fire is to hot.	Cold is to ice as hot is to fire.
	Hot is to cold as fire is to ice.	Cold is to hot as ice is to fire.
	Fire is to ice as hot is to cold.	Ice is to fire as cold is to hot.

Bonus: Try the first analogy above with numbers that make the statement true. Let fire be 2, hot be 4, ice be 3 and cold be 6. Does 2/4 = 3/6? Try each of the other analogies using the same substitutions. Discovery?

A. Long strings are to short strings as lower frequency of vibration is to _____ frequency of vibration.

B. One meter is to 2.5 meters as 39.37 inches is to _____ inches.

C. Similarly charged is to oppositely charged as repel is to _____.

D. Negatively charged particles are to positively charged particles as electrons are to _____.

E. Potential is to rest as kinetic is to _____.

F. Positive is to negative as anode is to _____.

G. Pulley and wheel & axle are to lever as wedge and screw are to _____.

H. Change of liquid to gas is to change of gas to liquid as evaporation is to _____.

I. Absorbing energy is to liberating energy as endothermic is to _____.

J. Divergent parallel light rays are to convergent parallel light rays as concave is to _____.

K. Light excluded shadow part is to partially illuminated shadow part as umbra is to_____.

Challenge 3: **Crocodile Gulch**

Do YOU know what makes the island creatures tick? Take the man meets machine challenge.

(Please choose the section that is appropriate to your grade level.)

Section One

Simple machines are an important part of our lives, especially since they are tools that make work easier. They're all around us, and certainly at an amusement park. The simple machines include the inclined plane, the wedge, the screw, the lever, the wheel and axle, and the pulley. All other machines are combinations of two or more of these simple machines, no matter how complicated they seem.

1. Simple machines may be used to multiply force, to multiply speed, or to change direction. Match the following items with the action.

a. flagpole pulley	1. multiply force
b. car jack	2. multiply speed
c. gears	3. change direction

2. Classify and group the following items used by the maintenance department at the park: hammer, wood chisel, wood screw, drill bits, pliers, auger, winch, nails, jack, snow blower, plow, axe, crowbar, kitchen knives, car steering wheels.

3. Give examples of the six simple machines that you might find inside the park.

4. How would you classify the gangplank and the chutes in the waterpark?

5. What do you think is the most common simple machine in Circus World?

6. What do you think is the most common simple machine in the rides department in general?

7. What do you think is the most common simple machine at the park? Why?

8. What ride in the park has the largest simple machine?

9. DownTime and Thunder N' Lightning lift guests to great heights and bring them back down. What simple machine do you think they might have in common that would help in completing this feat?

10. Choose one ride in the park and list the simple machines that you think might be part of its makeup.

Section Two

A machine can help make a job easier to perform by changing the_____ or _____ of an applied force. For each of the six simple machines below indicate the job easing function. Give an example that might be found at the Park.

	Changes direction of force	Changes amount of force	Example
Lever	_____	_____	_____
Pulley	_____	_____	_____
Wheel & Axle	_____	_____	_____
Inclined Plane	_____	_____	_____
Screw	_____	_____	_____
Wedge	_____	_____	_____

Force applied to a machine is the _____ force. The force produced by the machine is the _____ force. The amount by which the applied force is multiplied by a machine is known as _____ _____. Friction _____ the mechanical advantage of a machine and causes mechanical energy to be changed into _____ energy. The work done by a machine can never be _____ than the work put into it. The work _____ is always _____ than the work _____. The ratio of work output to work input is called the _____ of a machine. Efficiency is increased by reducing _____.

1. What is the ideal mechanical advantage of an inclined plane that is 3.5 m long and 1.0 m high?

2. What is the mechanical advantage of a machine that only changes the direction of the effort force?

3. What is the mechanical advantage of the pulley arrangement at the top of a flagpole that allows someone to raise the Compounce flag while standing on the ground?

4. How is the mechanical advantage of a pulley system measured?

5. What ride can claim the largest wheel and axle system in the Park?

6. A car jack has an effort arm of 48 cm and a resistance arm of 6.0 cm. What is the mechanical advantage of the jack?

7. A maintenance worker decides to use a crowbar to move a cement slab which weighs 370 N. The bar has a mechanical advantage of 5.0. What effort force is needed to move the slab?

8. A retail clerk needs to lift a box of display items weighing 220 N from the floor to a counter which is 1 m high. Disregarding friction, if he uses a ramp 2 m long, how much force will be needed to move the box?

   Without the ramp, how much force is needed?
   How many joules of work is done either way?

9. Using a lever to move a rock at the Boulder Dash site, a construction worker applies 92 N of force and moves the lever 2.2 m. The rock, which weighs 610 N, is moved .15 m. What is the percent efficiency of the lever?

10. The efficiency of a machine can be increased by reducing friction. For machines run by electricity or fossil fuels, natural resources can in turn be conserved. List five ways to reduce friction that could be used at the Park.

Bonus: Compute the mechanical advantage if the radius of the Ferris Wheel is 12.2 meters and the diameter of the axle is 12 inches.

Challenge 4: **Compounce Stew**

A little bit of this and that.
Match and savor the island tidbits.

First List	***Second List***	***Third List***	***Fourth List***
Guinness & World records for most consecutive rides on the Wildcat	_____	_____	_____
Hand cranked 20 ft. Pleasure Wheel renamed Dare Wheel	_____	_____	_____
Takes 455,000 watts of electricity to operate	_____	_____	_____
Tested for safety with twenty-eight 175 lb. sand bags	_____	_____	_____
Entertained at The Lake	_____	_____	_____
World's first mountainside coaster	_____	_____	_____
Park's Presidential guests	_____	_____	_____
White horse entertainment	_____	_____	_____
On National Register of Historic Places	_____	_____	_____
Contains over 18 tons of steel bolts; built by Philadelphia Toboggan Co.	_____	_____	_____

Second List	***Third List***	***Fourth List***
I. 1911	A. Golden Age of Roller Coasters, wooden classic	1. Warren Harding
II. 1850	B. Magician Harry Houdini	2. King & Queen of Lake Compounce

III.	September 1975	C. Preceded George Ferris ride by 43 years	3. 1310 complete trips
IV.	$ .10 front row seats	D. Has 1896 working mechanism: Wurlitzer 153B band organ	4. Thunder Rapids
V.	1927	E. Theodore Roosevelt	5. Boulder Dash
VI.	3.05 m rafts	F. Noel Nu Nu Aube Meriden, CT	6. Eight seats were rotated vertically
VII.	10 m loop "diameter"	G. Power to turn on 7584 sixty watt light bulbs	7. Zoomerang
VIII.	145 ft. total drop	H. Fastest, longest wooden coaster on East Coast	8. Wildcat
IX.	Crocodile Club outing	I. Equal to a Saturn 4-door sedan and 14 mountain goats	9. Carousel
X.	20 ft platform	J. Dove in the lake in early 1900's	10. Orson Welles juggler

Challenge 5: **Tame the Wild Things**

Be forewarned. This is not a walk in The Park! It requires physical stamina, cunning, and a spirit of adventure. (Hint: Enjoy!)

Completed (X)

A. Navigate the Saw Mill Plunge *without* getting soaked. _____

B. Spin on the Revolution *without* tossing your cookies or developing a green facial hue. _____

C. Bravely race through and between the dense vegetation and rugged rock facings on Boulder Dash *without* screaming or laughing raucously. _____

D. Travel up, up, up, and yet farther up the famous hillside (where the spirits of compowne, atumtuckoo, or patuchoos squaw may call your name) *without* trembling, closing your eyes, or begging to come down. _____

Note: If you *really (r e a l l y), truly, actually* were able to tame the wild things as suggested, you didn't follow the hint. Go back and do it the right way!!!

Locator

North End

Zoomerang

Zoomer's Gas N' Go

Pirate Ship

Twister

Ghost Hunt

Saw Mill Plunge

Thunder N' Lightning

Ferris Wheel

American Flyers

Back Midway

Carousel

Wildcat Entrance
DownTime

Phobia

Boulder Dash

Midway

Wildcat

Wave Swinger

Revolution

Splash Harbor

Clipper Cove

Anchor Bay

Mammoth Falls

Compounce Railway

Circus World/Kiddieland

South End

Thunder Rapids

Catering Pavilions

Art in

For the

the Park

of

it

In this section, use your imagination to see "art in the park." Maybe you would like to design a ride or make improvements to what is already here. Let your mind be free as it invents new ideas!

Mission Important: **Shrink Some Smiles into a Short Space! Create a cartoon strip showing what tickled your funny bone at the Park.**

Designing in the Park!

Choose one of these projects to work on. Write a fun caption for your creation.

1. Draw yourself racing over the mountainside on Boulder Dash.

2. Create an ad for a new ride to be installed at Lake Compounce.

3. Design a new water ride for Crocodile Cove.

4. Draw a picture of what Boocifer's secret room in the mansion attic might be like.

5. Design a tee-shirt that could be sold in one of the gift shops.

6. Draw a picture of your favorite ride at Lake Compounce.

7. Design and decorate a new animal for the Carousel.

8. Design a new landscaping feature for the entrance.

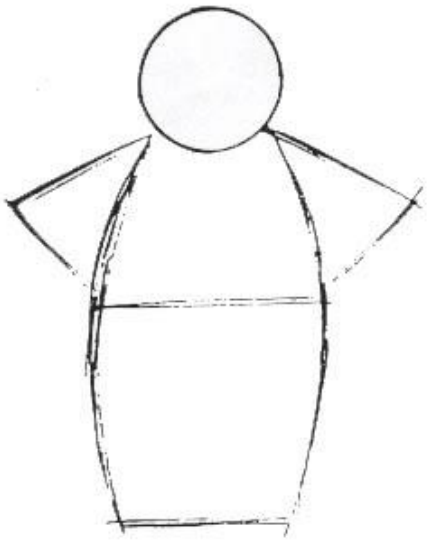
9. Design a food building that highlights a new edible specialty.

10. Draw you and your friends traveling under the Mammoth's waterfall.

A logo is a special design that identifies a product or company.

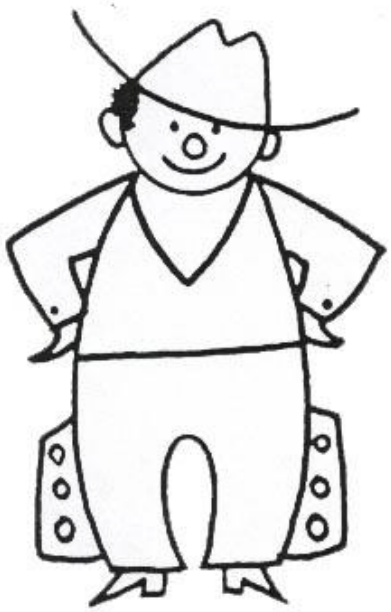
Design a new logo for Lake Compounce.

YOU CAN DRAW THIS COWBOY
IN THREE EASY STEPS

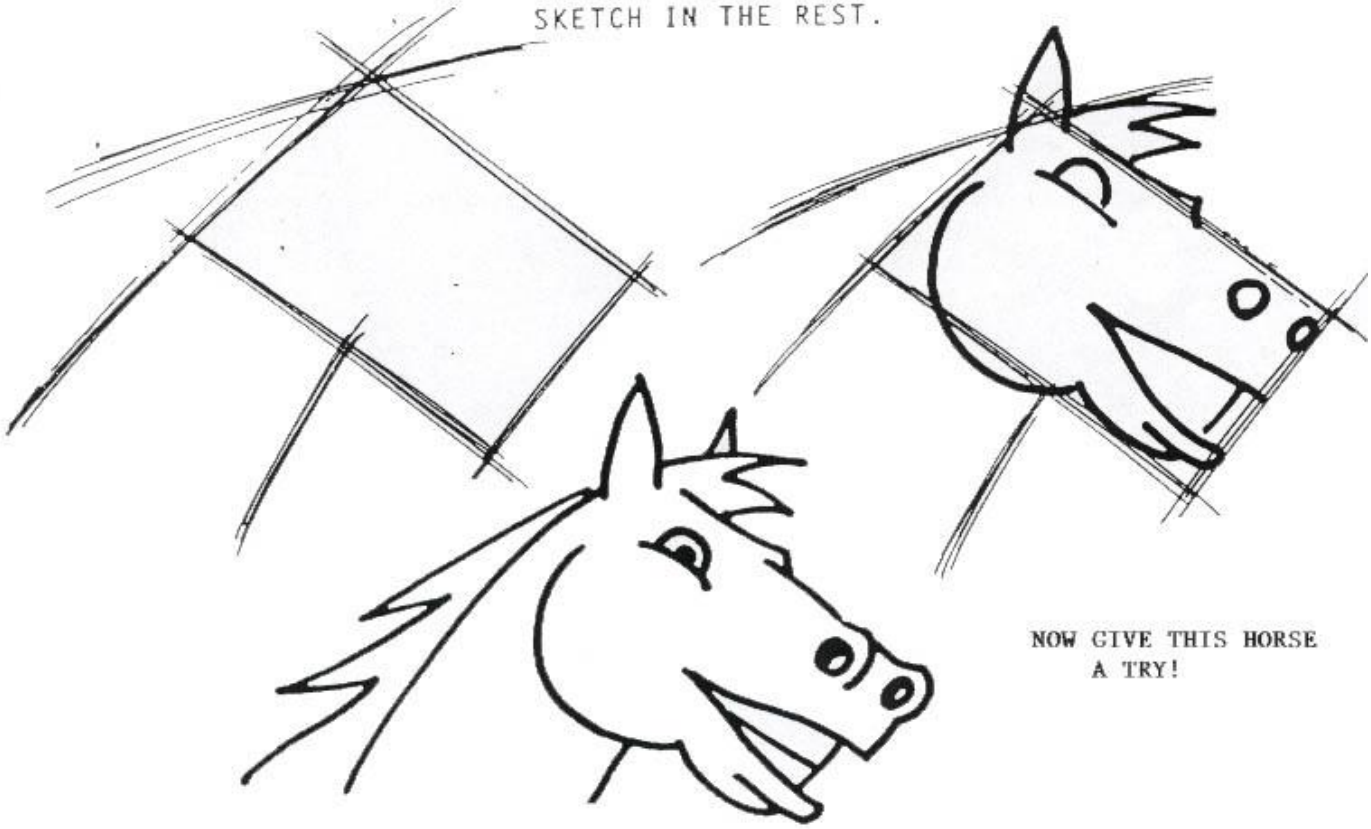


1. USING A PENNY AS A GUIDE MAKE A CIRCLE AND ADD A FEW LIGHT LINES AS SHOWN ABOVE.

2. NOW WITH A PEN OR USING HEAVY STROKES OF THE PENCIL GO OVER YOUR GUIDE LINES AS SHOWN. NOW LIGHTLY SKETCH IN THE REST.

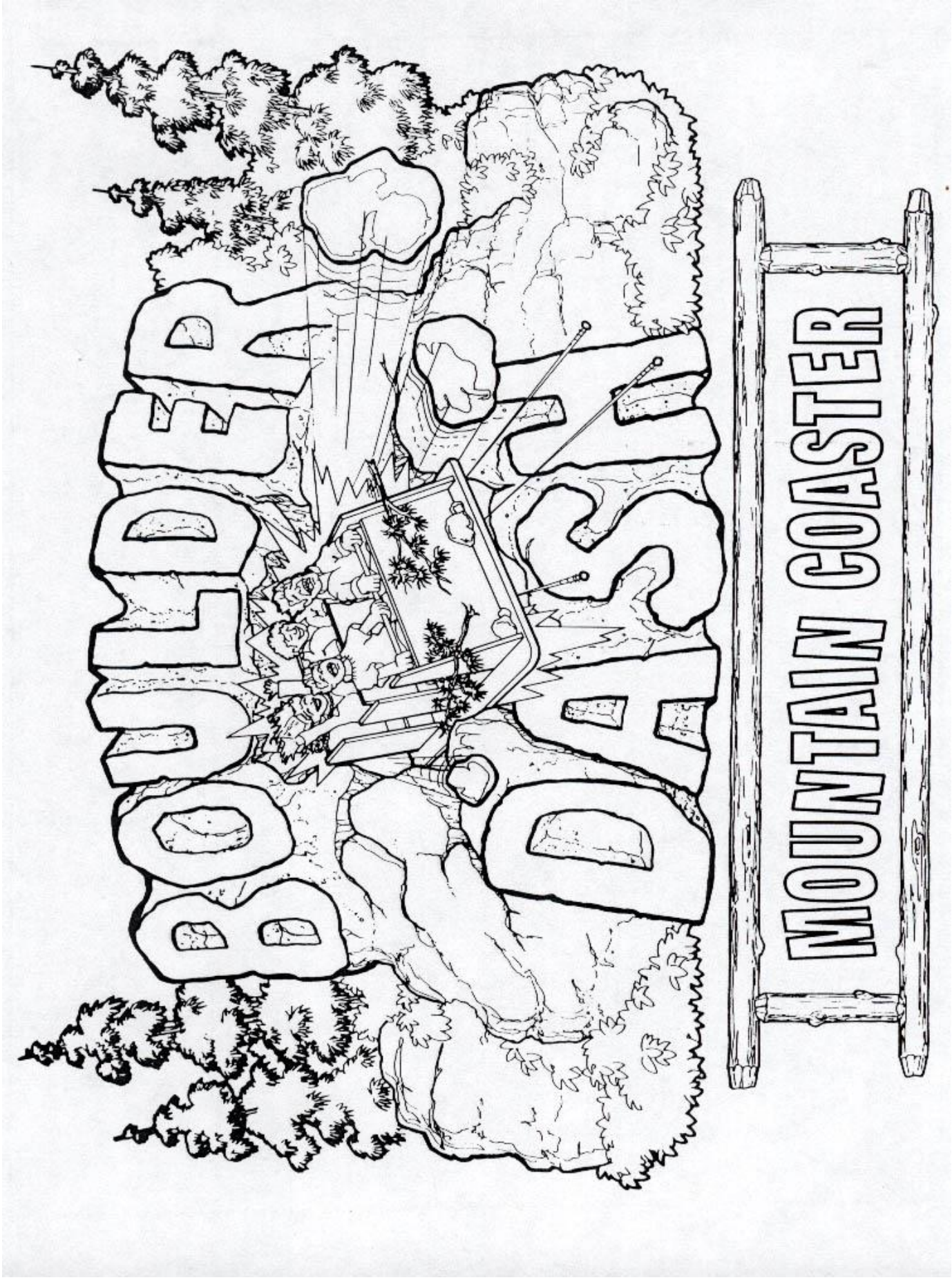


3. WITH HEAVY STROKES FINISH UP THE COWBOY AS YOU SEE HERE.



NOW GIVE THIS HORSE
A TRY!

The next 2 pages can be backed to create a puzzle. Color Boulder Dash, then cut out the pieces.


ROLLER COASTER
MOUNTAIN COASTER