



# EDUCATION IN MOTION

## Workbook



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# What Makes Magic Springs Magical?

## WRITING GENRE

Personal Narrative

## MATERIALS YOU WILL NEED

Pencil

Paper

## ACTIVITIES

Think about your fun filled and educational day at Magic Springs.

Write a story about your day at Magic Springs. Before you begin to write, think about everything that happened in the order that it happened. What was your favorite part of the day? What rides and activities did you enjoy? What did you learn?

Now, write a story describing your day at Magic Springs. Be sure to give specific details so that your teacher and classmates will understand.



# What is Your Favorite Ride?

## WRITING GENRE

Descriptive Narrative

## MATERIALS YOU WILL NEED

Pencil

Paper

## ACTIVITIES

Think of your favorite Magic Springs ride. Write an essay describing your favorite Magic Springs ride.

Before you begin to write, think about your favorite Magic Springs ride. What do you like about this ride? How does it look? How does this ride make you feel? Why is this ride better than all of the other rides at Magic Springs?

Write an essay describing your favorite Magic Springs ride. Be sure to include specific details so that your reader will be able to picture (visualize) it.



# FAVORITE GAME INSTRUCTIONS

## WRITING GENRE

Expository - Informational

## MATERIALS YOU WILL NEED

Pencil

Paper

## ACTIVITIES

Everyone has a favorite game to play at Magic Springs. Write about your favorite game at Magic Springs and explain how to play it.

Before you begin to write, think about the Magic Springs game that you like to play. What type of game is it? How did you learn to play it? What are the steps that others would need to follow to be successful at the game?

Write about a favorite game to play at Magic Springs. Be sure to give specific details and explain how to play the game so that your reader will understand.



# LEARNING IS FUN AT MAGIC SPRINGS

## WRITING GENRE

Persuasive

## MATERIALS YOU WILL NEED

Pencil  
Paper

## ACTIVITIES

The principal has decided that there will be no more Magic Springs field trips. Write a letter to the principal persuading him or her to reconsider.

Before you begin to write, think about how you will persuade the principal to change his or her mind. Why is this field trip important to you? What did you learn by attending the Magic Springs field trip? What reasons or facts could you give that would convince your principal that Magic Springs is educational?

Now, write a letter to your principal persuading him or her to allow the Magic Springs field trip to remain part of the school year. Be sure to include specific reasons for your request.



# ACROSTIC POEM

## CONCEPTS

Use the name of a ride at Magic Springs to create an acrostic poem

## ACTIVITIES

Choose your favorite ride at Magic Springs and brainstorm words that describe it. Then use those words to create an acrostic poem about your favorite ride.

## MATERIALS YOU WILL NEED

Paper  
Pencil





# THE LANGUAGE OF FUN

## CONCEPTS

Identify and categorize words as nouns, verbs, and adjectives

## ACTIVITIES

As you enjoy your field trip at Magic Springs, look around you. What do you see? What words would you use to describe what you see? What is everyone doing? After observing, record the nouns, verbs, and adjectives below.

## MATERIALS YOU WILL NEED

Paper  
Pencil

## NOUNS

## VERBS

## ADJECTIVES

# VENN DIAGRAM

## CONCEPTS

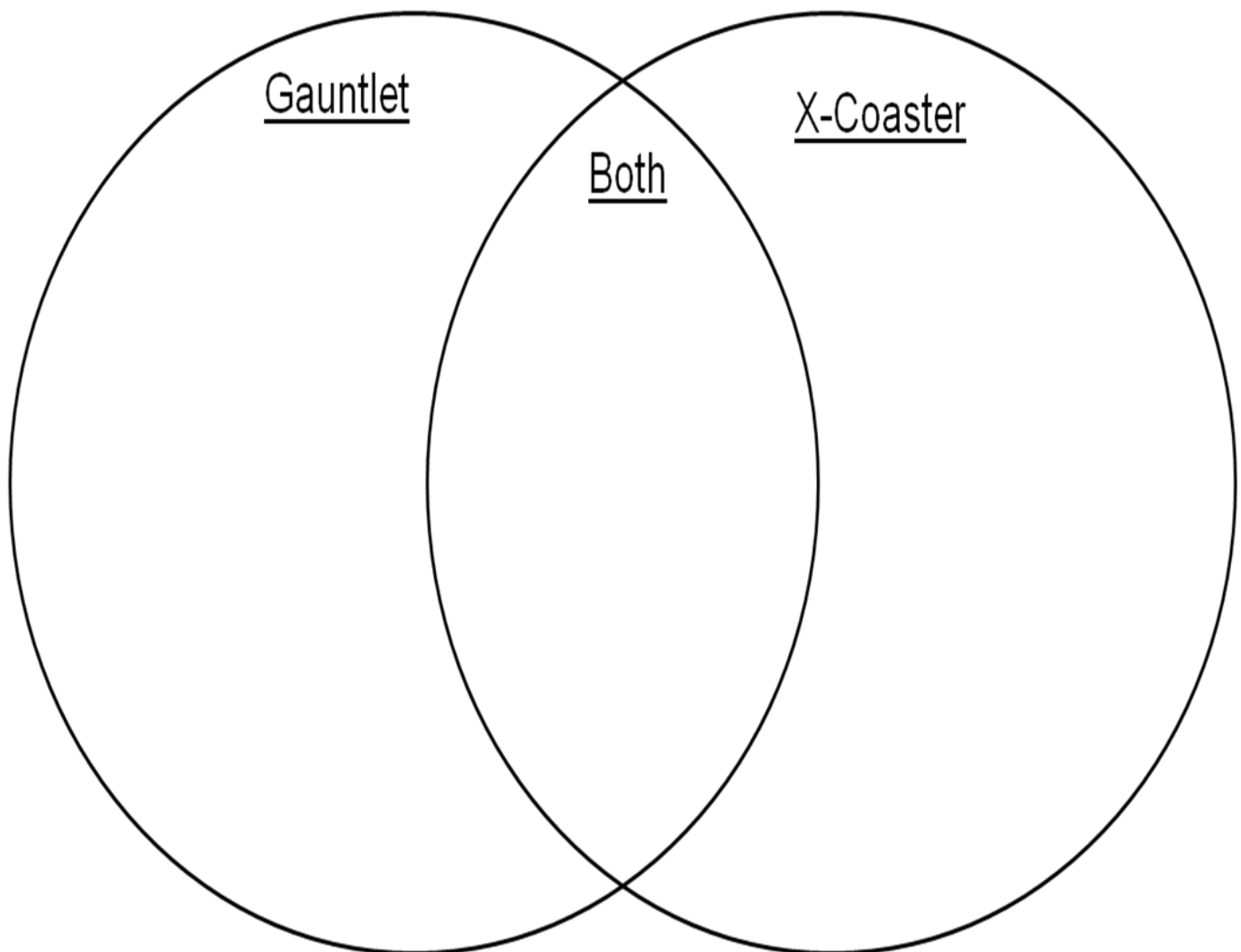
Compare and contrast using a Venn diagram as a graphic organizer

## ACTIVITIES

Think about the Gauntlet and the Arkansas Twister. Use the Venn diagram below to compare and contrast the two rides.

## MATERIALS YOU WILL NEED

Paper  
Pencil



# ROLLER COASTER ANGLES

## CONCEPTS

Acute angles  
Obtuse angles  
Right angles

## ACTIVITIES

Magic Springs has a variety of thrilling roller coasters like the Arkansas Twister, Big Bad John, and the Gauntlet. Each ride has a variety of angles. Sketch and label at least one of each type of angle that you see on the roller coasters.

## MATERIALS YOU WILL NEED

Pencil  
Paper



# POLYGONS, POLYGONS, POLYGONS

## CONCEPTS

Find, draw, and label polygons in the real world

## MATERIALS YOU WILL NEED

Paper  
Pencil

## ACTIVITIES

Shapes are all around us. Polygons are closed 2 dimensional figures with 3 or more straight sides. While walking around Magic Springs look for polygons in the design of the rides, buildings, and surroundings. Then, sketch and label as many different polygons as you can find.



# HOW MANY RIDES DID YOU RIDE?

## CONCEPTS

Data analysis  
Creating a line plot from a frequency table  
Maximum, minimum, range, and median of a set of numbers

## MATERIALS YOU WILL NEED

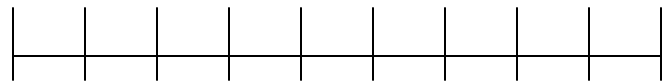
Pencil

## ACTIVITIES

After attending the Magic Springs Education in Motion field trip, one class was asked how many rides they had ridden during the day.

**Use the data from the tally chart to create a line plot.**

Number of rides ridden	Number of Students
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	



**Use the data to answer the question.**

1. What is the maximum (greatest) number of rides ridden? \_\_\_\_\_ rides
2. What is the minimum (least) number of rides ridden? \_\_\_\_\_ rides
3. What is the range for the data? \_\_\_\_\_ rides
4. What is the median for the data? \_\_\_\_\_ rides

# ANYTHING BUT ROUTINE

## CONCEPTS

Develop and use various math strategies to solve non-routine problems  
Check reasonableness of answers

## ACTIVITIES

Solve the following story problems. (note: numbers can be changed to increase or decrease the complexity of the problems)

## MATERIALS YOU WILL NEED

Paper  
Pencil

1. Mrs. Harper's class went to Magic Springs on a field trip. She had 24 students that were able to attend. The students wore either tennis shoes or sandals. There were two times as many students who wore tennis shoes than sandals. How many students wore tennis shoes?
2. There are 36 children standing in line at Arkansas Twister waiting to ride the roller coaster. There are 10 cars on the roller coaster and each car can hold up to 4 children. If the ride operator wants to put some children in each car but no one can ride alone, how many children should the ride operator put in each car? (There are several possible answers.)
3. Mrs. Smith's class had 19 students attend the field trip. The bus had 7 seats and the students could sit 2 in a seat or 3 in a seat. There could not be any empty seats. How many seats had 2 students? How many seats had 3 students?

# MAGIC MATH

## CONCEPTS

Develop, with and without appropriate *technology*, *computational fluency*, in multi-digit addition and subtraction using contextual problems; *strategies* for adding, subtracting, multiplying, and dividing numbers; *estimation* of reasonable answers• relationships between operations

## MATERIALS YOU WILL NEED

Paper

Pencil

## ACTIVITIES

Solve the following story problems. (note: numbers can be changed to increase or decrease the complexity of the problems)

1. Amy counted 200 red flowers in the garden at Magic Springs. Pam counted 120 yellow flowers in the same garden. How many flowers did they count all together?
2. Ian has some Skittles that he bought from the gift shop. Jamar gave him 125 more. Now Ian has 340 Skittles. How many Skittles did Ian have to start with?
3. There were 120 people in line at Big Bad John. After 40 people got on the roller coaster, how many people were still in line?
4. Terrace Treats had 120 chocolate chip cookies to sell. They sold some of those cookies. Now they have only 80 left. How many cookies did Terrace Treats sell?
5. The wave pool has 160 boys and some girls. Altogether, the wave pool has 280 people. How many girls are in the wave pool?
6. Piper has 30 pieces of gum to share while eating lunch at the pavilion. Maggie has 60 more pieces of gum than Piper. How many pieces of gum does Maggie have?
7. The Goodie Gallery has 45 brownies. They put 3 brownies in each box to sell. How many boxes will Goodie Gallery have to sell?
8. Mondraul has 4 trays of funnel cakes. There are 12 funnel cakes on each tray. How many funnel cakes does Mondraul have all together?
9. Terrace Treats has 60 soft pretzels. They have to put them in 5 bags. Each bag has to have the same number of pretzels. How many pretzels are in each bag?
10. There were 6 schools in line to buy tickets for Education in Motion. Each school purchased 20 tickets. How many tickets were bought in all?

# A PERFECT COMBINATION

## CONCEPTS

Develop and use various math strategies to solve non-routine problems  
Check reasonableness of answers

## ACTIVITIES

While at Magic Springs, order an ice cream sundae. You can choose one flavor of ice cream and one topping from their menu below. How many different combinations can you make? List all the possible combinations.

## MATERIALS YOU WILL NEED

Paper  
Pencil

## MENU

### Ice Cream Flavors

Chocolate  
Vanilla  
Strawberry

### Toppings

Sprinkles  
M&M's  
Oreos  
Gummy Bears



# WHAT SHALL I CHOOSE?

## CONCEPTS

Apply money concepts in contextual situations to determine change back with the least amount of currency.

## ACTIVITIES

During your trip to Magic Springs, choose one restaurant and look at their menu. Select three items that you would like to purchase for lunch for less than \$20.00. Record those three items along with their price on the table below.

## MATERIALS YOU WILL NEED

Paper  
Pencil

Menu Item	Price

1. What was the total cost for the lunch items listed above? Show your thinking using pictures, numbers, and/or words.
2. How much change should you receive after paying for the lunch items with a \$20.00 bill? Show your thinking using pictures, numbers, and/or words.
3. Use the **least** number of bills and/or coins possible to determine the change that you should receive. Show your thinking using pictures, numbers, and/or words.

Read the following passage. Then, answer the multiple choice questions as well as open-response item.

## Rides for Everyone

Magic Springs is the top family place to go in Arkansas. It has lots of rides. Every member of your family will find something to enjoy. The beauty of Magic Springs is matched only by the thrill of its coasters. There are also a wide variety of family rides. Your little ones won't be left out of the action. There are kiddie rides the youngest will love!

### Thrill Rides

The *Arkansas Twister* is a wooden roller coaster! The Twister is ready to take you on a wild 50 mile per hour ride. It has over 3,300 feet of track. It also features a 92 foot drop. It will get your heart racing all the way to the finish.



Are you up to a challenge? It takes nerves of steel to handle the *Gauntlet*. It has an eight-story drop with loops and bends. You'll travel more than 2,200 feet while you are suspended under the coaster's tracks. You will reach speeds of up to 50 miles per hour. This is a very thrilling ride. Your feet will be dangling. Your adrenaline will be pumping. Your heart will be thumping.

Load a raft with your best friends and hit the river. That is, if you don't mind a tidal wave! The best way to a cool down quickly in the Arkansas heat is a 50-foot drop on *Plummet Summit*. The chills and spills will hang around long after you've taken the plunge. On your way out, be sure to stop on the bridge. You can get a fresh soaking from the next rafters headed down the river!

### Family Rides

Are you looking for a roller coaster to start out on? Look no further than *The Diamond Mine Coaster*. This roller coaster is small but powerful. It is exciting for kids and fun for adults.

The *Rum Runner Pirate Ship* will make you feel like you are on the mighty seas. You will go higher and higher as you rock back and forth! It will leave your stomach tingling and your heart twittering.



The *Old No.2 Logging Company Log Flume* is a family favorite! Get in your log and take off. You will go twisting and turning through the water. This ride ends with a splash-down at the end of the river!

Go for a spin on our *Carousel*. This ride is the classic merry-go-round experience. You will have fun from the very beginning by picking out which beautifully painted animal or creature you want to ride. You'll want to ride over and over again.

## Kids' Rides



Imaginations fly high on *Fearless Flyers*. It features kid-sized air planes that go up and down as the planes go around. This will make a great time to snap a photo. Remember to smile as you wave at the camera.

On *Looney Ballooney* you will soar through the air on our colorful hot air balloons! The hot air balloons rise up as the ride spins. If you want added excitement, you can make your balloon basket twirl even faster.

All aboard the *Kit 'n Kaboodle Express*! Your kids can be the engineer of their own train. They can take a fun, colorful trip around the tracks.

Magic Springs includes all of these rides and many more. If all of the rides aren't enough, Magic Springs also includes more fun. It has a water park, games, entertainment, and yummy food. Your fun day will create many fun memories to look back on. So what are you waiting for?

1. What is the author's purpose for writing this passage?
  - a. To entertain the reader with a story about a field trip to Magic Springs
  - b. To persuade the reader to go to Magic Springs
  - c. To inform the reader that Magic Springs also has a water park
  - d. To encourage the reader to ride the Gauntlet
2. Why did the author use *italics* throughout the passage?
  - a. They are names of rides
  - b. They are subheadings in the passage
  - c. To give directions to the park
  - d. To help you say the words

3. Under which heading would you **most likely** find information about rides that a young child would want to ride?
  - a. Thrill Rides
  - b. Family Rides
  - c. Kids' Rides
  - d. Baby Rides
  
5. This passage about Magic Springs is a/an
  - a. fantasy
  - b. advertisement
  - c. menu
  - d. fiction
  
6. According to the passage, which ride would make a great time to take a picture?
  - a. Rum Runner Pirate Ship
  - b. Plummet Summit
  - c. Carousel
  - d. Fearless Flyers
  
7. Someone would **most likely** read this passage to?
  - a. Learn more about Magic Springs
  - b. Find out more about Arkansas
  - c. Determine how hot Arkansas summers can get
  - d. Enjoy a good story
  
8. A person that is scared of heights would be **most afraid** of which ride?
  - a. Plummet Summit
  - b. Arkansas Twister
  - c. Looney Ballooney
  - d. Gauntlet
  
9. What do you think the author meant when he used the term "nerves of steel"?
  - a. Someone might take your belongings.
  - b. You are nervous about riding rides.
  - c. You have a steel plate in your body.
  - d. You are very brave.

### Open Response:

In this passage, you read about different types of rides that they have at Magic Springs. Which type of rides do you think you would enjoy most? Use specific examples and details from the passage to support your answer.

# Rides for Everyone

## Answer Key

1. b Author's purpose
2. a Text features
3. c Text features
4. b Genre
5. d Article details
6. a Author's purpose
7. c Inference
8. b Vocabulary
9. d Vocabulary



# ARKANSAS TWISTER

The Arkansas Twister, a 3,500-foot-long roller coaster with drops of more than 100 feet, is one of the country's great out-and-back coasters and one of the biggest coasters in a six-state region. It was designed and constructed by Bill Cobb in 1977 for the Circus World park in South Florida. It was purchased in 1989 by the original Magic Springs Family Fun Park, transported from Florida to Arkansas in 29 trucks, and opened to the public at its new location in May, 1992.

## CONCEPTS

Mathematical Skills

## MATERIALS YOU WILL NEED

Paper  
Pencil  
Calculator  
Stopwatch

## ACTIVITIES

1. The highest point of the coaster's tallest hill is 100 feet. While you are on the ground, time the duration of the ride.
2. Calculate the average speed of the ride.
3. Identify at least three sources of friction in the ride.
4. Does an empty coaster take the same amount of time for a single trip as a full coaster? Defend your answer.
5. At what point on the roller coaster track should there be maximum potential energy and minimum and maximum kinetic energy?
6. Investigate the Law of Conservation of Energy and explain the difference of potential energy, kinetic energy, and mechanical energy.



# CREATING THE IDEAL RIDE

What do you think would be the ideal ride?  
Would it be made of wood or steel? Would it  
have loops, quick turns, or long, smooth  
stretches?



## MATERIALS YOU WILL NEED

Pencil  
Drawing paper  
Art supplies

## ACTIVITIES

1. Think about all the rides you have seen at Magic Springs.
2. Write down the best features of each ride you liked.
3. Make a drawing and write a description of your ride.
4. Be sure to include colors, special features, and any restrictions that would be in effect for the riders

# ROOM ENOUGH FOR ME?

Try to determine how many people can ride a ride at one time.

## ACTIVITIES

Use the chart below to record the information you collect as you observe various rides.

## MATERIALS YOU WILL NEED

- Paper
- Pencil
- Calculator



NAME OF RIDE	# OF CARS	MAXIMUM # OF GUESTS IN CAR	TOTAL # OF GUESTS PER RIDE



# PIRATE SHIP PENDULUM

The Rum Runner (our pirate ship ride) operates like a pendulum. Starting off slowly, the ride swings back and forth, going higher and higher with each swing.

## CONCEPTS

Observation Mathematical reasoning

## MATERIALS YOU Will NEED

Pencil  
Paper  
Stopwatch

## ACTIVITIES

1. While watching or riding the Rum Runner a total of four times, count the number of times the ship swings back and forth. Is this number always the same? If not, explain why.
2. Time the duration of each ride and compare this number to the number of times the ship goes back and forth. Is this always the same or different?
3. Is the Rum Runner ride a true example of a pendulum?





# WILD THANG, YOU MAKE MY HEART SING!

Many amusement park rides, such as Magic Springs' "Wild Thang," are designed with twists and turns that give their riders a thrill. Sometimes this element of a ride can be a simple curve, but Wild Thang is more complex. This activity will give you a better understanding of thrill rides, how to describe their motions, and how their motions make a rider feel "queasy."

## GOALS

To describe the motion of a ride and the way it makes you feel.

## MATERIALS YOU WILL NEED

Paper

Pencil

Packet

## ACTIVITIES

### BEFORE RIDING WILD THANG:

1. Observe the ride.
2. Pick a passenger on the ride. Follow the motion of that passenger with your finger as he or she undergoes all the twists and turns. Describe the motion of the ride.
3. From your observation, how do you think you will feel on the ride?

### AFTER RIDING WILD THANG:

1. Note the different forces that acted upon you.
2. Describe how you felt while riding the ride.
3. Can you describe the motion? Can you sketch it? Try to sketch the motion on the back of this sheet.
4. What other rides in the park use similar motions to produce thrills for their passengers?



# VECTORS

All motion can be described in terms of vectors. An arrow that has both direction and magnitude represents a vector. It takes three vectors to define a motion in a three-dimensional plane: the X, Y, and Z vectors. The X axis is the horizontal bar, the Y axis is the vertical bar, and the Z axis represents motion in and out of the plane. This three-dimensional coordinate plane is the same as the traditional two-dimensional plane, with X and Y axes, except that it allows you to show motion in and out of the plane with the Z axis.

## GOALS

To represent the motion of a ride using a three dimensional coordinate plane.

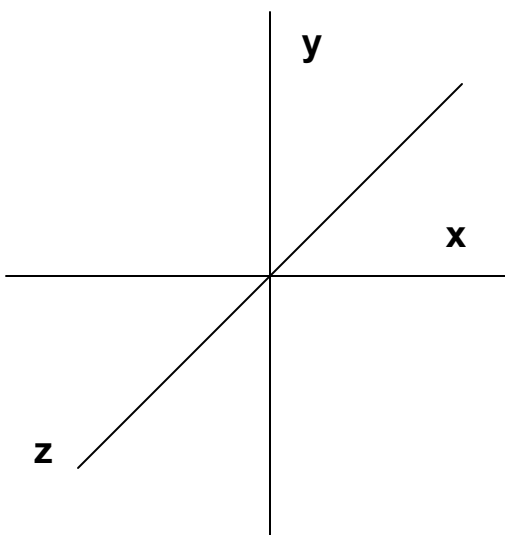
## MATERIALS YOU WILL NEED

Pencil

Paper

## ACTIVITIES

1. What is the vector representation of a car going in a straight line?
2. What does it look like if the car is turning?
3. Visualize the motion of a ride in the park that you select. Look at the top of the ride when it is going up. At any point, determine the vector representation.
4. Draw a vector representation of the ride when you are at the top of the ride.



Any motion can be divided into its component vectors. A rocket going straight up has one vector, the Y vector

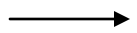
A small Y vector.



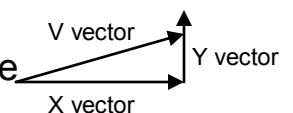
The faster the rocket, the longer the Y vector.



If a rocket is flying along the ground while going up, the X vector shows how fast it is going from left to right.



The two vectors, X and Y, come together to show the actual motion of the rocket, which is represented by the component vector V.



# GAMES — TALENT, LUCK, OR BOTH



## MATERIALS YOU WILL NEED

Paper

Pencil

Calculator

## ACTIVITIES

1. Describe the game you select to play.
2. What do you need to do to win?
3. How much does it cost to play the game?
4. What do you think the value of the prize would be if you purchased the same item at the gift shop?
5. Watch other people play. Determine the average score.
6. Why do you think any particular game is popular?
7. Did you notice any particular actions one person took that caused him or her to win?

# ONE PICTURE IS WORTH 300 WORDS

## MATERIALS YOU WILL NEED

Pencil or pen

Paper

## ACTIVITIES

Pick one person you do not know and watch this individual ride a ride. Write a 300-word paper describing how the person you were watching acted during the ride.

1. Did he or she look happy, sad, or frightened?

2. Describe how the person acted after exiting the ride.

3. Include a description of the ride and the sounds you heard.



# THE CAROUSEL

Each figure on the carousel has been carefully hand carved and painted. Hundreds of hours were devoted to the design and creation of this ride.



## CONCEPTS

Observing

Visualizing

Mathematical skills

## MATERIALS YOU WILL NEED

Paper

Colored pencils

Calculator

Stopwatch or watch with second hand

## ACTIVITIES

1. List all figures on the carousel that you can identify.
2. Choose your favorite figure on the carousel and draw it. Use colored pencils to color your picture.
3. Research the history of the carousel and write a short story about the creation of a carousel figure or a story about a runaway carousel figure.
4. Watch one of the figures on the outside row and measure the amount of time required for one revolution. Then measure the amount of time it takes for one of the figures on the inside row to make a complete revolution. Record your findings. Calculate the velocity of each row.

# A DIARY OF YOUR DAY AT MAGIC SPRINGS

Create a diary to show how you spent your time traveling to and from Magic Springs and while you were at Magic Springs.

## CONCEPTS

Quantifying

Observing

Writing

## MATERIALS YOU WILL NEED

Paper

Pencil or pen

## ACTIVITIES

1. Make a diary of your day at Magic Springs by writing down the time you woke up this morning, the time you arrived at school or your starting point, the time you arrived at the park, the beginning and ending time of each ride you rode, the time you left the park, and the time you arrived back home.

2. How many miles did you travel from your home to your starting point? How many miles did you travel from your starting point to the park? Calculate the average speed of the vehicle you were riding in from one point to another.

3. Write down what you did on the way to Magic Springs and back home. Comment on each ride. How did the ride make you feel? Did you like the ride? Would you recommend it to a friend?

4. Before visiting the park, plan your day by making a schedule to follow. After your visit, see how well you did by comparing your schedule with your diary.

START TIME	END TIME	ACTIVITY	TOTAL MINS. PER ACTIVITY	COMMENTS



# CREATE AN EXPENSE REPORT

You can prepare an expense report reflecting the costs of your day at Magic Springs for you as an individual, your whole class, or the entire school. The cost of admission for each student to visit Magic Springs during the Education In Motion program is \$9.00. Magic Springs & Crystal Falls sponsored the cost of one adult for every ten students registered per group. Of course, each student probably also spent money on other items while in the park.

## CONCEPTS

Quantifying

Mathematical reasoning

Mathematical procedures

Writing

## MATERIALS YOU WILL NEED

Calculator

Worksheets

Paper and pencil

## ACTIVITIES

1. Beginning with the admission cost, keep a record of how you spent your money during your visit to Magic Springs. Your teacher can tell you the cost of renting the bus to bring your class to the park. If you were transported by car, calculate the cost of gas and write that on your expense report. Be sure to divide the total cost by the number of people in the vehicle to determine an individual cost. Write down what you purchased throughout the day and the cost of each item (food, games, souvenirs, etc.).

2. Use the worksheet below to keep track of your expenses.

3. Make a chart for your entire class to show the amount spent by each student. Add each line to determine the cost for the entire class.

## Class Visit to Magic Springs & Crystal Falls

---

Student's Name and School

Admission	Food items	Food Cost	Games Played	Cost of Games	Souvenirs Purchased	Cost of Souvenirs	Mode of Transporta-	Transporta- tion Cost

# BUMPER CARS BUMPING



## MATERIALS YOU WILL NEED

Paper

Pencil

Stopwatch or watch with  
second hand

Calculator

## ACTIVITIES

1. Count the number of bumper cars on the track.
2. Time the length of one ride.
3. Pick out one bumper car and watch it for one full ride, counting the number of times it is hit and writing down that number.
4. Watch the ride a second time, selecting one particular car to watch, and count the number of times it is hit.
5. If there is a difference in the number of times the cars were hit, try to explain what might have caused that difference. Could it have been the age or size of the driver? Did one driver appear to be more aggressive than the other?
6. While watching the ride a third time and again selecting one particular car to observe, use a stopwatch or watch with a second hand to time the interval between hits. What is the longest time between hits?
7. During the entire ride, how many times was the car you watched hit? Calculate the average number of times the car was hit every 30 seconds.

# WHAT MAKES THE RIDES GO?

A simple machine changes the force or the direction of a force. Complex machines are a combination of two or more simple machines.

## CONCEPTS

Observing

Identifying

## ACTIVITIES

1. Select four rides you have either ridden or seen, and determine which simple machine or combination of simple machines was used to make the ride move. Write down your observations and conclusions.

## MATERIALS YOU WILL NEED

Paper

Pencil or pen

## GOAL

Identify and research the use of four simple machines.



# WHAT MAKES MAGIC SPRINGS SPECIAL?



## MATERIALS YOU WILL NEED

Paper

Pen or pencil

## ACTIVITIES

1. As you walk through the park, look at the buildings, walkways, colors, and overall layout of the park.
2. What makes Magic Springs different from other amusement parks you have visited? Describe what natural materials are used to create a special atmosphere in the park and how manmade materials are used to make the park look natural.
3. What is your favorite building and why? Describe the shape and color of the building. Why do you think the building was designed as it is?
4. What changes would you make in the overall layout of the park?

# CAN YOU HANDLE THE WILD THANG?

The Wild Thang ride at Magic Springs has six arms that spin around its center. Seats that rotate are attached to the end of each arm.

When the ride is in motion, its passengers are treated to the feeling of spinning in circles in different directions at the same time.

## CONCEPT

Observation

Creative writing

Designing

## MATERIALS YOU WILL NEED

Paper

Pencil

Graph paper

Markers, colored pencils, or  
crayons

## ACTIVITIES

1. Watch the Wild Thang for two to three ride cycles to get an idea of how it works.

2. Predict where passengers on the ride will feel heaviest and lightest.

3. Ride the Wild Thang. Were your predictions correct?

4. Design a ride that uses three circles, draw your ride, and describe it in writing.

5. Design a ride that uses more than three circles.

6. Build a model of the Wild Thang and/or the ride you designed.

# A HEARTBEAT AWAY

To calculate your pulse rate, place your fingertips on the carotid artery of your neck and count the number of pulses in 60 seconds. Each throb that you feel your artery is caused by the contraction of your heart.

## GOALS

Number concepts

Quantifying

Observing

## ACTIVITIES

Choose three rides and complete the worksheet for each ride. Take your pulse before you board the ride and then again when you exit the ride. As you ride, have a classmate time the length of the ride in minutes and seconds. Rate the ride on a scale of 1 (no fun) to 10 (great fun).

## MATERIALS YOU WILL NEED

Worksheet

Pencil

Stopwatch

## Pulse Rate Worksheet

NAME OF RIDE	LENGTH OF RIDE	PULSE RATE BEFORE RIDING	PULSE RATE AFTER RIDING	FUN SCALE: 1 TO 10

# NOTES