EDUCATION IN MOTION AT OWA

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WHAT MAKES THE PARK AT OWA MAGICAL?

WRITING GENRE

Personal Narrative

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

Think about your fun-filled and educational day at The Park at OWA.

Write a story about your day at The Park at OWA. 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 The Park at OWA.

Be sure to give specific details so that your teacher and classmates will understand.

WHAT IS YOUR FAVORITE RIDE?

WRITING GENRE

Personal Narrative

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

The Park at OWA has more than 20 rides that offer many levels of thrills.

Before you begin to write, think about your favorite ride at The Park at OWA. 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 The Park at OWA?

Write a fun essay describing your favorite ride in The Park at OWA. Be sure to include specific details so that your reader will be able to visualize it.

ACROSTIC POEM

CONCEPTS

Use the name of a ride at The Park at OWA to create an acrostic poem

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

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

EXAMPLE ACROSTIC POEM

Today we ride
With the wind we do abide
I'm one with the sky
Summer fun all around
The Park at OWA in the air and on the ground
Ends, outs, ups, and downs
Remember the around and round
adventure found

LEARNING IS FUN AT THE PARK AT OWA

WRITING GENRE

Persuasive

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

The principal has decided there will be no more fields trips to The Park at OWA. 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 Park at OWA field trip? What reasons or facts could you give that would convince your principal The Park at OWA is educational?

After you gather your thoughts, write a letter to your principal persuading him or her to allow The Park at OWA field trip to remain part of the school year. Be sure to include specific reasons for your request.

THE LANGUAGE OF FUN

CONCEPTS

Identify and categorize words as nouns, verbs, and adjectives

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

As you enjoy your field trip to The Park at OWA, 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.

NOUNS

VERBS

ADJECTIVES

VENN DIAGRAM

CONCEPTS

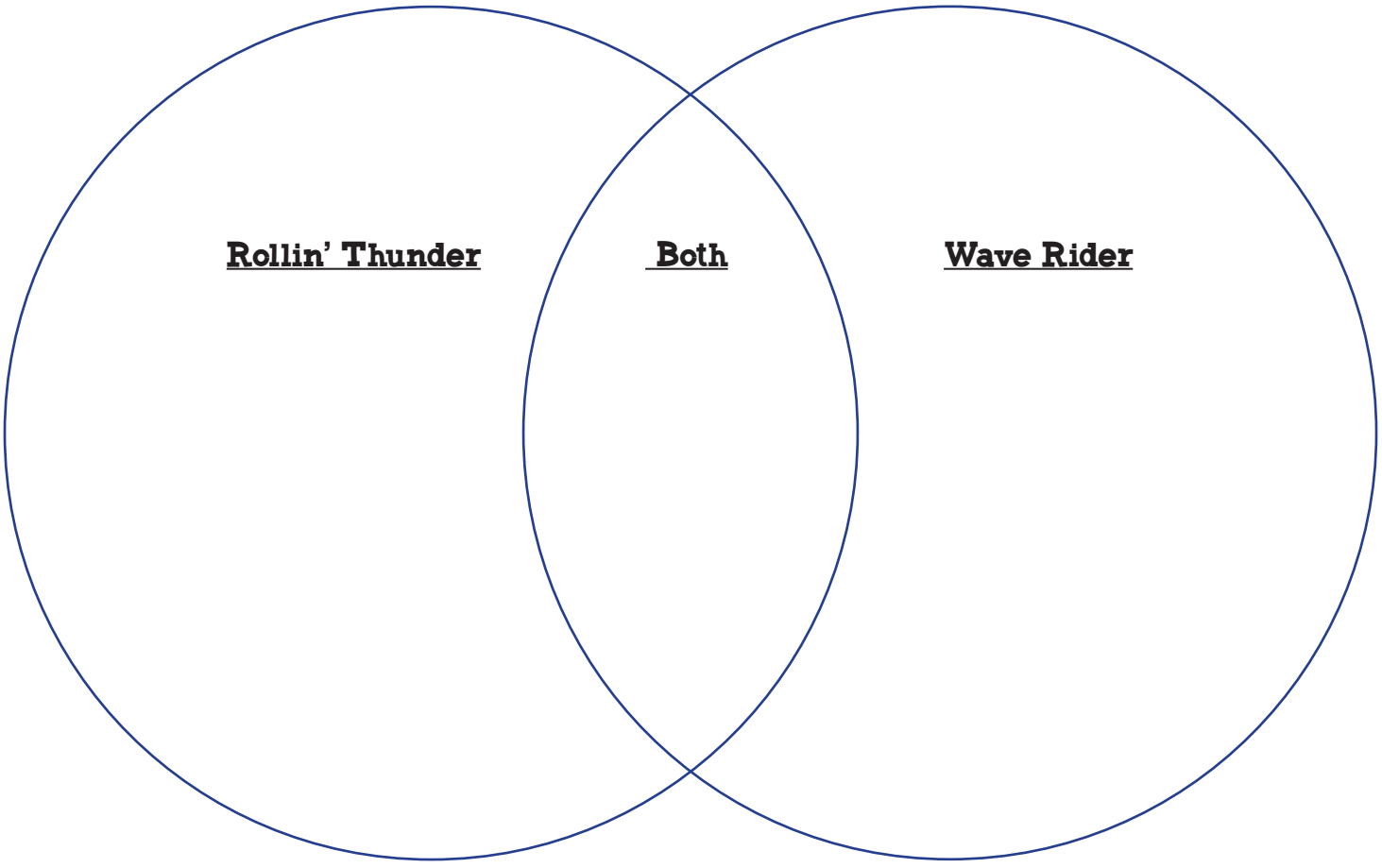
Compare and contrast using a Venn diagram as a graphic organizer

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

Think about the Rollin' Thunder and the Wave Rider. Use the Venn diagram below to compare and contrast the two rides.



ROLLER COASTER ANGLES

CONCEPTS

Acute Angles
Obtuse Angles
Right Angles

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

The Park at OWA's Rollin' Thunder coaster has very specific angles. Sketch and label at least one of each angle you see on the roller coaster.

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 Park at OWA Education in Motion field trip, ask classmates how many rides they rode throughout the day.

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

Number of Rides Ridden	Number of Students
12	
13	IIII I
14	
15	III
16	IIII
17	IIII IIII
18	III
19	I
20	II
21	

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? _____

4 What is the median for the data? _____

ANYTHING BUT ROUTINE

CONCEPTS

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

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

1 Mrs. Harper's class went to The Park at OWA on a field trip. She had 24 students who were able to attend. The students wore either tennis shoes or sandals. There were 2 times as many students who wore tennis shoes than sandals. How many students wore tennis shoes?

2 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?

FUN BY THE NUMBERS

CONCEPTS

Implement strategies for adding, subtracting, multiplying, and dividing numbers
Estimate reasonable answers and relationships between operations

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

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

1. Ian has some Skittles that he bought from Parkside Gift Shop. Jamar gave him 125 more. Now Ian has 340 Skittles. How many Skittles did Ian have to start with?
2. There were 120 people in line at Rollin' Thunder. After 40 people got on the roller coaster, how many people were still in line?
3. Shady Arbor had 120 chocolate chip cookies to sell. They sold some of those cookies. Now they have only 80 left. How many cookies did Shady Arbor sell?
4. 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?
5. The Veranda has 45 brownies. They put 3 brownies in each box to sell. How many boxes will Veranda have to sell?
6. Mondraul has 4 trays of funnel cakes. There are 12 funnel cakes on each tray. How many funnel cakes does Mondraul have all together?
7. Shady Arbor 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?
8. 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

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

While at The Park at OWA, you 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.

MENU

Ice Cream Flavors	Toppings
Chocolate	Sprinkles
Vanilla	M&M's
Strawberry	Oreos
	Gummy Bears

WHAT SHALL I CHOOSE?

CONCEPTS

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

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

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

Show your thinking using pictures, numbers, and/or words.

Menu Item	Price

1 What was the total cost for the lunch items listed above?

2 How much change should you receive after paying for the lunch items with a $20.00 bill?

3 Use the least number of bills and/or coins possible to determine the change you should receive.

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

RIDES FOR EVERYONE

The Park at OWA is the top family entertainment place to go in Alabama. Every member of your family will find something to enjoy. The beauty of The Park at OWA is matched only by the thrill of its coaster. There is also a wide variety of family rides. Your little ones won't be left out of the action with lots of kiddie rides to enjoy.

Thrill Rides

AIR RACER

Though it may look tame on the outside, *Air Racer* is your chance to feel the G-force thrust upon pilots when performing acrobatic maneuvers. From dives to flips to feeling weightless, *Air Racer* provides a unique thrill.

ALABAMA WHAM'A

Looks can be deceiving with the *Alabama Wham'a*. Boarding the ride at a horizontal position, the circular frame then changes course and raises its passengers to resemble a (thrilling and fast-paced) ferris wheel. Grab on because the *Alabama Wham'a* doesn't hold back!

CRAZY MOUSE

Its adorable mice cars may fool you, but the *Crazy Mouse* does get a little crazy! Putting a fun "twist" on the traditional coaster, your seat will spin out of control. Take in a 360° view as the mice scurry up, down and around the tracks.

FREEDOM FLYER

For all the dare devils out there, the *Freedom Flyer* is for you. These swings give you a vantage point to see the entire Park at OWA. Hold on tight and keep your eyes open for the amazing view. It's the perfect time to take a photo at the tip top!

ROLLIN' THUNDER

Rollin' Thunder rolls in as The Park at OWA's largest and most thrilling coaster. Designed with daredevils in mind, the *Rollin' Thunder* checks every box. Strap in, hold on tight and lift off as it twists, turns and shoots you to new heights. *Rollin' Thunder* is only for the bravest coaster fans with nerves of steel!

TWISTER

Action packed and full of bright lights, the *Twister* will take you on a whirlwind adventure. This unique ride spins 360° in multiple directions, keeping you on your toes at all times – except when you're upside down!

WAVE RIDER

The *Wave Rider*'s blue tracks and ocean-like shape will make you think you're on open waters while spinning round and round. Riders sit with their faces leaning toward the wind, so make sure you hold on tight.

Family Rides

FLYING CAROUSEL

Beautiful colors and lights on the *Flying Carousel* will transport every rider to a magical adventure. If you soar around the twinkling lights long enough, they may just turn into stars. The carousel's fun take on traditional swings will leave you coming back for more.

AEROZOOM

Come fly with all the colors of the wind! The colorful *AeroZoom* gives riders a chance to experience and be in charge of their own hang-gliding journey. Riders can control the movement of the glider's wings as they fly through the air.

ROCKIN' RAFT

Rock and whirl your way to the *Rockin' Raft* for a truly fun time with friends and family. Its large passenger boat can hold everyone you would like to invite on your *Rockin' Raft* voyage. Riders will feel as though they are on the open ocean as the raft takes them back, forth, up and around.

TEA TIME

If classic theme park is what you're searching for, then look no further than *Tea Time*. These teacups are an iconic and beloved attraction for guests of all ages. Feel fond memories rush back as you spin around at top speed in the beautifully crafted teacups.

SKY BALLOONS

You can check "ride in a hot air balloon" off the bucket list now! *Sky Balloons* is the new way to soar among the clouds. Simply step into the balloon's basket and let it take you – and your breath – away.

FLUTTER BY

Flutter By is one of The Park's interactive rides by allowing you to pedal and take control of your butterfly experience. Guided by colorful wings, the elevated seats give passengers that flying feeling.

SOUTHERN EXPRESS

Go on a real Southern experience aboard the *Southern Express*. Grab the family and go on a mining excursion on this timeless ride. You may not find gold inside the mining cars, but we guarantee you'll find fun!

FLYING TIGERS

The youngest in the bunch can now enjoy the thrills of flying. Whether they're seated with three of their favorite co-pilots or flying solo, the *Flying Tigers* will take them on an adventure like no other. Kids will love the plane's swinging motion as the ride makes its circles.

Kiddie Rides

HAPPY HAULERS

Kids will be jumping at the chance to get behind the wheel of *Happy Haulers*. Once seated in their own trucks, riders take off twisting and turning through the turn-of-the-century atmosphere. Kids will be overwhelmed with excitement and adventure!

FLYING ACES

Feel the wind in your hair as the *Flying Aces* takes you round and round in its multi-colored airplanes. With two seats available in each plane, make sure you board with your favorite co-captain, and keep your eyes open for thunder rollin' to the east.

LEAP FROG

Leap Frog is an enjoyable and inviting ride for all ages. The multicolored frogs are an eye-catching display and provide the little ones with hours of entertainment. Watch as riders leap around on their frogs with smiles on their faces.

ZIP ZAP RACE

Take one of our specialty hot rods for a spin on *Zip Zap Race*! Hop in the driver's seat and take off on a fun driving excursion with friends. As the brightly colored race cars pass by in a whirl, kids will feel the freedom of the open road and the wind in their hair.

SWINGIN' FUN

This swing set might be too heavy for parents to push, but the kiddos will love it just the same in *Swingin' Fun*. Sit back to back with friends and get some air time as the ride accelerates and swings each way.

GULLY WASHER

Laughs and squeals of joy can be heard throughout The Park when kids board the *Gully Washer*. The kid-friendly, free-falling ride will have everyone giggling in their seats as the *Gully Washer* bounces its way to the bottom.

1 What is the author's purpose for writing this passage?

a. To entertain the reader with a story about a field trip to The Park at OWA
b. To persuade the reader to go to The Park at OWA
c. To encourage the reader to ride the Rollin' Thunder

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. Kiddie Rides

4 This passage about The Park at OWA is a/an

a. fantasy
b. advertisement
c. descriptive
d. fiction

5 According to the passage, which ride would make a great time to take a picture?

a. Rollin' Thunder
b. Tea Time
c. Flying Carousel
d. Freedom Flyer

6 Someone would most likely read this passage to?

a. Learn more about The Park at OWA
b. Find out more about Alabama
c. Determine how hot Alabama summers can get
d. Enjoy a good story

7 A person that is scared of heights would be most afraid of which ride?

a. Zip Zap Race
b. Wave Rider
c. Rollin' Thunder
d. Flutter By

8 What do you think the author meant when they 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 The Park at OWA. 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

2

3

4

5

6

7

8

CREATING THE IDEAL RIDE

MATERIALS YOU WILL NEED

Pencil
Drawing paper
Art supplies

ACTIVITIES

1 Think about all the rides you have seen at The Park at OWA.

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 distinguishable traits.

Here are some questions to help you think through your designs:

What do you think would be the ideal ride?

Would it be made of wood or steel?

Would it have quick turns or long, smooth stretches?

ROOM ENOUGH FOR ME?

MATERIALS YOU WILL NEED

Paper
Pencil
Calculator

ACTIVITIES

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

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

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

TWISTER PENDULUM

CONCEPTS

Observation
mathematical
reasoning

MATERIALS YOU WILL NEED

Pencil
Paper
Stopwatch

ACTIVITIES

1 While watching or riding the Twister a total of four times, count the number of times the ride 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 ride goes back and forth. Is this always the same or different?

3 Is the Twister ride a true example of a pendulum?

Twister operates like a pendulum. Starting off slowly, the ride swings back and forth, going higher and higher with each swing.

CIRCLES

CONCEPTS

Observing; Classifying

MATERIALS YOU WILL NEED

Paper
Pencil

ACTIVITIES

1. Select several rides in The Park that move in a circle.
2. Use the chart below to record the information about the rides you are comparing.
3. Write down the number of circles each ride makes.
4. Indicate where the centripetal force is used.

To make things more exciting for their passengers, many rides operate in circles. Centripetal force and inertia work together to keep riders in their seats. Inertia is a physical property that keeps moving things moving or motionless things still unless an outside force acts on them. Centripetal force causes an object to turn in a circular path.

NAME OF RIDE	# OF CIRCLES	USE OF CENTRIPETAL FORCE CONCEPTS

POTENTIAL VS. KINETIC ENERGY

CONCEPTS

To understand and identify the difference between potential and kinetic energy

MATERIALS YOU WILL NEED

Paper
Pencil

ACTIVITIES

An object can store energy as the result of its position; this is known as potential energy. This builds and turns into kinetic energy – the energy of motion. A roller coaster going up a hill is building potential energy; when it crests over the top, it is converted to kinetic energy.

1. Choose a coaster in The Park.
2. Observe two ride cycles.
3. Identify points where the train is building potential energy and areas where that is converted to kinetic energy.
4. Are there multiple points where the train can store potential energy?
5. Can it switch from kinetic energy back to potential energy?

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.

CONCEPTS

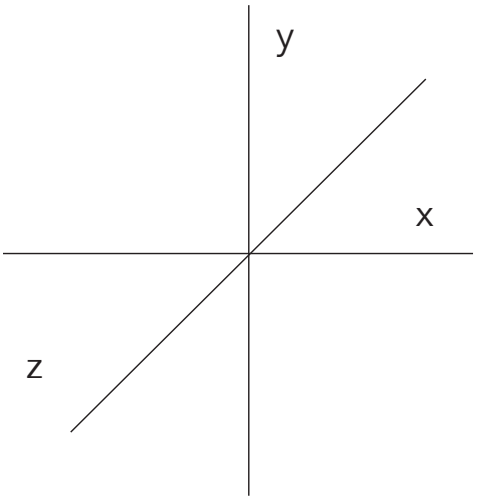
Represent the motion of a ride using a three dimensional coordinate plane

MATERIALS YOU WILL NEED

Pencil
Paper

ACTIVITIES

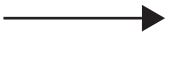
1. What is the vector representation of a car going in a straight line?
2. What does it look like if the car is turning?
3. Visualize the motion of a ride in The Park at OWA that you select. Look at the top of the ride when it is going up. At any point, determine the vector representation.
4. Draw a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



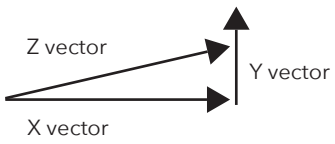
Any motion can be divided into its component vectors. A rocket going straight up has one vector, the Y vector.

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 Z.



GAMES – TALENT, LUCK OR BOTH?

MATERIALS YOU WILL NEED

Pencil
Paper
Calculator

ACTIVITIES

1. Describe the game you select to play from The Park at OWA midway.
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 Parkside 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?

1 PICTURE IS WORTH 300 WORDS

MATERIALS YOU WILL NEED

Pencil
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.

A DIARY OF YOUR DAY AT THE PARK AT OWA

Create a diary to show how you spent your time traveling to and from The Park at OWA and activities you enjoyed while you were at The Park at OWA.

CONCEPTS

Quantifying
Observing
Writing

MATERIALS YOU WILL NEED

Paper
Pencil

ACTIVITIES

1. 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.
2. Make a diary of your day visiting The Park at OWA 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.
3. 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.
4. Write down what you did on the way to The Park at OWA 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?

USE THIS CHART AS AN EXAMPLE TO TRACK YOUR ACTIVITIES

NAME OF RIDE	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 The Park at OWA for you as an individual, your whole class, or the entire school. The cost of admission for each student to visit The Park at OWA during the Education in Motion program is $19.99 + taxes and fees ($2.40), which totals $22.39 per student. The Park at OWA sponsored the cost allowing one adult in free for every 15 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

Date of Class Visit to The Park at OWA

_____

Student's Name and School

_____

ACTIVITIES

1. Beginning with the admission cost, keep a record of how you spent your money during your visit to The Park at OWA. 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.

Student Last Name	Ticket Price	Name Of Food Item	Food Cost	# of Games Played	Cost of Games	Name of Souvenirs Purchased	Cost of Souvenirs	Mode of Transportation	Transportation Cost

WHAT MAKES THE RIDES GO?

CONCEPTS

Observing
Identifying

MATERIALS YOU WILL NEED

Calculator
Worksheets
Paper and Pencil

GOAL

Identify and research the use of four simple machines

ACTIVITIES

1 Select four rides you have 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.

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

PULSE CHECK

MATERIALS YOU WILL NEED

Calculator
Worksheets
Paper and Pencil

GOALS

Worksheet Pencil
Stopwatch
Pulse Rate Worksheet

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).

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 from your artery is caused by the contraction of your heart.

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

NOTES

NOTES

OWA

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