Discovery Kingdom Project Kit

Congratulations! You're going to Six Flags Discovery Kingdom! Use these project ideas to enrich your educational experience in the park. Read through them before you go to make sure you understand the terms and concepts, and to help you determine if you want to expand upon any of them. You'll find fun facts and printable worksheets at the end of this packet.

a- elementary level activity b- middle school level activity c- high school level activity

Language Arts

Discovery Kingdom is full of fun things to do, but there is a lot that goes on behind the scenes. Informational reports are used by staff to detail the workings and conditions of the attractions in the park. Try your hand at writing a professional informational report on one of the attractions.

a. Pick an attraction to do your report on. Draw or write about three details about that attraction (height, color, etc) and whether or not you think it looks safe for guests based on the way it looks.
b. Choose one attraction to do your report on. Detail five specific details of the attraction, like estimated height, paint condition, queue condition, etc. Conclude your report with a recommendation for improvement.
c. Detail ten specific details of the attraction of your choice. Include guest experience ratings, safety ratings, queue management ratings, etc. Conclude your report with your approval and/or recommendations for improvements. Use appropriate letter format to present your report.

Materials required: Notebook, pen/pencil
Submission: A copy of your writings/drawing, and any pictures/videos

Teaching or learning notes:

Applied Math

Math is everywhere! Every single attraction at Discovery Kingdom was created using math. Take a look around and find examples of the math you know.

a. Identify and draw the shapes that you see and where you see them. See if you can find places where simple math equations were used. Document your findings.
b. Identify the math used to create one particular feature in the park. Outline the concepts and principles you see.
c. Identify the math used to create one particular feature in the park. Outline the concepts and principles, and use estimation to perform one of the calculations the builders would have used.

Materials required: Notebook, pen/pencil, calculator or smartphone (optional)
Submission: Your calculations, estimations, and conclusions, and any pictures/videos

Teaching or learning notes:

Science

Animals are awesome! Zoologists study animals. Every animal has a unique life history. A “life history” is the story of an animal’s life from birth (or fertilization) to adulthood (and death). How many different ways can an animal begin it’s life? Are some animals more independent as babies than others? Why do you think this is? What about their lives affect how vulnerable they are when they are born? What kinds of animals raise their babies, and what kinds don’t? How does this affect how many babies survive to adulthood?

a. Choose an animal to think about these questions for. Draw or write about your ideas.
b. Discuss and diagram the unique life history of one of the animals you see. Write a paragraph about your findings.
c. Discuss the life history of one of the animals at the park. Write a short essay on your findings. Then, explore zoology. What kinds of things does the park need to keep in mind about each animal's’ life history when it is designing its living space and their plan for taking care of it? Ask a zookeeper.

Materials required: Notebook, pen/pencil
Submission: A copy of your drawings, diagrams, maps, or designs, and any pictures/videos

Teaching or learning notes:

Social Studies

There are a lot of people at Discovery Kingdom! How does an amusement park handle the crowds? What sorts of tools does it employ to manage people and prevent unsafe crowding conditions? What sorts of tools does the park use to limit the number of people who attend the park in a day? What types of attractions does the park utilize to help with crowd control? How do people respond to these tools? Do they notice? How many people do they need to employ to help manage their guests? What affect does the layout of the park have on the movement of people? Can you see these same principles in use in the planning of large cities or other social environments?

a. Notice how many people are in the park. Discuss some of the things Discovery Kingdom does to control crowding and help make each guest's experience pleasurable. Write down or draw the techniques you see and how often you see them being used.
b. Discuss crowd control pre-entrance, during guest stay, and around specific attractions. Analyze the layout of the park and if/why certain features were designed with the purpose of managing crowds.
c. Discuss crowd control and analyze the layout of the park. Discuss the things you've seen in light of larger social environments you've been in. How universal are these techniques? What are your ideas for improving guest experience at Discovery Kingdom?

Materials required: Notebook, pen/pencil
Submission: A copy of your writings/drawings, and any pictures/videos

Teaching or learning notes:

Fun Facts

- Discovery Kingdom is a 135 acre animal park/thrill ride park hybrid which was originally called Marine World Africa USA in its current location.

- The park's original Mascot was Garfield the cat.

- The park is separated into different themed areas: Land (exotic land animals), Sea (marine mammals) and Sky (roller coasters).

- In Greek mythology, the dreaded monster Medusa was half woman and half serpent. Even the bravest warriors were no match for her. It is said that she was so nasty that just one look at her and her hair full of deadly snakes would turn any mortal into stone. With seven relentless inversions looping like snakes made of steel, Medusa is a reflection of this great mythical story.

- At 3,937 feet, Medusa is the longest and highest coaster in Northern California.

- Medusa is one of only 13 floorless coasters on Earth (eight in the United States).

- A Medusa train weighs approximately 25,000 pounds!

- Kong has what they call the heartline loop – a startling inversion in the shape of a heart that flips you head over heels, twice, in two seconds, at a pulse-pounding 50 miles per hour.

- The Joker has a unique breaking wave turn, the only one of its kind on the West Coast.

Discovery Kingdom

1. Draw a picture of your favorite ride.

2. Describe your favorite ride and why you love it.

3. Which rollercoaster is the tallest? The fastest? The oldest?

4. Draw or describe one example of engineering you saw.

5. Draw a simple replica of the park map including some labels.

6. What is inertia and when do you experience it?

BONUS:

Explain how an engineer uses math to design and build a rollercoaster. What kind of math do they use? Why is it important that they are accurate?