ORLANDO SCIENCE CENTER

Discovery Lab Post-Visit Activities

SuperHero Science

Grades K-2

We hope that you enjoyed your visit to the Orlando Science Center! As a means of enhancing and extending your students' Discovery Lab experience into the classroom, we are providing you with these post-visit materials to share with your class.

Discussion Topics:

- Some superpowers enable superheroes to do things quicker than ordinary people can. Some superpowers give superheroes the ability to do things that are impossible for ordinary people to accomplish, such as flying. We are not able to fly on our own, so we have used science and technology to create airplanes and rockets that enable us to fly through the skies and into outer space!

  What are some other ways that we have used science and technology to perform super tasks?
- Friction both helps and hinders everything we do.

  What would your life be like if there were no friction? Which actions would be more difficult? Which would be easier?

In Class Activities:

- Explore how sound travels by building a simple paper cup telephone. Divide the class into teams of two students each. Provide each team with two paper cups, two paper clips, and a piece of string (approximately 20' in length). Have students stand 20 feet away from their partner and whisper into their cups. Can they understand what their partner is saying? Assemble the paper cup phone by poking a hole in the bottom of each cup with a pencil. Thread the string from the outside of the cup to the inside and tie it around a paperclip. Tie the other end of the string to the second cup in the same way. Have students stand 20 feet away from each other so that the string connecting their two paper cups is taut. Students should take turns placing the cup against one ear while their partner whispers into the cup at the other end of the string. Can they understand what their partner is saying? How does it work? How do the vibrations of your partner's voice reach your ear? Try again, but this time, allow the string to sag between the two cups. Does it work? Why or why not? Try using your paper cup telephone while someone is holding the string in the middle. Does it work? Why or why not?
- Master the powers of magnetism. Place three donut magnets on a vertical dowel or rod. Which sides of the magnets are attracted to each other? Try to cause the magnets to repel each other by flipping the magnets as needed. The magnets will float and be suspended above each other. You have just used the forces of magnetism to levitate objects in the air!

Math Problem:
Super Boy and Super Girl were comparing their super powers.

- Super Boy can lift a car weighing 1 ton (1 ton = 2000 lbs). Super Girl can lift a school bus weighing 5 tons. Who can lift more weight? Super Boy or Super Girl?
- Super Boy can run 60 miles in 1 hour. Super girl can run 50 miles in 1 hour. Who can run faster? Super Boy or Super Girl?
- Super Boy can jump over a 9-story tall building in a single leap. Super Girl can jump over a 12-story tall building in a single leap. Who can jump higher? Super Boy or Super Girl?

Writing Prompt:
Imagine that you awoke one morning and found that you had become a super hero or heroine overnight! What super powers do you have and how did you get them? Write three sentences about your adventurous day with your new super powers. How would you use them?

Art Project:
Every superhero needs to conceal their identity and a fun mask is just the way to do it! Cut out a mask with eyeholes from card stock or poster board. Decorate the mask using markers, glitter, sequins, and feathers. Punch a hole on each side of the mask and thread a length of string through each hole and secure it. Adjust the string so that the mask fits snugly, but not too tightly.

Additional Resources:
SuperHero ABC by Bob McLeod (HarperCollins)
Dex: The Heart of a Hero by Caralyn Buehner (HarperCollins)
The Adventures of Max and Pinky: Superheroes by Maxwell Eaton (Knopf Books)