

## ***Physics Internet Scavenger Hunt***

Name \_\_\_\_\_

For each site below, log follow the link(s) and begin your hunt for information! Once you are done, you can go back and explore any of the sites in greater detail! Enjoy!

### **Amusement Park Physics ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Motion & Forces)**

1. Which horses on a carousel are moving the fastest: the ones on the inside or the ones on the outside? Explain your choice.
2. Which Law of Motion explains what happens during a ride on the bumper cars? Give an example.
3. Where do riders have a feeling of “weightlessness” on a pendulum-type ride? At what point on the pendulum-type rides do riders feel the highest g-forces?
4. Explain the “weightless water” trick. Hint: Go to the Free Fall section.
5. Out of the 270 million people who visit amusement parks annually, how many require a trip to the emergency room?

### **Simple Machines ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Simple Machines)**

- A. List 6 types of simple machines.
- B. What is the definition of a compound machine?

### **Speed Machines ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Motion & Forces)**

- A. How long can the SR-71 operate (at top speed) before it needs refueling?
- B. Who devised the unit of power called the horsepower?
- C. What type of vehicle is the Spirit of America? \_\_\_\_\_ What is its top speed? \_\_\_\_\_

### **Rube Goldberg ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Simple Machines)**

- A. Complete: Rube Goldberg lived from \_\_\_\_\_ to \_\_\_\_\_ and was a Pulitzer Prize winning \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
- B. How many steps were involved in Rube Goldberg’s pencil sharpener? \_\_\_\_\_

**Physics Classroom: Newton's Law ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Motion & Forces)**

- A. Give an example of Newton's 1st Law of Motion.
- B. What formula is used to show Newton's 2nd Law of Motion?
- C. In Newton's 3<sup>rd</sup> Law, how many forces always act at once? Give an example of how this works.

**The Sundry ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Light & Sound)**

- A. What medium does sound travel the fastest through?
- B. What are the 3 parts of the ear? Draw & label a sketch of the ear.
- C. Go to the Doppler Effect Applet. Experiment! What do you notice about the sound of the jet as it gets closer to the person? How does the jet speed affect the sound?

**Funderstanding ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Motion & Forces)**

Work together as a group to make the roller coaster work. What is the coaster's top speed? \_\_\_\_\_  
Sketch your coaster here:

Get your teacher's initials to show that you have successfully completed the coaster. \_\_\_\_\_

**Shockwave Physics ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Light & Sound)**

1. Go to RGB Lighting. Click the red button to turn on the red light. What do you observe about the color of the shadow and the color of the background?
2. Turn off the red light and then click the blue button to turn on the blue light. What do you observe about the color of the shadow and the color of the background?
3. Leave the blue light on and click to turn on the red light. What do you observe about the color of the shadows and the color of the background?
4. Leave the blue and red lights on and click to turn on the green light. What do you observe about the color of the shadows and the color of the background?

**Sport Science ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Motion & Forces)**

- A. Where would you have the best chance for hitting a home run: Denver, Colorado or San Diego, California? Why?
- B. How much force does it take to break a hockey stick?
- C. Who is credited for developing the chain drive (chain and cog system) for bicycles?

**Sandlot Science ([www.sciencespot.net](http://www.sciencespot.net) > Kid Zone > Physics: Light & Sound)**

Click as follows Home >Optical Illusions>Optical Illusions>Distortions>Breathing Square.

- A. What appears to be happening?
- B. Click on the red shapes to change their size. What do you observe about the blue object?

Click “Moon Illusions” and then Demonstration from the menu on the left, then click on the picture of the moon. Use the mouse to move the moon in the sky. What do you observe? What causes this illusion?

Click “Typography” in the left hand menu and then choose “Which is an ambigram?”

- A. What is an ambigram?
- B. Which words in the table are ambigrams?

Which of the websites did you find most interesting? Why?

List three things you learned about physics through this activity:

- 1.
- 2.
- 3.

Which website(s) do you want to further explore? Why?

