MUSEUM MISSION

Grades: 4 / Primary Cycle 2

Your mission, should you choose to accept, is to explore the museum and gain as much knowledge as possible!
Paper Strength
Exhibit – Artifact Alley – Materials

Can you find the piece of paper? Where is it?

Think: How do the gears help to pull the piece of paper to determine its strength?
Find the different sized pulleys. Why do you think there are different sizes?

Think: Circle the different functions of the gears that you can see (circle all that apply):

a. Change direction
b. Increase speed
c. Increase power
d. Change plane of rotation
e. Decrease speed
f. Decrease power

*remember: gears from big to small increase speed, and from small to big increase power
**Time Flies**

Exhibit – Artifact Alley - Smartphone

This is the inner workings of a clock from 1719. **Find** all the gears, how many can you count?

**Think:** What is the source of power for this clock? (Circle the answer you think is correct):

a. Chemical Energy  
b. Electrical Energy  
c. Mechanical Energy  
d. Solar Energy  
e. Wind Energy  
f. Hydro Energy
Sounds Good

Exhibit – Artifact Alley - Smartphone

Find the microphone boom. What is it used for?

Think: Do these pulleys make it easier to lift a weight or change the direction of the force required?
Think: Try the bicycle race interactive. Which bike won and why?

Why do you think some bicycles have an advantage in a race over others? Circle those that apply.

a. Number of gears  
b. Size of the tires  
c. Strength of the rider  
d. Position of the handle bars  
e. Weather outside
Catch a Train

Exhibit – Steam – A World in Motion – Model Train Set

Find all the pulleys and gears and list where they are.

Pulleys:

Gears:

Think: The roundhouse was used to turn the massive locomotives around. Which simple machine could be used to help make this work easier?
Ship's Ahoy

Exhibit – Steam a World in Motion – Ship Display

Find all the pulleys and gears. How many do you see?

Pulleys: Gears:

Think: Why were pulleys used on ships? Circle all that apply:

a. Lift and lower the sails
b. Dry laundry
c. Raise a flag
d. Raise and lower lifeboats
e. Get water from the well
f. Turn the ship ventilators
   (see the big ship ventilator artifact behind you).