Challenge: As a team, construct a structure which will stop the flow of water for the longest amount of time.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Exhibit Challenge Card

Catenary Arch

Challenge: Work together as a team to successfully construct the Catenary Arch.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Challenges:

1. Try all 3 airplane designs.
   Which design flies the farthest?
   Which has the most accurate flight pattern?

2. Figure out what the highest possible score you could get within 3 launches.
   What is your highest score?
   What is the lowest possible score?
Wooden Blocks

Challenge: Work as a team to design and build a structure as tall as the Statue of Liberty.

Try using the blocks in a variety of ways. Try using their edges, standing up and lying down. Which way seems more stable or harder to knock down?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
A-Mazing Airwaves

Challenge: Work together to make a scarf or pom-pom ball come out of all four exits.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Lego Table

Challenge: As an individual work to construct the letters needed to spell out your name. Can you spell OH WOW!? Are some letters more difficult to make with Legos? If so, why do you think this is?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
**Challenge Card**

**Magnet Wall**

**Challenge:** Use the different materials provided to make a metal arch where at least one piece is not touching the wall’s surface.

Does every object stick to the wall? If not, why do you think this is?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Challenge: As a team, work to balance a ball on EVERY laminar at once.
Does it work better to do it on your own or work with your group?

▲ What do you see or observe?
▲ What conclusions can you make based on your observations?
▲ What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Challenge: Work as a team to talk about the questions. Can each player receive a PERFECT score on one of the four Quiz shows dealing with financial literacy?

🌟 Did you learn something new today?
Oh Wow!

Exhibit Challenge Cards
Students will gain greater understanding of the scientific process of inquiry as they explore our exhibits and consider the questions presented. You can help by following these tips as well:

- Have Fun! Explore & Experiment with your child.
- Minimize your cell phone use. Keep your fingers free for interacting with our exhibits.
**Exhibit Challenge Card**

**Archimedes' Screw**

**Challenge:** Use Archimedes’ screw to move objects from the basin of water up to the stream.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Exhibit Challenge Card

Stream Table

Challenge: Design a stream by positioning the gray plastic barriers along the table. Race different objects down the stream to decide which materials would make for a better vessel.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Challenge: Slowly play through the video of the hummingbird. Can your group count the number of still pictures that were put together to make the completed video?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Exhibit Challenge Card
ATM Machine

Challenge: Follow the directions on the screen to get a raffle ticket. Fill in the needed information and turn your ticket in to the front desk.

Look into the sides of the machine and notice how it works.
If every visitor turns in 1 raffle ticket, what are the chances you will win the $25.00 this month?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and Can those results be replicated (that means repeated)?
Challenge Card

Drum Machine & PVC Pipe Organ

Challenge: Work together with a friend to compose a song using both the pipe organ and the drum machine.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Challenge: Can you climb the rock wall and keep it moving for 30 seconds.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and can those results be replicated (that means repeated)?
Challenge: Choose the forecast of your choice. Read through the script provided to let the other guests know what the weather outside is like.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Wheelchair Racer

**Challenge:** How long does it take you to travel 30 meters?

The world record is about 5 seconds. Did your time take twice as long as the world record? Three times as long?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Challenge: Can you work as a team to make a basket using the prosthetic hands in the exhibit?

Try again, using each of the different hands. Which is the most difficult to use?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Challenge: Using your hand, can you play each laser beam?

Try it again, this time play with your elbow, leg or foot.

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and
- Can those results be replicated (that means repeated)?
Silly Faces

Challenge: Select one member from your group to be the actor. This person pushes the button and acts out the emotion.

Can the other members of the group guess the emotion? Can they guess five in a row?

- What do you see or observe?
- What conclusions can you make based on your observations?
- What results do you get as you manipulate the variables (that means change stuff) and Can those results be replicated (that means repeated)?