



THE ROGER & GLORIA JONES
CHILDREN'S CENTER
FOR SCIENCE & TECHNOLOGY

Exhibit Challenge Cards

Adults, we do want you to have fun, too! Studies show the most effective way to teach is through modeling. Have fun exploring all of the hands-on exhibits at OH WOW! and your young explorers will follow suit.

Use these cards as you work through the exhibit hall to challenge yourself and those that are with you!

OH WOW! Exhibit Challenges :

ATM Exhibit

PreK-K:

Follow the directions to withdraw a raffle ticket from the ATM. Work with an adult to enter the monthly raffle. Write your name, address, phone number and submit at the front desk.

1st-3rd:

Follow the directions to withdraw a raffle ticket from the ATM. Fill out the information requested and turn the ticket in at the front desk to enter the monthly raffle.

4th-6th:

Follow the directions to withdraw a raffle ticket from the ATM. Fill out the information requested and turn the ticket in at the front desk to enter the monthly raffle.



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Exhibit Challenges :

Quiz Show

PreK-K:

Work with an adult to select the correct colored button for each question.

1st-3rd:

Work with an adult to answer 4 questions correct about financial literacy.

4th-6th:

Answer the financial questions and get at least 5 correct.



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Exhibit Challenges :

Sensory Sensitive Room

PreK-K:

Interact with the items of different textures that are in the room for a tactile and visual experience.

1st-3rd:

Run your hands through the LED lights hanging against the wall. Can you make slower movements?

4th-6th:

Sit or lay on the green textured bench. Run your hands across the material for a tactile and visual experience.



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Exhibit Challenges :

Video Browser

PreK-K:

Turn the knob fast and slow, left and right, and watch how the videos play. What is your favorite video?

1st-3rd:

Turn the knob forward, backward, fast, or slow and watch what happened to the video. What do you notice?

4th-6th:

Turn the knob forward, backward, fast, or slow and watch what happened to the video. What other types of videos would you like to see on our video browser?



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Exhibit Challenges :

Peek-a-Boo Screen

PreK-K:

With a person on each side of the screen, place your hand on the sensor. What happens?

1st-3rd:

With a person on each side of the screen, place your hand on the sensor. Why does it work with only one person's hand on the sensor?

4th-6th:

With a person on each side of the screen, place your hand on the sensor. Can you think of anything else that works on a similar circuit?



Exhibit Challenges :

Weather Station

PreK-K:

Sit in the chair behind the desk and pretend to be a tv weather forecaster as you notice yourself on the tv in front of you.

1st-3rd:

Select one of the four weather scenarios and read the script as you act out the job of weather forecaster on the tv in front of you.

4th-6th:

Select one of the four weather scenarios but make up your own script as you act out the job of weather forecaster on the tv in front of you.



Exhibit Challenges :

Crackle Screen

PreK-K:

Hold your hand to the center of the crackle screen. What happens if you begin to move your hand around?

1st-3rd:

What type of weather does the crackle screen remind you of?

4th-6th:

What force in nature does the crackle screen remind you of? Is there another exhibit inside OH WOW! that displays that force of nature?



Exhibit Challenges :

Hurricane Chamber

PreK-K:

Enter the Hurricane while the top button is pressed. How fast do the winds blow?

1st-3rd:

Make note of the speed of the winds when you press the first and second buttons. What is the difference in wind speed between these two levels of hurricanes?

4th-6th:

Make note of the range of speed of the winds when you press the three different buttons. Can you estimate the average wind speed for OH WOW!'s Hurricane?



Exhibit Challenges :

Block Table

PreK-K:

Can you construct a structure that uses all the blocks on the table?

1st-3rd:

What are the fewest number of blocks you can use to construct a structure that is the same height as you are?

4th-6th:

Use the blocks to make at least 3 different quadrilateral shapes on the base. Can you make them 3 dimensional?



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Exhibit Challenges :

Water Table

PreK-K:

Use the grey slates to create a river and then dam up the stream side of the table. Place a boat at the top of the stream. Now release the bottom dam. What do you notice?

1st-3rd:

Turn off the faucets at the erosion side of the table. Fill the table with sand while the water is off. Once you have a bit of sand filling the table turn the water back on and watch the sand erode away.

4th-6th:

Use the Archimedes screw in the bottom of the stream table to move an item from the water in the pool to fall out of the top of the screw.



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Exhibit Challenges :

PVC Pipe Organ

PreK-K:

Hit the pipes to make different sounds using the foam piece as your mallet.

1st-3rd:

Use the foam piece as your mallet to play one of the songs displayed on the PVC Pipe Organ and see if someone else in your group can Name that Tune.

4th-6th:

Use the foam piece as your mallet and play one of the songs displayed on the PVC Pipe Organ. How are the pipes producing different sounds?



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Exhibit Challenges :

Drum Machine

PreK-K:

Select a song and speed up or slow down the tempo.

1st-3rd:

Use the buttons to compose your own song.

4th-6th:

Use the buttons to compose your own song and adjust the tempo.



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Exhibit Challenges :

Echo Tube

PreK-K:

Talk, clap, yell, hum, and listen to your sound coming back to you.

1st-3rd:

Sound travels to the end of the tube and bounces back to you. Sound travels at a speed of 340 meters per second and echo tube should be 17 meters long to produce an echo. How long do you think is Oh Wow's echo tube?

4th-6th:

Sound travels to the end of the tube and bounces back to you. Sound travels at a speed of 340 meters per second and echo tube should be 17 meters long to produce an echo. How long does it take for your sound to reflect back?



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Exhibit Challenges :

Laser Guitar

PreK-K:

Climb into the laser guitar and play a song.

1st-3rd:

Climb into the laser guitar and play a song with your foot, then reach out and touch the white button to change the sound. Can you recreate a song?

4th-6th:

Use your fingers to touch the laser beams and play a song. Then touch the white button to change the sound, can you recreate a song?



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Exhibit Challenges :

Airplane Launcher

PreK-K:

Can you make a paper airplane and launch it into the target using the launcher?

1st-3rd:

If the center target is worth 10 points and the outer circles are worth 5. How many point can you make taking 5 launches toward the target with your favorite airplane?

4th-6th:

Make one of all three designs of airplanes that are displayed on the airplane-making station. Test each of the airplanes and decide which is more accurate when trying to hit the target.



Exhibit Challenges :

Big John's Flight Simulator

PreK-K:

Sit in the plane and press the buttons on the left that make noises. Do you have a favorite sound?

1st-3rd:

Choose one of the cities to fly to and successfully complete the flight path.

4th-6th:

Choose two different cities to fly to. Which one was an easier flight? Why?



Exhibit Challenges :

Kids in the Kitchen

PreK-K:

Choose one of the My plate plates and prepare a meal filling a portion of each food group (meat, vegetable, bread, dessert).

1st-3rd:

Buy something from each food group to make a balanced meal from Frank's Marketplace. Make up a price for each item. Use the cash register to add up the cost of your meal.

4th-6th:

Buy something from each food group to make a balanced meal from Frank's Marketplace. Make up a price for each item. Use the cash register to add up the cost of your meal. Can you feed a family of four for less than \$20?



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Exhibit Challenges :

Stop Motion

PreK-K:

Take 10 pictures while moving the items around on the board and then play your movie back.

1st-3rd:

Make a movie using at least 25 pictures while moving the items around the board. Then play your movie back.

4th-6th:

Plan out a movie, what is going to happen? How many pictures will it take? Make the movie, then share with someone in your group.



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Exhibit Challenges :

House of Shine

PreK-K:

Use the magnet at one of the activity boards to complete the activity.

1st-3rd:

Look at the wall of tags, find a tag that describes a trait you have. Then look for one that describes someone else you know that you would like to share with them.

4th-6th:

Stand on the yellow circles in front of the mirrors. Reflect on the person you are today and the person you will be in the future by answering the question written on the mirrors.



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Exhibit Challenges :

Gear Wall

PreK-K:

Make a gear train that goes from the left to the right side of the gear wall. Now try to spin it. Does it work? If not what adjustments need to be made?

1st-3rd:

Make a gear train that uses all the gears. Now try to spin it. Does it work? If not what adjustments need to be made?

4th-6th:

Try to get the metal pieces to stick to the magnet wall. Do they all stick? Why do some fall off and others stick?



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Exhibit Challenges :

Magnet Wall

PreK-K:

Try to get the metal pieces to stick to the magnet wall. Do they all stick? Why do some fall off and others stick?

1st-3rd:

Use the metal pieces to create a metal sculpture on the magnet wall.

4th-6th:

Create a target using one of the bigger pieces of metal, like the triangle. Now let's try a game of spoon darts. Can you toss the spoons from a few feet away and get them to land within the target?



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Exhibit Challenges :

Amazing Airwaves

PreK-K:

If you place a scarf in the intake box, can you guess where it is going to come out?

1st-3rd:

Place a puffball and a scarf in the intake box at the same time.
Predict which will come out of the tube first.

4th-6th:

Place a puffball and a scarf in the intake box at the same time.
Predict which will come out of the tube first. Change the direction of air with the help of the lever and see where the puffball and scarf move.



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Exhibit Challenges :

Lego Table

PreK-K:

Make structures using the Lego blocks.

1st-3rd:

Pick one of the cards randomly and build what it says.

4th-6th:

Pick one of the cards randomly and build what it says.



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Exhibit Challenges :

Bernoulli Table

PreK-K:

Press the white button on the table to turn on the air and try to balance a ball on the air stream.

1st-3rd:

Construct a tube that goes straight up that you can balance a ball on once you turn the table on.

4th-6th:

Construct a series of tubes that creates a place to balance the ball when you turn the table on. Are you able to balance more than one ball at a time?



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Exhibit Challenges :

Microelectronics

PreK-K:

Work with an adult to use the snap circuits to complete a circuit.

1st-3rd:

Work with an adult to complete a circuit using the circuit blocks. Make light bulbs, alarm, fan by putting together the circuit.

4th-6th:

Look through the books for snap circuits. Find a project you would like to try. Work to successfully build the project then take time to play with the completed project.



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Exhibit Challenges :

Rock Wall

PreK-K:

Climb up 3 rocks in the center of the wall.

1st-3rd:

Climb to the top of the wall using the rocks in the center of the wall and maintaining your balance.

4th-6th:

Climb up the wall using rocks along the outer ends, causing the wall to spin. How long can you keep going?



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Exhibit Challenges :

Drive to Hear

PreK-K:

Click on the blue buttons and see how sound travels in our ears.

1st-3rd:

Click on the blue buttons that represents the path sound takes in the ears in different hearing conditions.

4th-6th:

Click on the blue buttons that represents the path sound takes in the ears in different hearing conditions. Go on the other side, connect the electrode to the sound source and examine the oscillation of different sounds.



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Exhibit Challenges :

Drive to Hold

PreK-K:

Work as a team to get a basket. Your job is to push the button to launch the ball up the tube, then pull the lever back to shoot the basket.

1st-3rd:

Work as a team to make a basket. What part of the team are you?

4th-6th:

Work as a team to get 3 balls in the shooting hand. Then shoot all 3 at once. How many can you get into the basket?



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Exhibit Challenges :

Drive to Dance

PreK-K:

Dance along to the music that is being played. Then watch the replay of your recorded video on the screen above the mirrors.

1st-3rd:

Dance along with the video displayed on the large monitor. Then watch the replay of your recorded video on the screen above the mirrors. Notice how Science and Technology is helping them on the screen to dance.

4th-6th:

Dance along with the video displayed on the large monitor. Then watch the replay of your recorded video on the screen above the mirrors. Notice how Science and Technology is helping them on the screen to dance.



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Exhibit Challenges :

Drive to Succeed

PreK-K:

Sit in the seat and use the steering wheel to control the Drive to Succeed truck.

1st-3rd:

Sit in the seat and use the steering wheel to control the Drive to Succeed truck.

4th-6th:

What do you notice is different between the two types of steering wheels?



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Exhibit Challenges :

Drive to Race

PreK-K:

Hit the start button and see how long it takes to race 30 meters.

1st-3rd:

Race against others in your group. Who can go 30 meters the fastest?

4th-6th:

What is the best way to roll? Try different techniques to get the best time. Try rolling forward, backward, on the rubber tire, on the metal frame...



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Exhibit Challenges :

Drive to Invent

PreK-K:

Use the mallet to test the strength of each item.

1st-3rd:

Test each of the materials using the different testing principles.
Which item on the wall would be best to make a robotic arm from?

4th-6th:

Test each item using the different testing principles. What types of projects would each of these materials be good for?



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Exhibit Challenges :

InspireWorks Makerspace

PreK-K:

Get inspiration from your surrounding and make something yourself.

1st-3rd:

Draw inspiration from how you are feeling and get creative with your art.

4th-6th:

Draw inspiration from your life and put it into art. Get creative.