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East Jordan Lions Club
Charlevoix Lions Club
Boyne Valley Lions



Written Exhibit Descriptions

Voiceover by Cliff Carey

25. Roman Arch

The Roman Arch originated in Ancient Rome. This arch was typically constructed of stone, brick or concrete. The Romans quickly discovered that by making the arch out of concrete, instead of stone or brick, the structure could withstand more force and hold more weight. That discovery greatly influenced the innovation of support structures. Today, arches can be also made out of steel and play a very important role in building and reinforcing architecture.

24. Obelisk

Obelisks were first built in Egyptian cultures. The Washington Monument is an example of a famous Obelisk. The Raven Hill Obelisk shows the date and time using the sun. The sun hits the Obelisk and casts a shadow on the ground near the cement blocks that display the date and the time. The tip of the shadow is on the correct date and time on the 21st of each month. From this, you can estimate other dates and times.

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1. Skittles

Skittles is a game that originated in Europe. It was originally called Nine Pins and was played on a lawn, similar to bowling. The modern version of Skittles is about 1.5 feet wide by 4 feet long, with 5 inch walls forming compartments. There are 15 pins set up on circles with point values ranging from 10 to 100 written inside them. The goal of the game is to gain the most points by knocking down the pins with the spinning top. To do this, wrap a string around the stem of the top. Next, place the top inside the hole at the end of the board. Let the string extend through the hole, outside the board. Finally, pull the string all the way off to make the top spin and knock down the pins.

23. Moai (Easter Island Head)

Moai, or Easter Island Heads, are sculptures found on Easter Island, which is located 2,300 miles off the coast of Chile in South America. It's called Easter Island because in 1722, Jacob Roggeveen found the island on Easter Sunday. The sculptures were built by ancient Polynesian people called the Rapa Nui who lived on the island. The Rapa Nui people called the statues *Moai* and built them between 400 CE and 1700 CE. The heads are 14 feet tall and weigh nearly 14 tons. They were carved out of volcanic ash. The Raven Hill Easter Island Head is a much smaller version and is only 10 feet tall. Middle school girls, working with an artist, in 2006, created it out of Styrofoam, chicken wire, and cement.

22. Pyramid

The ancient pyramids originated as tombs for pharaohs, kings, or rulers. One of the most famous pyramids is the great pyramid of Giza built for the pharaoh Khufu. The Raven Hill Pyramid resembles ancient Mesopotamian pyramids from cultures such as the Olmec, Aztecs, and Mayans. A set of steps down each flat side of the pyramid connect at the top. Some of the ancient pyramids included a room or tomb underneath.

2. Glass Harp

The Glass Harp consists of several wine glasses partially filled with water. To play, dip your finger in the bowl of vinegar to remove any oils from your skin. Next, rub your finger on the rim of one of the glasses. If you don't hear a sound, use more pressure on the rim of the glass. This works because rubbing a finger on the glass causes the glass to vibrate and produce a sound wave. The amount of water in the glass will determine the pitch of the sound. Hold the stem of the goblet otherwise your hand will stop the vibrations.

3. Xylophone

A Xylophone is an instrument made up of several wooden bars that a player strikes with mallets to make a sound. The Xylophone belongs to the idiophone family, which consists of many different percussion instruments including the marimba, glockenspiel, and vibraphone. The Xylophone originated in Asia and Africa around 500 CE. There were many different versions of the Xylophone in the 9th century, each country developing their own version of the instrument. Although there were, and still are, hundreds of different forms of Xylophones across the world, all versions have one thing in common: their structure. Many forms of Xylophones differ in their sound, size, and origin, but all share the same basic, ancient structure of wooden bars and mallets.

21. Sphinx

The Great Sphinx is located in Giza and was built by ancient Egyptians. It has the head of a human, the body of a lion, and was sculpted over 10,000 years ago. It was carved from a mound of natural rock and guards the front of Khafra's pyramid. The real Sphinx is 66 feet tall and 241 feet long. The Raven Hill Sphinx is a smaller version--approximately 3 feet tall and 10 feet long.

20. Print Shop

The Print Shop contains spaces where artists can come and use equipment for printmaking and to teach classes. The Print Shop has become our “maker space” as we have added a wood shop, clay studio, and medal shop so that visitors can create many other art pieces.

4. Kaleidoscope

The Kaleidoscope was invented by David Brewster in 1816. When you look in the Kaleidoscope, the 3 mirrors come together at angles to form different patterns and designs. The word Kaleidoscope comes from the Greek words kalos, eidos, and scopos, which translate to beautiful form watcher. The Raven Hill Kaleidoscope was donated by the Hall of Ideas at Midland Center of the Arts.

5. Energy Bike

The Energy Bike is a life size science experiment. When pedaling, the bike produces energy which causes the light bulbs to shine. There are three different kinds of light bulbs attached to the bike--incandescent, CFL, and LED. Incandescent bulbs are one of the first versions of light bulbs, and are the least effective of the three. It is harder to pedal when the dial is set to incandescent, because the bulb needs more energy to light. The CFL bulb is a newer, more efficient version, so it is easier when pedaling to turn on these bulbs. LED bulbs are the newest version of light bulbs. They are made to consume less energy than the CFL or incandescent, which is why the LED bulbs are the easiest to pedal.

19. Jurassic Park

Jurassic Park is a timeline of the geologic history of the earth from the time the earth formed to modern man. Located on each side of the path are rocks, trees, fossils, and sculptures of extinct species that would have been present during the time period. In the middle of the timeline, the length of 2 fence sections is equivalent to about 50 million years. The beginning of the timeline is compressed because during that period few new plants or animals evolved. The end of the timeline is expanded because so many new plants and animals appeared during that period.

18. Whisper Dishes

The Whisper Dishes were built in 2013. These dishes are better known as “parabolic acoustic mirrors”, and are used to demonstrate the focusing of sound. The two dishes each stand about 10 feet tall, and are located 250 feet apart. When one person stands at one dish, and one stands at another, you can whisper through the tube and hear the sound just as if you were standing right next to the other person.

6. Dark Room

The Dark Room includes fluorescent rocks, colored shadows, and a plasma lamp, all of which work best in a dark area. Rocks appear fluorescent when light energy enters the rock and is refracted. When the light exits the rock, it is traveling at a different speed, making the rocks appear differently colored. The slowest light waves exiting the rock give it a red appearance; the fastest light waves exiting the rock turn it violet.

Next, in the colored shadows area, there are three bulbs that represent the three primary colors of light; red, green, and blue, all of which are projected on a white screen. Put a hand in the apparatus to block red, green, or blue to make a different color.

(Continued on next page)

6. Dark Room (continued)

The plasma lamp illustrates what happens inside a fluorescent light. It is a glass ball about the size of a soccer ball with a light in the center and bolts of light that extend toward your hand when it's touched. Electrons have a negative charge and hands have a positive charge. Because opposite charges attract, your hand will attract the light when you touch the lamp.

17. Medicinal Gardens

The Medicinal Gardens are made up of many plants that were once used to treat certain illnesses or problems with the body. Each of the 16 gardens has a different focus, such as the heart, cold and flu, and relaxation. Each garden is approximately 4 feet long by 4 feet wide. The red bricks between the gardens represent the Red Cross flag.

16. Stone Labyrinth

Labyrinths have been around since ancient times and are present in many different cultures. Most labyrinths have only one winding path that eventually leads to the center. They are usually symbolic. In Cretan cultures, labyrinths symbolized a myth involving a half human and half bull creature called a Minotaur. In the middle ages, the labyrinth symbolized the pilgrimage for those who were unable to visit the Holy Land. Like ancient labyrinths, the one at Raven Hill has only one path that leads to the center.

7. Magnet Table

The Magnet Table was donated by Industrial Magnetics of Boyne City in 1992. It's a table about 4 feet long by 4 feet wide with washers on top. These magnets are permanent magnets, meaning that they only lose one one-hundredth of a percent magnetism every 100 years.

Magnets that are not permanent can lose their magnetism when they are heated or hit against something. Make a tower with the washers as tall as the sign to win a prize!

8. Rollaway

The Rollaway consists of high-density slanted foam about 4 feet long by 4 feet wide with angled slots, panels of different sizes and colors, and a golf ball. The goal of the Rollaway exhibit is to slow the golf ball down by placing the panels in the slots to make a path. If you can make the golf ball take 15 seconds or more to reach the end, you can win a shark tooth. Make the golf ball take 30 seconds or more to win a Raven Hill t-shirt. Must be officially timed.

15. Patent Office

The Patent Office is the hands-on part of the Evolving Technology building. When someone invents something, they must go to the patent office to make sure nobody else has made anything similar. Then, they're given a patent, which means that nobody else can sell anything similar to their invention. At the Raven Hill Patent Office, kids can make their own invention and pretend to have it patented.

14. Evolving Tech Building

The Evolving Technology Building displays show how technology has changed over 16 time periods from The Stone Age to modern times. The building is in the shape of an “H,” with several timelines on either side of the path. Tools are located at the top of the wall on the left, or south side. Toys and games are at the center of the left wall. The bottom of the left side displays daily life, including cooking, cleaning, laundry, and sewing. Communication technologies are located on the right, or north side and includes written, audio, visual, and items such as clocks, calendars, and thermometers that include numbers.

9. Animal Room

The Animal Room houses many different types of live animals, including amphibians, reptiles, and aquatic life. We have no native Michigan animals in the Animal Room, since Michigan animals are protected by law. That means that it is illegal to hold these animals in captivity without a license. The Animal Room features a guided tour, where a staff member will take out a few of our exotic animals, give a few facts, and allow visitors to touch or hold the creatures.

10. Schoolhouse

The Schoolhouse was built in the 1930s by the Civilian Conservation Corps and used to be Wilson Township Hall. One-room schoolhouses were common in the 1800s and early 1900s. Students ranged from 1st grade to 8th grade. Boys and girls sat on opposite sides of the room and weren't allowed to play together at recess. Teachers were almost always female and unmarried. They would board with families of children they taught. Paper was very expensive. Slate boards were used instead because they were reusable year after year. Slate boards are displayed on the Raven Hill Schoolhouse walls.

13. Music Garden

The Music Garden was built in 2009. Here you can find various oversized, tuned instruments that are very easy to play. This garden features instruments made of materials that come from earth—wood, metal, and stone. Striking the granite lithophone panels with a mallet produces a sound. The whale drum is played with a mallet and is made out of a propane tank. The metallophone is made out of brake drums— hit it with the wrench attached to the bottom to produce a sound. The slap tubes are long plastic pipes with a hole at the bottom that make a sound using a flip-flop sandal as a mallet. The wooden Amadinda is an African instrument that makes music with a mallet. Lastly, simply by the wind blowing by the wires, the Earth Harp, also known as an Aeolian Harp, can make sound.

12. Energy House

The Energy House uses solar energy as its power source. It is off-grid, which means that it's not connected to the electric grid. It's about 20 feet long by 30 feet wide and features wood floors, two maple block countertops, a closet, a future bathroom, and a small bed. The floor is bamboo--a renewable source of wood because bamboo grows very fast. There are many different forms of energy in the house. Energy from the sun is converted to chemical energy and stored in batteries. This chemical energy can be transferred to light energy by turning on a light bulb, motion by turning on a fan, heat by turning on the hot plate, and sound by turning on the radio.

11. Treehouse

The Treehouse, built in 2008, is designed in the shape of a maple leaf. This exhibit features marble rolls, rose-colored glasses, periscopes, voice pipes, and murals painted by 5th grade through 12th grade students. There are two quotes inside the Treehouse. The first is from John Stilgoe: "Having taken wood from the tree, we bring the tree back to the wood. The tree becomes the house, and in ceremony, the house becomes the tree." The second is from the book *Where the Sidewalk Ends* by Shel Silverstein: "A tree house, a free house, a secret you and me house, a high up in the leafy branches, cozy as can be house."