Inside Outside


In this wordless book, Lizi Boyd follows a boy through a year of activities, both indoors and out. Die cuts on each “inside” page offer a glimpse to the outside world, while “outside” pages allow readers to peek inside. Inside Outside encourages the use of imagination and storytelling.

ABOUT THE ILLUSTRATOR:
Lizi Boyd

Lizi Boyd is best known for her wordless children’s picture books. She enjoys trying new papers and surfaces to create her art, along with new artistic techniques. In order to find the perfect paper to enhance her paintings, Boyd will often create the same illustration on multiple papers while discovering which paper works best. You can learn more about Lizi Boyd and see images of her work at liziboyd.com.

ABOUT THE TECHNIQUE: Gouache

Gouache paint is similar to watercolor paint, although the color is opaque, or not able to be seen through, unlike watercolor, which is transparent.

BOOKS TO DISPLAY

Art Project: Inside Outside Book

Think about your favorite season and some of the things you may see inside and outside. Create an inside page with a cut window opening to the outside page.

PIECES NEEDED

- Brown paper grocery bags cut to the size desired (each child will need two pieces)
- Pencil
- Scissors
- Gouache paints
- Paintbrushes and plate for paint palette
- Water and paper towels for rinsing brushes
- Table covers to protect tables as needed
- Stapler

DIRECTIONS

1. Create your inside page. What are some things you may see inside? Draw the details of your inside page. Mark where you will place your window.
2. Cut the window opening for the inside page. Place the outside page underneath the inside page and mark the spot where the window will feature an outside item. The window should open to a special element on the outside page.
3. Draw the details of your outside page.
4. Use gouache paint in a variety of colors to enhance the illustrations. Allow the paint to dry before adding additional details and color.
5. After both pages are dry, staple the inside page on top of the outside page in the upper left corner.
6. Sign your work of art and display!
If You Were a Kid at the Iditarod

A young boy visits his cousins in Alaska during the Iditarod race. While the fictional story tells of the family following his cousin’s race, facts about the Iditarod race and dogs are included on each page. The story is engaging for children, and the added information makes learning the details of the race interesting for all.

ABOUT THE IDITAROD

The Iditarod Trail Sled Dog Race is an annual long-distance race held in early March. The trail runs from Anchorage to Nome and is nearly 1,000 miles long. Each sled dog team consists of 16 dogs and a musher to drive the dogs. Although many believe the Iditarod Race was originally established to commemorate the delivery of a diphtheria antitoxin to Nome in 1925, it was actually established in 1973 to preserve the culture of the sled dogs and their place in Alaskan history. The Iditarod trail was the original route used by Native Alaskans to travel to other villages and provided a way to supply miners at settlements with mail and other necessities. The Serum Run race commemorates the delivery of the diphtheria antitoxin and only covers part of the original Iditarod Trail. The Iditarod Trail is a Congressionally designated National Historic Trail in Alaska.

Programming Tip

The Iditarod Trail Sled Dog Race is an annual event each March. You can use a GPS tracker to follow the race on your computer. Share this event while learning about sled dog teams and the geography of the trail. You can get a GPS Tracker subscription at http://iditarod.com/gps/.
DID YOU KNOW?

Aurora borealis (northern lights) can be seen an average of 243 days a year in Fairbanks, Alaska and in many other Alaskan locations. Charged electrons and protons striking the earth’s upper atmosphere produce the northern lights. If you are visiting Alaska, make sure you look at the night skies to see this amazing phenomenon.

BOOKS TO DISPLAY


HANDS-ON PROJECT

Discover which is the longest section of the Iditarod Trail Race by graphing the distance between checkpoints.

MATERIALS NEEDED

- Maps of Northern or Southern route
- Distances of Northern or Southern route checkpoints
- Graphing paper
- Colored pencils

DIRECTIONS

1. Determine if you will be working on one graph together as a group or individually.
2. Give each child a piece of graphing paper and a copy of the Iditarod Race route listing the distance between checkpoints. Maps and checkpoint distance can be printed from http://iditarod.com/about/the-iditarod-trail/.
3. Write the names of the checkpoints across the bottom of the graph.
4. Determine how many miles each vertical block will represent: 1 mile, 5 miles, or 10 miles.
5. Rounding to the nearest whole number, graph the distance between checkpoints. If you chose each block to represent 1 mile, you will not need to round to the nearest whole number.
6. Determine which part of the trail had the greatest distance between checkpoints. Which had the smallest?
Grand Canyon

A father and daughter explore the Grand Canyon, enjoying the scenery and nature, while also imagining what the Grand Canyon was before and what may have created the fossils they discover. Pages filled with border illustrations give details about the animals, fossils, and rocks found in the Grand Canyon. Brought to life with vibrant illustrations, the book introduces the reader to this outdoor natural wonder.

ABOUT THE GRAND CANYON NATIONAL PARK

The Grand Canyon measures over a mile deep, 277 miles long, and 18 miles wide. It was carved five- to six-million years ago by the Colorado River. Exposed canyon walls show a variety of rock types, formations, and fossils. Native Americans consider the Grand Canyon a holy site and for several thousand years made the Grand Canyon area their home, building settlements within and around the canyons and caves. The National Park Service has maintained and protected the Grand Canyon since 1919.

DID YOU KNOW?

Four Corners is the point in the Southwestern United States where Arizona, Colorado, New Mexico, and Utah meet. It is the only point in the United States where visitors can literally
step on four states at once. The landmark is marked by a monument and the Navajo Nation manages the site.

**BOOKS TO DISPLAY**


**HANDS-ON ACTIVITY**

Fossils are the remains or imprints left behind from any creature or plant that was once on Earth. From fossils we discover animals and plants that may be extinct, as well as details about life on Earth. Create your own fossil to preserve your handprint or objects found in nature.

**MATERIALS NEEDED**

- Clay
- Wax paper
- Paper bowl
- Seashells, stones, sticks, leaves, etc.

**DIRECTIONS**

1. Place wax paper in paper bowl, covering bottom and sides.
2. Work clay until smooth and press into a bottom of a paper bowl, creating a layer of clay about two inches deep.
3. If making a handprint, press hand into the clay. Remove hand and allow clay to dry.
4. If making fossil prints, press leaves, seashells, or other items into the bottom of the bowl. Remove the items and allow clay to dry.
5. Once clay has dried, remove from the bowl and display your fossil.
Spring is the perfect time to teach kids about honeybees since this is the season that they awaken! In spring, flowers bloom and honeybees get their fill of pollen and nectar. With a wiggle and a waggle, they show their fellow honeybees where they can find the best flowers for nectar to bring back to the hive. Then the magic happens—they take the nectar and flap their wings until honey is finally made. Honeybees are not only essential for providing honey, but also for contributing to the pollination of many of the fruits and vegetables we consume. A wonderful introduction to honeybees, this book explains how each season influences honeybees’ routines. Illustrations enhance the story with gentle hints to show what each season offers.

**ABOUT HONEYBEES**

Honeybees live in colonies within hives. As honeybees travel from plant to plant looking for nectar, they spread pollen, which causes seeds to form. Honeybees communicate inside the hive by using either the round dance or waggle dance. When a honeybee does the round dance, she is telling the other bees that the flowers are close to the hive. The dancing bee walks in a circle then turns and goes the other way, alerting the bees to go outside and fly in a circular pattern near the hive until they find the flowers. When a honeybee does the waggle dance, she walks around in two loops and shakes her body. The angle of the dance indicates the direction of the flowers. The dance also tells them how far away the flowers are. The longer a bee dances for, the further away the flowers are from the hive. During the dance, the bee will pause and give samples of the nectar she gathered to the other bees. Bees can also smell with their antennae the sweet scent of flowers they visited. If the dancing bee buzzes loudly and performs the dance vigorously, the other bees become excited too.

**BOOKS TO DISPLAY**

Hands-on Project
After reading the book *Bee Dance* by Rick Chrus-towski, have kids practice their own waggle dance. The role of a scout honeybee is to discover new food sources, meaning flowers that provide pollen. The scout collects all the pollen she can carry, then takes it back to the hive and tells the other bees where to find it. A honeybee scout can choose to either do the round dance or the waggle dance depending on where the flowers are located. For flowers more than 100 yards away from the hive, she performs the waggle dance. See how well the students can interpret the dance moves of the scout. Remember, when a scout honeybee finds a good batch of flowers, she tells the hive and other forager bees where she found them through her dance.

**MATERIALS NEEDED**
- Artificial or real flowers, or a photo of flowers

**DIRECTIONS**
1. Decide on a location to hide the flowers. Have one student be the scout honeybee who will instruct the others where the flowers are located.
2. The waggle dance is performed as a figure eight or two side-by-side halves. The number of waggles tells the other bees how far the flowers are. If flowers are nearby, perform the waggle dance once. If flowers are far away, perform the waggle dance two or three times.
3. Have the scout face the direction of the flowers and have the scout follow the instructions below to perform the waggle dance.

   - Waggle your bottom while walking a few steps. Circle to the right and return to the starting point. Waggle up the center again, and then circle to the left and return to the starting point. That is one complete waggle dance. Do this as often as needed to demonstrate the distance of the flowers.
4. When the scout stops dancing, have the other students travel in the direction the scout indicated and begin searching for the flowers.
5. Have the students take turns hiding the flowers, being the scout bee, and performing the waggle dance.

**LEARN MORE** Life in a honeybee hive is very organized, with each bee performing a role to support the community it lives in. Queen bees and drones have important roles, but most of the work is done by the worker bees, which are the smallest bees in the hive. They are female workers and their chores include making honey, cleaning the hive, guarding the colony, and cleaning and feeding the queen, drones, and larva. In addition, they are responsible for building the wax combs and visiting the flowers. They are truly workers! Think about your role in your family, classroom and neighborhood. What responsibilities do you have that help the community? What chores do you have that help contribute to your home running smoothly? How do these tasks relate to the bees’ community?
Monarch Butterflies

Gotta Go! Gotta Go!

In this classic tale, an egg becomes a caterpillar who knew it had to go to Mexico. This story teaches kids how caterpillars transform into butterflies and explores the journey that monarch butterflies take as they migrate south. The caterpillar crawls and eats, and eats and crawls, but eventually becomes too tired to crawl any further. After sleeping for days, the caterpillar transforms into something new—a monarch butterfly! The butterfly begins to fly as fast as it can to Mexico, where it can dance with other monarchs. Eventually though, monarchs must return home, so they can lay new eggs and begin the cycle again.

ABOUT MONARCH BUTTERFLIES
Monarch butterflies have a distinctive orange and black pattern that is easily recognizable. Monarchs start as an egg, often found on thick green leaves of a milkweed plant. The egg then turns into a caterpillar that eats the leaves of the milkweed. This is the only type of leaf that monarchs eat; the leaf contains a chemical that makes the caterpillars taste bad to predators. After about two weeks, caterpillars attach themselves to a branch and curl into a J shape. The caterpillar forms a chrysalis that sparkles like a green jewel with a golden thread. About nine days after that, the chrysalis darkens and cracks, and a monarch butterfly emerges. After drying its wings, the butterfly drinks nectar from flowers to begin to store energy for its long journey. In the fall, monarchs from the northern and eastern parts of the United States fly to Mexico. Those from western states fly to California. Migrating monarchs travel 50–100 miles per day and can travel up to 3,000 miles during migration.

According to the National Wildlife Federation, the monarch population is in decline, as they are experiencing habitat loss and their migration is being affected by changes in climate. Once plentiful, milkweed is now less common because of increasing urban and agricultural development and the widespread use of herbicides. Without

BOOKS TO DISPLAY


frequent resting spots where there is milkweed, monarchs are unable to make the long migration journey. Furthermore, herbicides and pesticides not only destroy milkweed, but can make surviving milkweed plants toxic.

**DID YOU KNOW?**

No single migrating monarch butterfly makes the whole round trip. Typically one “super generation” makes the journey south, while it takes three or four generations to complete the trip north. Southern migrating monarchs live longer and travel further. They also help the planet as they migrate by pollinating wildflowers. Once the monarchs reach the Sierra Madre mountains in Mexico, they will hibernate together in the oyamel fir trees.

**Hands-on Project**

Monarch butterflies rely on their wings to migrate to Mexico. Have participants use their engineering skills to create a butterfly with moveable wings from a variety of available items.

**MATERIALS NEEDED**

- Brad fasteners
- Glue
- Tape
- Scissors
- A variety of paper including recycled newspapers, books, and magazines
- Pipe cleaners
- Paper egg cartons
- Buttons, googly eyes, and stickers to decorate
- Markers or crayons

**DIRECTIONS**

Have participants follow the instructions below to create their own butterfly.

1. Using a variety of items, have participants construct a butterfly. The butterfly can be any size, but the wings must be able to move.

2. Explain how butterflies have symmetrical patterns on each wing, and then have participants decorate the wings of their butterflies with symmetrical patterns.

**LEARN MORE**

An easy way to help the monarch butterflies on their journey is to create a monarch waystation, a garden that provides food for monarch butterflies. Whether at home or school, adding milkweeds and other nectar plants can make a positive impact on their habitat. For more information in creating and registering your site as a monarch waystation, visit monarchwatch.org/waystations.