

LEO LIONNI'S

SWIMMY

FREDERICK

INCH BY
INCH

Mermaid Theatre of Nova Scotia

Applause Series CURRICULUM GUIDE
CIVIC CENTER OF GREATER DES MOINES

February 11, 2011

LEO LIONNI'S

SWIMMY, FREDERICK & INCH BY INCH

Dear Teachers,

Thank you for joining us for the Applause Series presentation of *Leo Lionni's Swimmy, Frederick & Inch by Inch*. Of the many companies that present work for young audiences, Mermaid Theatre of Nova Scotia is one of our personal favorites, and their adaptation of three of Leo Lionni's most cherished books is nothing short of exquisite. We are very pleased that you have chosen to share this special experience with your students and hope that this study guide helps you connect the performance to your in-classroom curriculum in ways that you find valuable.

In the following pages, you will find contextual information about the performance and related subjects, as well as a wide variety of discussion questions and activities that tie into several curriculum areas. Some pages are appropriate to reproduce for your students; others are designed more specifically with you, their teacher, in mind. As such, we hope that you are able to "pick and choose" material and ideas from the study guide to meet your class's unique needs.

See you at the theater,

Civic Center Education Team

Support for Civic Center education programs and the Applause Series is provided by:

Alliant Energy, American Republic Insurance Company, Bank of the West, Bradford and Sally Austin, Bank of America, EMC Insurance Companies, Jules and Judy Gray, Greater Des Moines Community Foundation, Hy-Vee, John Deere Des Moines Operations, Iowa Department of Cultural Affairs, Richard and Deborah McConnell, Pioneer Hi-Bred - a DuPont business, Polk County, Prairie Meadows Community Betterment Grant, Sargent Family Foundation, U.S. Bank, Wells Fargo & Co., Willis Auto Campus, and more than 200 individual donors.

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This study guide was compiled and written by Karoline Myers; edited by Michelle McDonald and Eric Olmscheid.
Based on "Leo Lionni: A Resource Guide for Teachers" by Mermaid Theatre of Nova Scotia.

ABOUT THE CIVIC CENTER



The Civic Center of Greater Des Moines is a cultural landmark of central Iowa and is committed to engaging the Midwest in world-class entertainment, education, and cultural activities. The Civic Center has achieved a national reputation for excellence as a performing arts center and belongs to several national organizations, including The Broadway League, the Independent Presenters Network, International Performing Arts for Youth, and Theater for Young Audiences/USA.

Five performing arts series currently comprise the season— the Willis Broadway Series, Prairie Meadows Temple Theater Series, Wellmark Blue Cross and Blue Shield Family Series, the Dance Series, and the Applause Series. The Civic Center is also the performance home for the Des Moines Symphony and Stage West.

The Civic Center is a private, nonprofit organization and is an important part of central Iowa's cultural community. Through its education programs, the Civic Center strives to engage patrons in arts experiences that extend beyond the stage. Master classes bring professional and local artists together to share their art form and craft, while pre-performance lectures and post-performance Q&A sessions with company members offer ticket holders the opportunity to explore each show as a living, evolving piece of art.

Through the Applause Series— curriculum-connected performances for school audiences— students are encouraged to discover the rich, diverse world of performing arts. During the 2010-2011 season, the Civic Center will welcome more than 30,000 students and educators to 12 professional productions for young audiences.

Want an inside look? Request a tour.

Group tours can be arranged for performance and non-performance dates for groups grades 3 and above.

Call 515-246-2355 or visit civiccenter.org/education to check on availability or book your visit.

DID YOU KNOW?

More than 250,000 patrons visit the Civic Center each year.

The Civic Center opened in 1979.

The Civic Center has three theater spaces:

- *Main Hall, 2745 seats*
- *Stoner Studio, 200 seats*
- *Temple Theater, 299 seats (located in the Temple for the Performing Arts)*

No seat is more than 155 feet from center stage in the Main Hall.

Nollen Plaza, situated just west of the Civic Center, is a park and amphitheater that is also part of the Civic Center complex. The space features the Brenton Waterfall and Reflection Pool and the Crusoe Umbrella sculpture.

The Applause Series started in 1996. You are joining us for the 15th anniversary season!

GOING TO THE THEATER . . .



YOUR ROLE AS AN AUDIENCE MEMBER

Attending a live performance is a unique and exciting opportunity. Unlike the passive experience of watching a movie, audience members play an important role in every live performance. As they act, sing, dance, or play instruments, the performers on stage are very aware of the audience's mood and level of engagement. Each performance calls for a different response from audience members. Lively bands, musicians, and dancers may desire the audience to focus silently on the stage and applaud only during natural breaks in the performance. Audience members can often take cues from performers on how to respond to the performance appropriately. For example, performers will often pause or bow for applause at a specific time.

As you experience the performance, consider the following questions:

- What kind of live performance is this (a play, a dance, a concert, etc.)?
- What is the mood of the performance? Is the subject matter serious or lighthearted?
- What is the mood of the performers? Are they happy and smiling or somber and reserved?
- Are the performers encouraging the audience to clap to the music or move to the beat?
- Are there natural breaks in the performance where applause seems appropriate?

THEATER ETIQUETTE

Here is a checklist of general guidelines to follow when you visit the Civic Center:

- Leave all food, drinks, and chewing gum at school or on the bus.
- Cameras, recording devices, and personal listening devices are not permitted in the theater.
- Turn off cell phones, pagers, and all other electronic devices before the performance begins.
- When the house lights dim, the performance is about to begin. Please stop talking at this time.
- **Talk before and after the performance only.** Remember, the theater is designed to amplify sound, so the other audience members and the performers on stage can hear your voice!
- Appropriate responses such as laughing and applauding are appreciated. Pay attention to the artists on stage—they will let you know what is appropriate.
- Open your eyes, ears, mind, and heart to the entire experience. Enjoy yourself!

GOING TO THE THEATER information is adapted from the Ordway Center for the Performing Arts study guide materials.

CIVIC CENTER FIELD TRIP INFORMATION FOR TEACHERS



Thank you for choosing the Applause Series at the Civic Center of Greater Des Moines. Below are tips for organizing a safe and successful field trip to the Civic Center.

ORGANIZING YOUR FIELD TRIP

- Please include all students, teachers, and chaperones in your ticket request.
- After you submit your ticket request, you will receive a confirmation e-mail within five business days. Your **invoice will be attached to the confirmation e-mail.**
- Payment policies and options are located at the top of the invoice. **Payment (or a purchase order) for your reservation is due four weeks** prior to the date of the performance.
- The Civic Center reserves the right to cancel unpaid reservations after the payment due date.
- Tickets are not printed for Applause Series shows. Your invoice will serve as the reservation confirmation for your group order.
- Schedule buses to arrive in downtown Des Moines at least 30 minutes prior to the start of the performance. This will allow time to park, walk to the Civic Center, and be seated in the theater.
- Performances are approximately 60 minutes unless otherwise noted on the website and printed materials.
- All school groups with reservations to the show will receive an e-mail notification when the study guide is posted. Please note that study guides are only printed and mailed upon request.

DIRECTIONS AND PARKING

- Directions: From I-235, take Exit 8A (Downtown Exits) and the ramp toward 3rd Street and 2nd Avenue. Turn onto 3rd Street and head south.
- Police officers are stationed at the corner of 3rd and Locust Streets and will direct buses to parking areas with hooded meters near the Civic Center. Groups traveling in personal vehicles are responsible for locating their own parking in ramps or metered (non-hooded) spots downtown.
- Buses will remain parked for the duration of the show. At the conclusion, bus drivers must be available to move their bus if necessary, even if their students are staying at the Civic Center to eat lunch or take a tour.
- Buses are not generally permitted to drop off or pick up students near the Civic Center. If a bus must return to school during the performance, prior arrangements must be made with the Civic Center Education staff.

ARRIVAL TO THE CIVIC CENTER

- When arriving at the Civic Center, please have an **adult lead your group** for identification and check-in purposes. You may enter the building through the East or West lobbies; a Civic Center staff member may be stationed outside the building to direct you.
- Civic Center staff will usher groups into the building as quickly as possible. Once inside, you will be directed to the check-in area.
- Seating in the theater is general admission. Ushers will escort groups to their seats; various seating factors including group size, grade levels, arrival time, and special needs seating requests may determine a group's specific location in the hall.
- We request that an **adult lead the group into the theater and other adults position themselves throughout the group**; we request this arrangement for supervision purposes, especially in the event that a group must be seated in multiple rows.
- Please allow ushers to seat your entire group before rearranging seat locations and taking groups to the restroom.

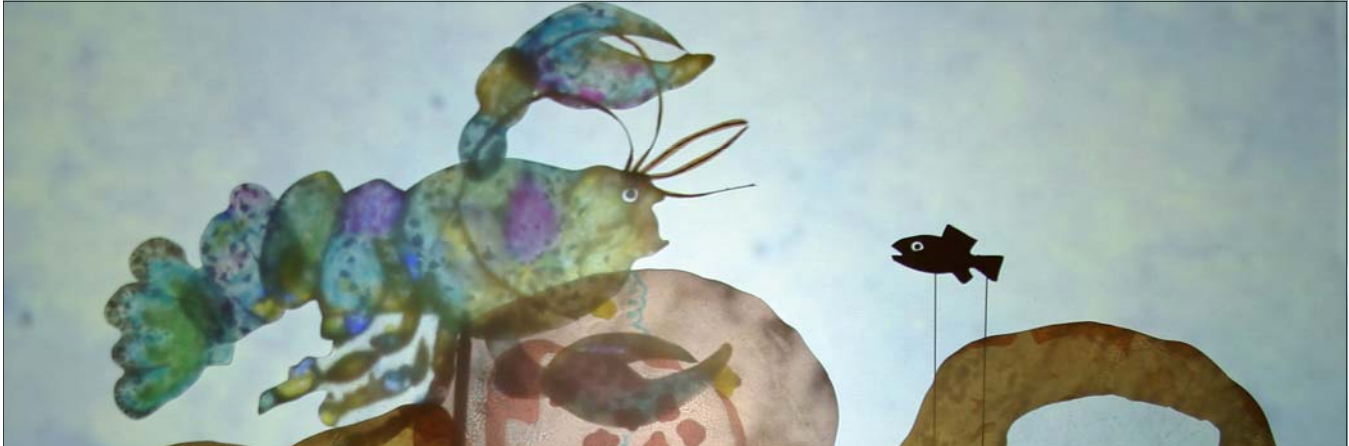
IN THE THEATER

- In case of a medical emergency, please notify the nearest usher. A medical assistant is on duty for all Main Hall performances.
- We ask that adults handle any disruptive behavior in their groups. If the behavior persists, an usher may request your group to exit the theater.
- Following the performance groups may exit the theater and proceed to their bus(es).
- If an item is lost at the Civic Center, please see an usher or contact us after the performance at 515.246.2355.

QUESTIONS?

Please contact the Education department at 515.246.2355 or education@civiccenter.org. Thank you!

ABOUT THE PERFORMANCE



Leo Lionni's direct influence is evident in almost all aspects of Mermaid Theatre's adaptation of *Swimmy, Frederick & Inch by Inch*. The performance's spoken narration is taken word-for-word from the books, and each of the three stories are designed to look like the original illustrations. The performance is set to an original score; the composition for each story was inspired by the tone of Lionni's illustrations.

Mermaid Theater of Nova Scotia will announce to the audience that this is a "non-shushing show." It is okay to make some sounds if you are showing your enjoyment for the performance. Audience members can laugh, help tell the story, and react to the puppets in quiet voices. Feet, however, should be kept still, and conversations with neighbors should be kept to a minimum. After all, we want everyone in the audience to be able to hear the story!

Amazingly, all of the puppets in the show are manipulated by just TWO performers!

SWIMMY

The show's creators use two-dimensional shadow puppets to tell the story of *Swimmy*. Each puppet is made from colored plastic film. The puppets are placed behind a large translucent screen and lit from behind. This technique gives the illusion of the objects floating and being underwater. To create the illusion of water, images from the original book were scanned, placed on DVD, and are then projected onto the screen.

INCH BY INCH

Inch by Inch uses three-dimensional puppets. To the creators, scale was the biggest consideration in designing *Inch by Inch*. The worm needed to be big enough for the audience to see from the back of the performance hall, while still showing that the inchworm is very small relative to the other characters he encounters. A two-foot worm meant the other puppets would be too large to fit on the set while a six-inch worm was too small to see. The creative team finally settled on a worm that is about a foot long. The performers are also visible to the audience in *Inch by Inch*.

FREDERICK

In designing *Frederick*, the show's creators were inspired by an original 'Frederick' Leo Lionni made out of felt and presented to Eric Carle as a gift. Trying to capture the simplicity and beauty of this mouse, the creators decided to use two-dimensional rod puppets that are covered with felt fabric. The puppeteers, who dress in light clothing and are visible to the audience, move the mice puppets across a raised surface of grass and in and around rocks.



A performer holds up the flamingo puppet. It needs to be this large for the inchworm to still be seen by the audience and to look the right size in comparison.

ABOUT THE AUTHOR AND ILLUSTRATOR



LEO LIONNI

Leo Lionni is the author and illustrator of more than forty children's books. Four of his books— *INCH BY INCH*, *SWIMMY*, *FREDERICK*, and *ALEXANDER AND THE WIND-UP MOUSE*— were named Caldecott Honor Books. His collage style, use of white space and clean, modern design, served as a major influence for other notable children's book artists including Eric Carle and Ezra Jack Keats.

CHILDHOOD

Leo Lionni was born in Holland in 1910. He was his parents' only child. Leo Lionni's childhood was filled with art. His uncle Piet, who was an artist, gave him his first drawing lessons. Leo often visited Amsterdam's art museums and practiced drawing by copying the works of famous painters and sculptors.

Leo also loved nature from an early age. His room was filled with jars of insects, aquariums of minnows and tadpoles, and cages filled with mice and frogs. He collected shells, pebbles, leaves, feathers, and flowers. It is not a surprise, then, that much of Leo's art features nature and the tiny creatures that he kept as a boy.

EARLY CAREER

Leo Lionni moved to the United States in 1939 with his wife and his two young sons. He took a job for an advertising agency and designed advertisements for Ford Motors, Chrysler, and the Container Corporation of America. Later in his career, he worked as the Art Director for the magazines *Time*, *Life*, *Fortune* and *Prints*.

CHILDREN'S BOOKS

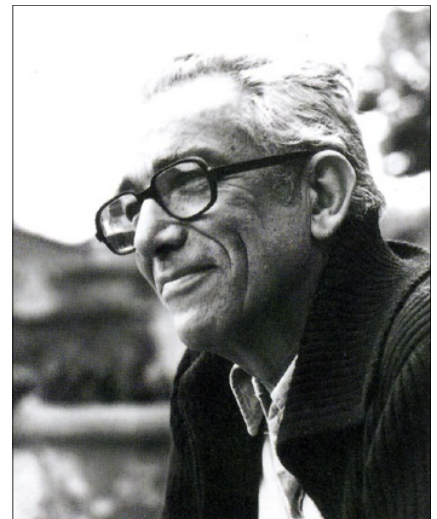
In 1959, Leo Lionni was traveling with his two young grandchildren by train. When the children grew restless, he told them he would tell them a story. He took a magazine out of his briefcase and tore the pages into small round pieces of various colors. "This is Little Blue, and this is Little Yellow," he said, placing the colored papers on his briefcase as he began his story. The children were mesmerized by the little blobs of color. When they arrived home, Leo helped his grandchildren to make the story into a book. When a family friend, who was a children's book editor saw it, he decided on the spot to publish it.

LITTLE BLUE AND LITTLE YELLOW was the first of more than forty books Leo Lionni wrote and illustrated for children over the next thirty-five years.

FINAL YEARS

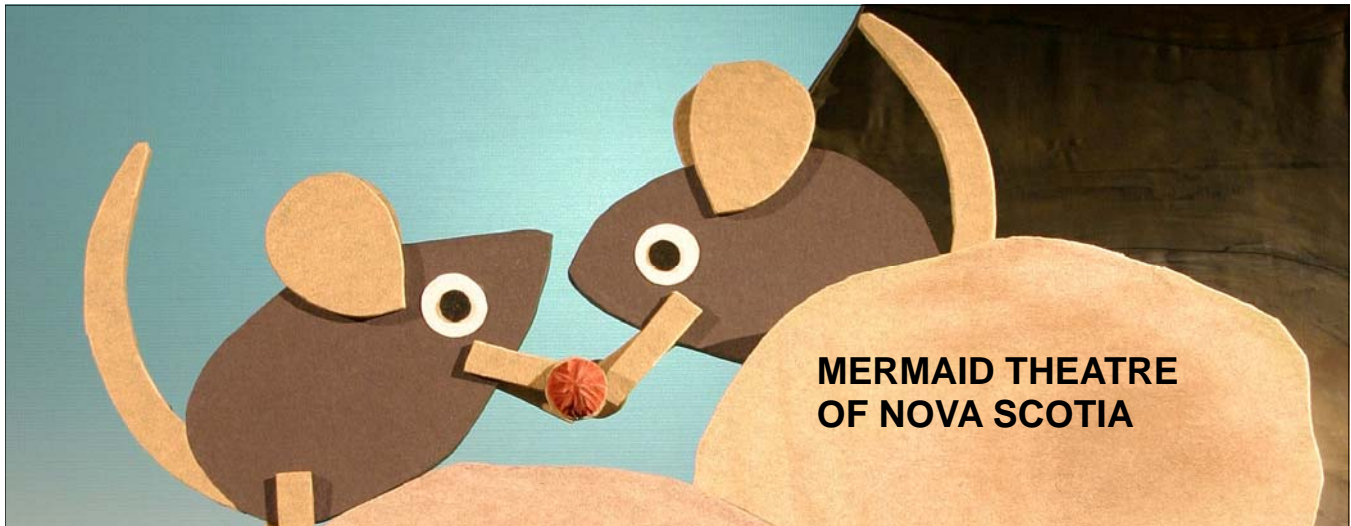
While much of Leo Lionni's professional life was spent in New York, he moved to Italy in 1962. He split his time between Europe and the United States for the last twenty years of his life.

He was a fervent advocate for peace and human rights. His beliefs are reflected in many of his books. He died in Tuscany in 1999 at the age of 89.



When I was asked what I wanted to be when I grew up, the answer was always, without hesitation, "an artist."

ABOUT THE PERFORMERS



Now in its thirty-eighth season, Mermaid Theatre of Nova Scotia ranks among North America's most respected creators of family entertainment. Nearly four million young people around the world have delighted in Mermaid's unique adaptations of children's literature.

LITERATURE AND THE ARTS
Mermaid Theatre believes that young people benefit greatly from early exposure to literature, the arts, and the power of the imagination. Therefore, Mermaid Theatre's creative ambition is to produce work which is quality theatre—entertaining, informative, and stimulating to all the senses—along with the goal of encouraging literacy and generating enthusiasm for the art of reading. With these core values in mind, the company produces some of the most highly regarded theater for young audiences around the world. Classic children's literature comes to life through striking visual images, evocative original music, innovative puppetry and staging in productions that captivate young people's imaginations.

IN NOVA SCOTIA
Mermaid Theatre is from Nova Scotia, Canada. They provide important educational outreach throughout Nova Scotia, through school visits and their Institute of Puppetry Arts based in Windsor, Nova Scotia.

AMBASSADOR ROLE
Extensive international engagements allow the company to play an important ambassadorial role for the Province of Nova Scotia and for Canada. Mermaid Theatre has represented Canada in Japan, Mexico, Australia, England, Northern Ireland, Holland, Scotland, Wales, Hong Kong, Macau, Singapore, South Korea, Taiwan and Vietnam.



One of the two puppeteers who perform *Swimmy*, *Frederick & Inch by Inch*, manipulating the inchworm puppet.



Nova Scotia, shown here in red, is located on Canada's southeastern coast. Map courtesy of solarnavigator.net.

- Other popular productions from Mermaid Theatre of Nova Scotia:
- The Very Hungry Caterpillar*
 - Goodnight Moon & The Runaway Bunny*
 - Guess How Much I Love You*
 - When Dinosaurs Dance at Midnight*

ABOUT SWIMMY: THE MARVELS OF THE OCEAN



Image courtesy of ucla.edu

On Swimmy's adventure, he sees many ocean creatures. Learn more about four of the ocean animals he encountered and about how fish swim in schools.



Image courtesy of washingtonpost.com.

TUNA

Tuna are large fish.

The

Bluefin Tuna is sometimes called the 'King of the Sea.' It is one of the fastest swimmers in the ocean and typically grows to be 6 feet long and about 300 pounds in weight. Bluefin Tuna can live to be 40 years old. Tuna eat other fish, such as mackerel. Even though a Bluefin Tuna can rarely be attacked by other fish, the Bluefin Tuna is in danger of disappearing. Humans have caught too many of them and must begin to practice better fishing practices if the species is to survive.

“The sea was full of wonderful creatures, and as he swam from marvel to marvel Swimmy was happy again.”

JELLYFISH

Jellyfish are umbrella-shaped animals that float in water. Jellyfish have soft bodies and long tentacles. The tentacles of a jellyfish contain poison, which helps the jellyfish to sting and catch its prey. Most jellyfish are transparent, which means you can see through them. They are called jellyfish because their bodies are



Image courtesy of animalreview.files.wordpress.com

wobbly like jelly! This is due to the fact that 98% of its body is made up of water.

LOBSTERS

Lobsters live on the ocean floor. They have a tough exoskeleton on the outside of their body which protects their insides. Lobsters eat crabs, clams, worms, snails, flounder, and sometimes other lobsters. It uses its claws to catch food and defend itself. As a lobster grows, it loses its old shell and grows a new one; it will then eat the old shell. The biggest lobster ever caught weighed 44 pounds. Lobsters may live to be 100 years old!



Image courtesy of scuba-instr.com

EELS

Eels are bony fish that have a muscular, snake-like body.



Image courtesy of scuba-instr.com

Although their bodies look different, eels use gills to get oxygen from the water just like other types of fish. An eel's spine is made up of over 100 vertebrae, which makes the creature very flexible. Many eels grow to very long sizes. The largest type of eel is the Slender Giant Moray. It can grow up to 13 feet in length. Many eels migrate over long distances to breed and to eat.

FISH AND SCHOOLS

Swimmy teaches his fellow fish how to swim together to save themselves from a shark. In real life, many types of fish swim in schools. This means a group of fish swim close together and seem to turn, rise, and dive all together as one. A school offers fish protection from predators and makes it easier to catch their food. Fish in a school know how to move together by watching each other closely. They also have tiny hairs on their bodies that sense the movement of water around them. This can signal to a fish very quickly which direction the other fish around it are moving.

ABOUT *FREDERICK*: THE WORLD OF MICE



daryllorettecafe.typepad.com

Leo Lionni's book *Frederick* is about a family of field mice as they prepare for the winter. Learn more about mice before seeing the show!

HOMES

Mice live almost everywhere around the world and can live almost anywhere a human can live. They make their homes in abandoned bird nests, crevices, houses, buildings, and barns.

FOOD

Mice that live in fields eat seeds, roots, nuts, berries, and insects. Mice that live in barns eat grains and cattle feed. Mice that live in houses will eat whatever food they can find.

TEETH

A mouse's front teeth continue to grow throughout its life. It must gnaw on hard items to wear the teeth down.

NOCTURNAL

Mice are nocturnal creatures. This means they are mostly active at night and tend to sleep during the daytime.

PREDATORS

It can be dangerous to be a mouse. Mice that live outside in the fields may be hunted by owls, buzzards, weasels, and foxes. Mice that live indoors may be in danger from cats, traps, and humans.

MICE IN THE WINTER

Mice adapt for the cold winter months. Because food is hard to find in the winter, they gather extra food in the fall and store it to eat later. When the cold comes, mice build tunnels or find a sheltered place to stay. They will huddle together to keep warm.

MORE MICE

It does not take long for a few mice to become many mice. A female (girl) mouse can give birth to up to a dozen babies every three weeks. That's 150 babies a year!

"In that wall, not far from the barn and the granary, a chatty family of field mice had made their home."

FUN FACTS

The name mouse comes from "mus," a Sanskrit word that means "thief."

You can keep mice on a table without a cage because mice are afraid to jump off high vertical drops.

Mice like to eat between 15 and 20 times per day. This is why it is important to keep your home clean and to not leave food out!

Mice will nurse babies that are not their own.

Baby mice curl up when they are being carried.

A male (boy) mouse is called a *buck*. A female (girl) mouse is called a *doe*. A baby mouse is called a *pup*, *pinkie*, or *kitten*. A group of mice is called a *horde* or a *mischief*.

Mice have tails that are as long as their bodies.

Never pick up a mouse by its tail. It can fall off!

Colonies of mice have been found thriving in the supplies used on polar expeditions.

ABOUT INCH BY INCH: A LOOK AT INCHWORMS



Imageshack.us

An inchworm isn't really a worm at all! Learn more about inchworms, how they move, and their life cycle before seeing the performance.

WHAT IS AN INCHWORM?

An inchworm is a small caterpillar that will eventually become a Geometer moth. Inchworms have smooth, hairless bodies and can be green, brown or black in color. Some types of inchworms even have small projections on their bodies that make them look like twigs or trees. This camouflage helps them blend in with their habitat to escape danger.

PREDATORS

In nature, birds, paper wasps, and yellow jackets will feed on inchworms. When an inchworm senses danger, it will stand straight up on its hind legs. This makes it look even more like a stick or twig. Some inchworms also have the ability to spin silk thread like spiders. They will use this thread to drop to the ground if they are in danger.

“Don't eat me. I am an inchworm. I am useful. I measure things.”

LIFE CYCLE

Moths have 4 stages in their lifecycle.



Stage 1: Egg

A female Geometer moth will lay her eggs on the underside of leaves, which the new inchworms will be able to eat when they emerge.



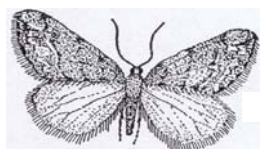
Stage 2: Larva

This is the inchworm stage. During this part of its life, the inchworm eats, eats, and eats! Feeding on leaves helps the inchworm to grow quickly. It will shed its skin several times as it grows.



Stage 3: Pupa

The inchworm will drop to the ground and spin a protective covering around itself called a pupa. While inside, it will change into an adult moth. This process is called metamorphosis.



Stage 4: Adult

The adult moth emerges from the pupa. Geometer moths have slender abdomens and hold their wings flat when they are resting. They tend to fly at night.

INCHING ALONG

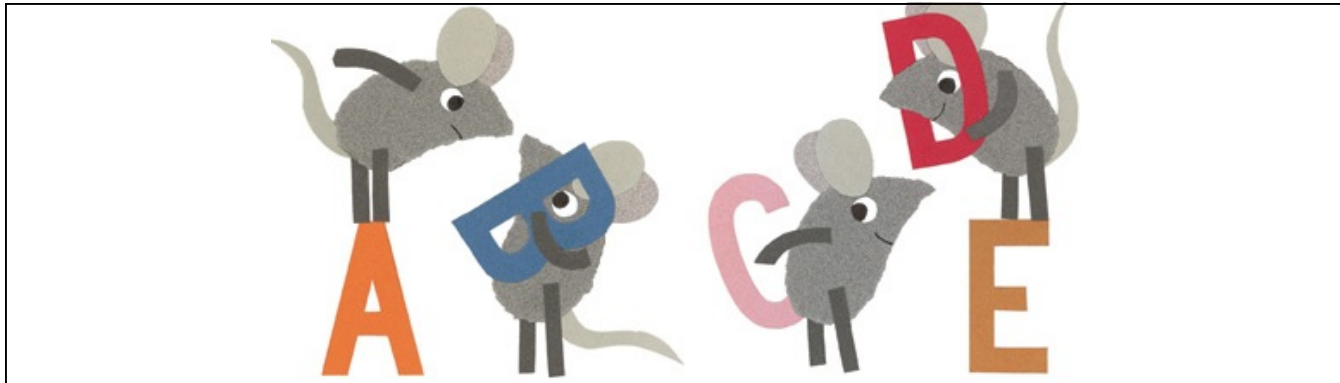
Inchworms have their name because it looks like they are measuring the ground, leaves, or twigs as they move. An inchworm has three pairs of legs on their front end. Unlike other caterpillars, inchworms only have two or three pairs of pro-legs (smaller legs) towards the end of their bodies. This affects the way the inchworm moves. An inchworm clutches a leaf or twig with its front legs and then draws its back legs forward. It will then stretch its front section forward while holding onto the leaf or twig with its back pro-legs. Repeating this process, the inchworm slowly inches along to reach its destination.

MOVE LIKE AN INCHWORM!

Start in a standing position. Next, bend at the waist and put your hands flat on the floor. Try to keep your knees as straight as possible. Then step forward so your feet are right behind your hands. Once your feet are planted, pick up both your hands and place them on the ground a foot further in front of you. Repeat until you reach your destination. Once you have mastered the technique, try having an inchworm race or relay.

Lifecycle images courtesy of westminstercollege.edu.

VOCABULARY (Numbers in parentheses indicate the page the vocabulary term is used.)



PUPPETRY AND ILLUSTRATION TERMS

Collage: art where materials, such as papers, are pasted and layered onto a surface. Lionni illustrated many of his books, through collage. (7, 15)

Rod Puppet: a puppet whose joints or body are operated by stiff rods rather than strings. (6)

Scale: the relationship between the size of one object and the size of another object. (6)



Swimmy puppet.

Shadow Puppet: a flat shape attached to thin sticks. Shadow puppets are used to tell a story by moving them in front of a light to make shadows on a screen. (6)

Stamping: to press a tool dipped in paint or ink to a piece of paper. The tool then leaves a mark of the same shape. Lionni used stamping to make the illustrations in *Swimmy*. (14)



Potato stamps.

ANIMAL TERMS

Adapt: to make changes to survive an environment or situation. Some animals, like mice, adapt to survive winter conditions by growing thicker fur, gathering food, and finding shelter. (10, 16)

Camouflage: shape, coloring, and other features that allow an animal to blend into its environment.



Can you see the inchworm in the tree?

Inchworms often look like twigs, which makes it more difficult for predators to find them. (11)

Exoskeleton: a hard shell on the outside of certain animals' bodies which protects their insides. Lobsters are covered in an exoskeleton. (9)

Gills: special organs used by fish to "breathe." Gills are located on the sides of a fish's head. After a fish opens its mouth and takes in water, the water is pumped to the gills. Fish absorb the oxygen in the water and the water then flows out of the gills. (9)

Hibernate: to pass the winter in an inactive or sleep-like state. Bears, skunks, and chipmunks are some of the animals that hibernate. These animals eat extra food in the fall which they store as body fat. They use the fat for energy while they hibernate. (16)

Metamorphosis: a change in form. Inchworms undergo metamorphosis as they develop into moths. (11)

Migrate: to move from one place to another as the seasons change. Many kinds of birds fly south for the winter to find warmer temperatures and food. (16)

Predator: an animal that lives by eating another animal. (9, 10, 11)

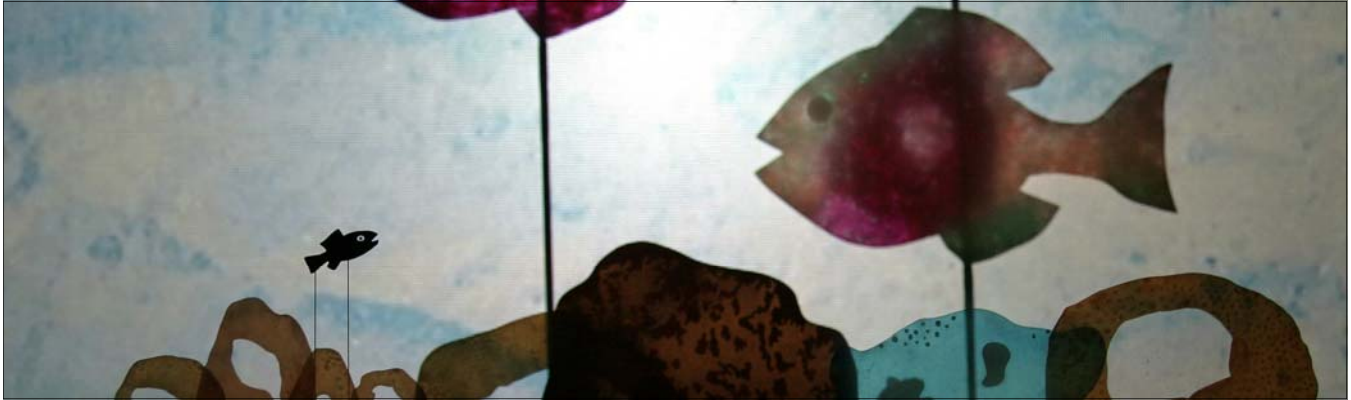
School: a group of fish swimming together. The fish in *Swimmy* escape danger by swimming in a school. (9)



Hundreds of fish swimming in a school.

Transparent: clear. Many jellyfish are transparent. (9)

ACTIVITIES AND DISCUSSION: SWIMMY pg. 1 of 2



WRITING WITH DESCRIPTIVE LANGUAGE

Goal: To explore descriptive language and introduce students to the concepts of *simile* and *metaphor*

Curriculum Connections: Literacy

When: Before or after seeing the performance

Explanation: In this activity, students will review the creative language that Leo Lionni uses in *Swimmy*. Students will create a class book that uses descriptive language to paint word pictures of objects and places from their own lives.

Activity:

1. Read Leo Lionni's *Swimmy* as a class. After finishing the book, remind students that when Swimmy swims away to explore the ocean, he discovers many beautiful things. Leo Lionni uses descriptive language to help us imagine creatures that Swimmy meets.
2. Review the different underwater characters that Swimmy meets and the language that Leo Lionni uses to describe them. Ex. "He saw a medusa made of rainbow jelly."
3. Invite students to explore how the descriptive language paints a picture in their mind for each creature.
4. As a class, brainstorm good descriptive words for objects in the classroom, outside or at home.
5. Take students for a walk down the hall, through the playground or around the block. Who do they meet along the way? What do they see? What kinds of words could be used to describe them?

6. After brainstorming describing words, introduce the term *simile* (comparing two things using 'like' or 'as') and *metaphor* (comparison of two unlike things using the verb 'to be' rather than 'like' or 'as'). Classify examples of metaphors and similes found in *Swimmy*.

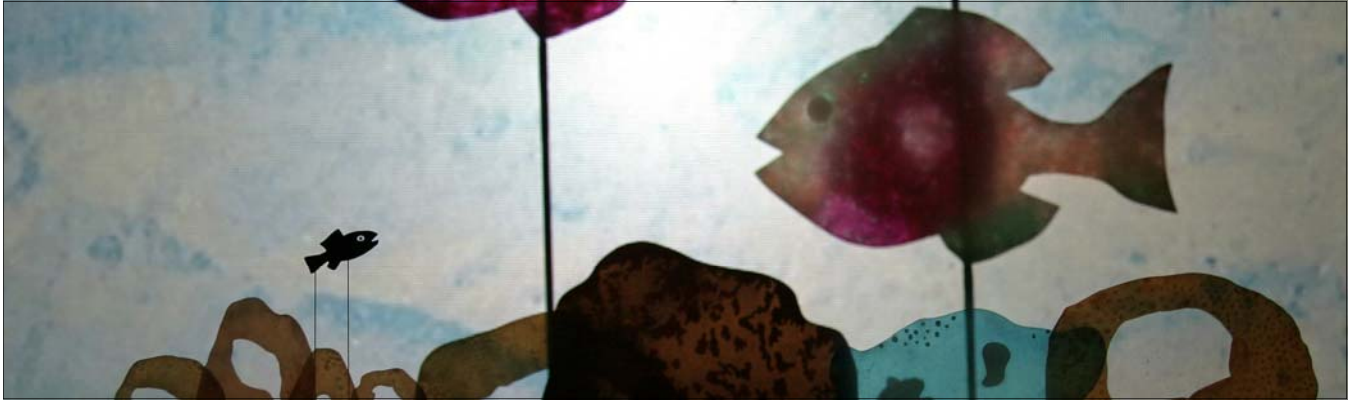
7. Next, make a class book about the adventures on the class walk. Each student will contribute one page and write a descriptive sentence about one of the things they saw or who they met on the walk. Encourage students to use comparative language (through similes or metaphors) to paint a word picture of whom they met or what they saw on the walk.

Follow-Up Discussion Questions:

1. Why do writers use descriptive language?
2. Does good descriptive language make it easy to imagine what the writer is telling us?
3. Good descriptive language appeals to our senses. What are the five senses? (sight, hearing, feel, taste, smell)
4. Can you come up with an example of descriptive language that paints a picture of how something looks? Sounds like? Feels?
5. How would *Swimmy* be different if Leo Lionni didn't use descriptive language?

Activity adapted from "Leo Lionni: A Resource Guide for Teachers" by Mermaid Theatre of Nova Scotia.

ACTIVITIES AND DISCUSSION: SWIMMY pg. 2 of 2



FISH STAMPING

Goal: To practice counting, addition and/or subtraction skills and to explore Lionni's illustration style in *Swimmy*

Curriculum Connections: Math, Visual Art

Explanation: Leo Lionni used stamping methods to create the illustrations for *Swimmy*. Using potato stamps, students will stamp the correct number of fish as they count, add, or subtract.

When: Before or after seeing the performance

Materials: large sized potatoes, paring knife, pencil, paper, tempera paint

Activity:

1. To prepare for the activity, cut potatoes in half to create the widest surface area. Draw a simple fish outline onto the potato. Create relief by cutting excess potato away at the sides. Repeat to create as many stamps as you desire.
2. Invite students to examine the illustrations in *Swimmy*. Point out how Leo Lionni created the illustrations through stamping.
3. Invite students to practice stamping by dipping the potato stamps into the tempera paint and stamping on the paper.
4. Have students make their own math stamping books. For example, on the first page, students will write the number 1 and stamp one fish print, write the number 2 and stamp two fish prints on the second page, etc.

5. Depending on your students' abilities, you may modify the books to include simple addition or subtraction problems. For example, in an addition problem, have students stamp the correct number of fish above each addend and the total number of fish above the sum. (You may also consider using word problems.)
6. When the paint is dry, allow students to fill in the rest of their underwater scene using water colors, crayons, colored pencils or other art materials.

Follow-Up Discussion Questions:

1. What do you notice about Leo Lionni's *Swimmy* illustrations? How can you tell that he made his illustrations using stamping?
2. Did every single one of your stamps look the same? How were they different? What caused the differences?
3. Have you ever stamped with any other type of stamp? What other common materials could you use to make stamps?

ACTIVITIES AND DISCUSSION: *FREDERICK* pg. 1 of 2



FREDERICK'S STORIES & POEMS

Goal: To study the concepts of beginning, middle, and end and to introduce writing poetry

Curriculum Connections: Literacy, Visual Art

When: Before seeing the performance

Explanation: In this activity, students will analyze the story structure of *Frederick* and work together to write a class version of the story. Each student will contribute a page to the middle of the story. The class will work together to write Frederick's final poem.

Activity: Day 1

1. Read the book *Frederick* as a class.
2. Hold a class discussion about what happens in the beginning, middle and end of the story. Post this outline on the board.
3. Go back and closely examine the structure of the story when the mice are preparing for winter. If students do not notice on their own, point out that the story alternates between the mice gathering types of food for winter and Frederick gathering words, feelings, and ideas.
4. Tell students that they are going to write their own version of *Frederick* as a class.
5. As a class, brainstorm a list of items that the mice could gather for winter. Next, have students close their eyes and think about summer. What do they miss about summer? Brainstorm a list of things that Frederick could gather, such as sunshine, the feel of the breeze, the sounds of bees buzzing, etc.

Activity: Day 2

1. Review the lists of items the class brainstormed the day before.
2. Allow each student to choose one item from each list. Help them to write a few sentences about the mice gathering food and what Frederick gathers

instead. Students may write their own original sentences or fill in the blanks of the following:

The mice worked hard to gather _____ for the winter. Frederick sat on the wall. "What are you doing, Frederick?" the mice asked. "I gather _____ because winter is _____," said Frederick.

3. Allow each student to make an illustration of their sentences using collage (like Leo Lionni used in *Frederick*) or other materials. Encourage students to include lots of details in their illustrations.

Activity: Day 3

1. Come together as a class to create Frederick's final poem that he shares in winter. (Although Frederick rhymes in the story, do not use rhyme in your class poem. Student writing tends to be more creative, descriptive, and logical when not trying to rhyme.)
2. To write the poem, choose one of the things that Frederick gathered. As a class, create a word chart of nouns, adjectives, and verbs associated with the chosen item. Help students classify the words into the correct column.

Example: Sunshine

Nouns: sun, fire, rays, ball

Verbs: stream, shine, glow

Adjectives: radiant, golden, bright

3. Drawing from the word bank, have students contribute ideas for lines of poetry. Write 2 or 4 lines about one of the things Frederick gathered in their story.
4. Repeat the process with other items Frederick gathered until you feel you have a complete poem.
5. Make a large copy of the final poem to be posted in the room.
6. Last, fill in the gaps of the story through writing a beginning and a transition to the final poem. Post the completed story with the beginning, middle and end around your room. Continue to review the class story daily, identifying the beginning, middle and end each time.

Activity adapted from model lesson plan by Jan Louise Kusske.

ACTIVITIES AND DISCUSSION: *FREDERICK* pg. 2 of 2



ANIMALS IN THE WINTER

Goal: To learn how different animals migrate, adapt or hibernate during the winter

Curriculum Connections: Science

Explanation: In *Frederick*, the mice prepare for winter by gathering food. When the cold comes, they huddle close together to keep warm. In this unit of study, students will activate prior knowledge, ask questions, and do basic research to learn about how different animals migrate, adapt or hibernate to survive the cold winter.

When: Before or after seeing the performance

Activity:

1. Begin by asking students to think about winter, how the weather gets colder, the days get shorter, and how the leaves fall off the trees. Snow covers the ground. People live in warm houses, bundle up in heavy layers of clothes, and go to the grocery store to get food, but what do animals do?
2. If you have not already done so, read the book *Frederick* as a class. Ask students to pay attention to what the mice do to prepare for winter and what they do once winter arrives.
3. After you finish the book and discuss students' observations, create a KWL chart* about animals in the winter. Have students draw on prior knowledge of animal behavior to share what they know about animals in the winter. Fill in what they *know* in the first column of their KWL chart.
4. Organize what they know into categories, such as type of animal, how they get food, and how they stay warm.
5. Next, have students generate questions that they still have about animals in the winter. Record their questions in the second column- what they *want* to know.

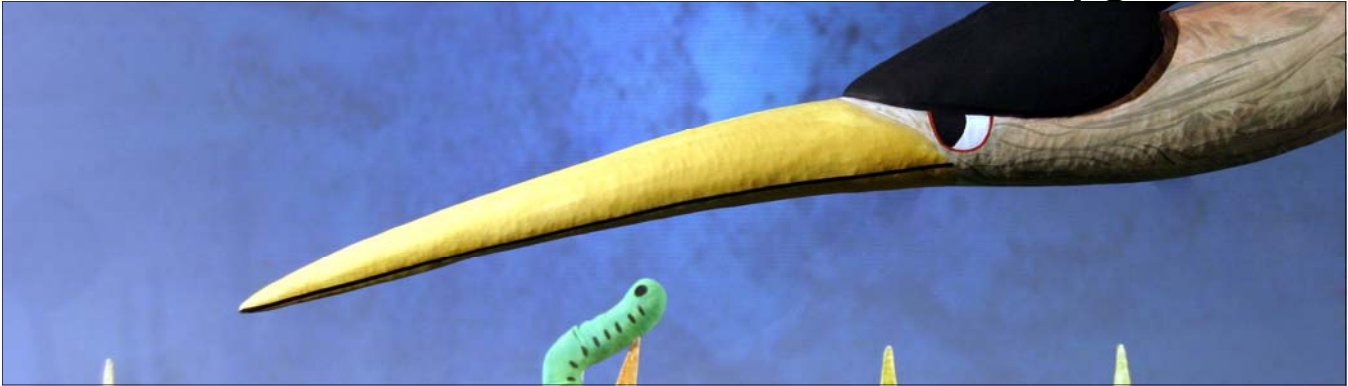
6. Use student questions to guide their exploration. Stock your reading corner with books on different North American animals and their winter habits.
7. As you study different animals, introduce the terms Migrate, Hibernate, and Adapt (definitions on page 12).
8. On a wall or bulletin board, put up three headings: MIGRATE, HIBERNATE, ADAPT.
9. Each day, choose a featured animal. Ask students to read about its winter habits. Based on the information, ask students to classify whether it is an animal that migrates, hibernates, or adapts. Once students have decided, post a picture of the animal under the correct heading. Caption the picture with 2 or 3 sentences about the animal's winter habits.
10. As students gain new knowledge, fill in the final column of the KWL chart with statements about what they've *learned*.

Follow-Up Discussion Questions:

1. Do people migrate, hibernate, or adapt in the winter? What leads you to this conclusion?
2. What do animals and people need to survive the winter? What else do they need? (Think about Frederick and the gift he gave to his family.)
3. What ways can we help animals that adapt and are still active in the winter?

*The KWL chart is a graphical organizer, created by Donna Ogle in 1986. The letters are an acronym for "what we know," "what we want to know," and "what we learned."

ACTIVITIES AND DISCUSSION: *INCH BY INCH* pg. 1 of 2



RETELLING THE STORY WITH *INCH BY INCH* PUPPETS

Goal: To demonstrate reading comprehension through puppetry and performance

Curriculum Connections: Literacy, Theater

Explanation: In this activity, students will re-tell the story of *Inch by Inch* using simple puppets.

When: Before the performance

Preparation: Before you begin this activity, prepare simple puppets to represent each character in the story *Inch by Inch*.

Inchworm Puppet Instructions: Create a simple inchworm puppet out of a green pipe cleaner. Use needle nose pliers to wrap the sharp wire ends over onto themselves. Coil the pipe cleaner around a pencil or paintbrush handle to form it into an inchworm shape. Glue googly eyes to one end to make the inchworm's face.

Bird Puppet Instructions: Scan or photocopy a picture of each of the birds in *Inch by Inch*. Trim away excess paper. Laminiate if you so desire. Glue or tape bird cut-outs to popsicle sticks or paint sticks for students to hold onto.

Activity:

1. Read *Inch by Inch* as a class.
2. Discuss the sequence of events. Which bird did the inchworm meet first? What did he measure? What bird did he meet next?
3. Show students the puppets you have prepared.
4. Remind students that inchworms don't crawl flat across the ground; their body arcs as they move their front end and then their back end forward. To make the puppet move like a real inchworm, use both of your hands. Pinch the ends of the puppet between your thumbs and index fingers. Inch the puppet along by moving one end forward. Pause briefly and then move the back end forward, so that both of your hands are now side by side. Repeat.
6. As a class or in small groups, allow students to perform the story of *Inch by Inch* with the inchworm and bird puppets. Students may use the inchworm puppet to measure the bird puppets and narrate the story in their own words.

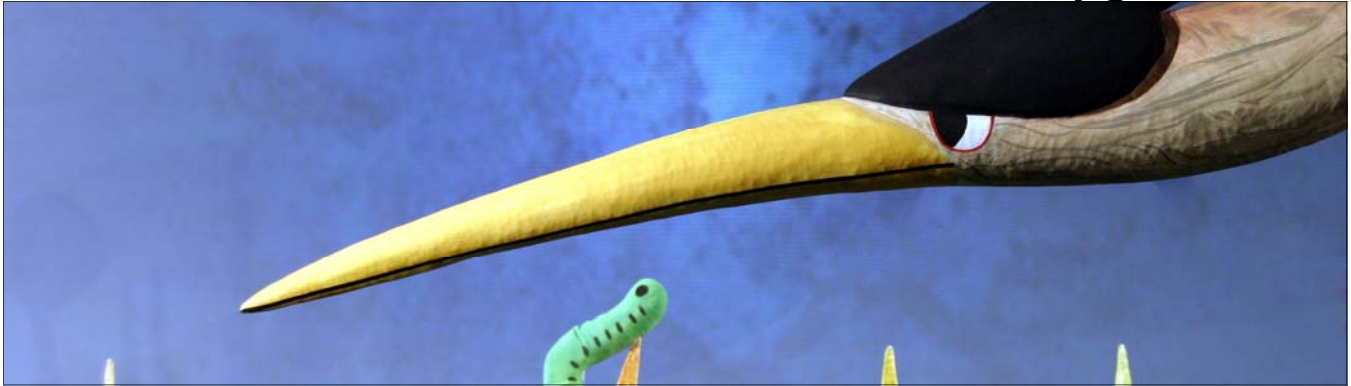
Follow-Up Discussion Questions:

1. Why did the robin want to eat the inchworm?
2. How did the inchworm meet the other birds?
3. What did the nightingale want the inchworm to measure?

Additional Questions for After the Show:

1. How were the puppets in the performance similar to the ones in our classroom? How were they different?
2. Who told the story during the performance? Could you see this person?
3. What was your favorite part of *Inch by Inch*? Why?

ACTIVITIES AND DISCUSSION: *INCH BY INCH* pg. 2 of 2



INCHWORM MEASURING

Goal: To practice estimation and measuring skills

Curriculum Connections: Math

Explanation: Students will use inchworm cutouts to measure items around the classroom and graph the results.

When: Before the performance

Activity:

1. Make copies of the inchworm templates found on page 19. Cut apart and laminate if you so desire.
2. Read *Inch by Inch* as a class.
3. Choose a 1", 2" or 3" inchworm. Hold it up in front of the class.
4. Ask students to estimate how many inchworms would be needed to go the length of a students' desk, the length of the classroom?
5. Using the same size of cutouts, have students check their estimations.
6. Next, using the inchworm cutouts, give students a list of items to measure around the classroom.
7. Have students estimate the length of each item, record their estimates, and then check with their inchworm cutouts. Create a bar graph of the results.

Extension Activity:

1. Divide students into 3 or more groups. Provide group 1 with 1" inchworm cutouts, group 2 with 2" inchworm cutouts, and group 3 with 3" inchworm cutouts.
2. Repeat the exercise of using the cutouts to measure items around the classroom.
3. Graph the groups' results.
4. Compare the lengths of the different inchworm cutouts. What do students notice? How does this relate to the results of their classroom measurements?

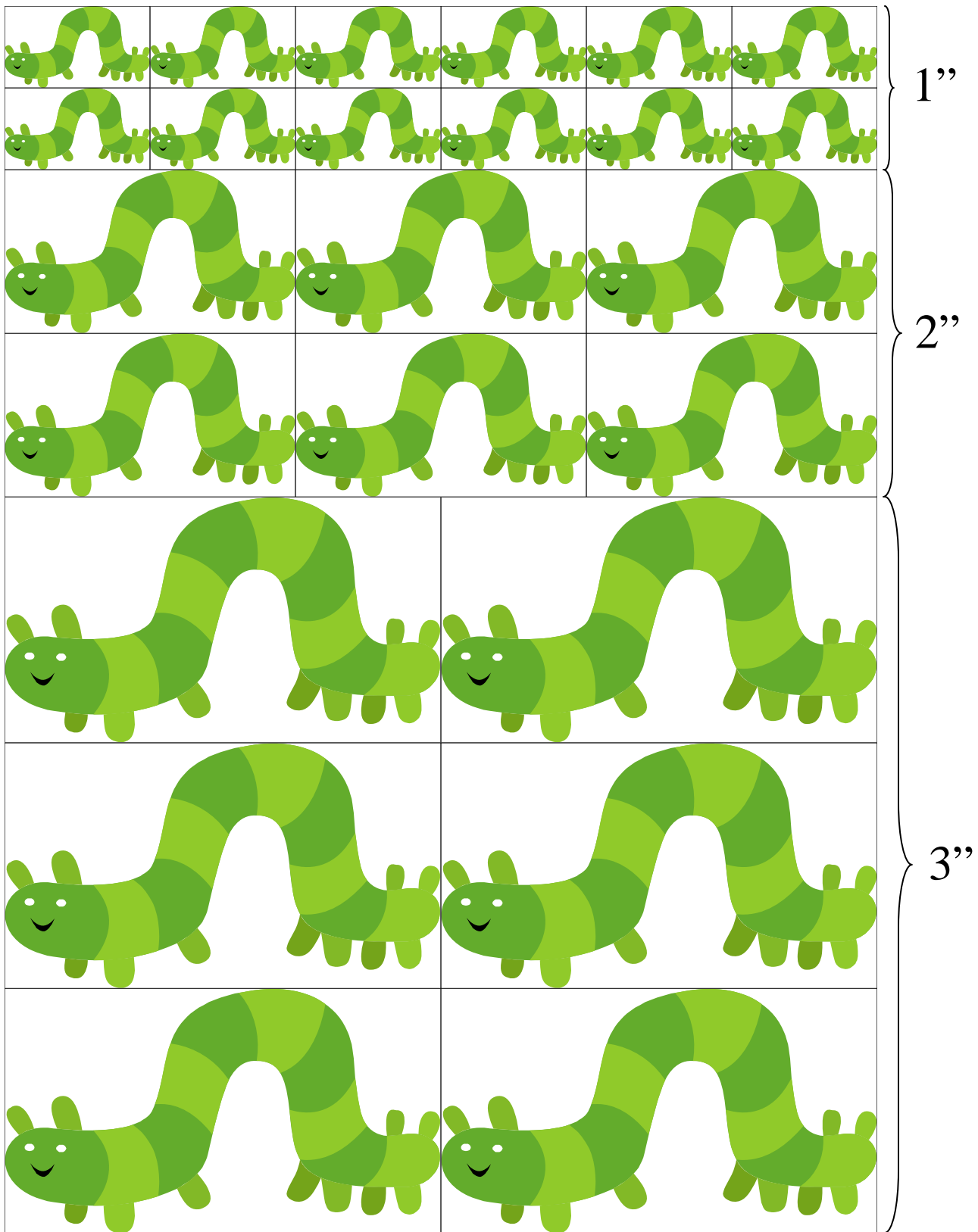
Follow-Up Discussion Questions:

1. Why is measuring useful? What can measuring tell us?
2. The inchworm measured different birds. What sorts of things have you or members of your family measured?
3. Can you think of different jobs where measuring is important?
4. Are there certain things that you can't measure? Like what?

Additional Follow-Up Discussion Questions for After the Show:

1. How did the performers show that the inchworm was measuring?
2. Why were the bird puppets so large?
3. How would you have escaped from the nightingale if you were the inchworm?

INCHWORM MEASURING TEMPLATES (For use with activity on page 18)



RESOURCES AND SOURCES



BOOKS BY LEO LIONNI

- *Little Blue and Little Yellow* (1959)
- *Inch by Inch* (1960)*
- *On My Beach There are Many Pebbles* (1961)
- *Swimmy* (1963)*
- *Alphabet Tree* (1968)
- *The Biggest House in the World* (1968)
- *Alexander and the Wind-Up Mouse* (1969)*
- *Fish is Fish* (1970)
- *Theodore and the Talking Mushroom* (1971)
- *Frederick* (1973)*
- *The Greentail Mouse* (1973)
- *A Color of His Own* (1975)
- *In the Rabbitgarden* (1975)
- *Pezzettino* (1975)
- *Tico and the Golden Wings* (1975)
- *I Want to Stay Here!: I Want to Go There!: A Flea Story* (1977)
- *Geraldine, the Music Mouse* (1979)
- *Let's Make Rabbits: A Fable* (1982)
- *Cornelius: A Fable* (1983)
- *It's Mine!* (1986)
- *Nicolas, Where Have You Been?* (1987)
- *Six Crows: A Fable* (1988)
- *Tillie and the Wall* (1989)
- *Matthew's Dream* (1991)
- *Mr. McMouse* (1992)
- *A Busy Year* (1992)
- *Let's Play* (1993)
- *An Extraordinary Egg* (1994)

*Indicates Caldecott Honor recognition

CLASSROOM RESOURCES

"100 Years of Leo Lionni"

Features a detailed author biography, photos, video and printable activities.
<http://www.randomhouse.com/kids/lionni/aboutlionni.php>

Mermaid Theatre of Nova Scotia's "Leo Lionni: A Resource Guide for Teachers"
Additional background materials and ideas for activities and discussion.
Download at <http://www.mermaidtheatre.ns.ca/repertory/swimmy.shtml>

STUDY GUIDE SOURCES

Print Materials:

Mermaid Theatre of Nova Scotia's "Leo Lionni: A Resource Guide for Teachers"

State Theatre Keynotes for "Leo Lionni's Swimmy, Frederick & Inch by Inch"

Websites:

Animal Planet, Discovery Channel: <http://animal.discovery.com/fish/eel/>

Children's Butterfly Site: <http://www.kidsbutterfly.org/life-cycle>

Enchanted Learning: <http://www.enchantedlearning.com/coloring/oceanlife.shtml>

Facts about Mice: <http://www.pestworldforkids.org/mice.html>

Inchworms International:
<http://www.funtrivia.com/en/subtopics/Inchworms-International-318475.html>

Information about Inchworms:
http://www.asktheexterminator.com/garden_pests/Inchworms.shtml

Library Thinkquest-- Mice: <http://library.thinkquest.org/3882/mice.html>

Mermaid Theatre of Nova Scotia: <http://www.mermaidtheatre.ns.ca/>

Pet Place-- Fish:
<http://www.petplace.com/fish/why-fish-swim-in-schools/page1.aspx>

Ocean Life for Kids:
<http://www.calstatela.edu/faculty/eviau/edit557/oceans/linda/loceans.htm>

Save our Seas Foundation-- Kids: <http://www.soskids.com/>

Science Made Simple-- Animals in Winter:
<http://www.sciencemadesimple.com/animals.html>