

INDIGO CLUSTER, GRADES 2-3

Rhoda Coleman and Nancy Nakagiri

Everything you need to know about life you can learn from a fairy tale.

---Michael Hague

Indigo Cluster's theme for this year is Creating a World of Enchantment. Children explore both the magical world of multicultural fairy tales and the real world of architecture and environmental studies. We look at how each fairy tale embodies the values of its culture and relates to our own lives. Children read fairy tales, analyze similarities and differences, find new solutions, dramatize characters, clarify values, and make judgments. We read fairy tales that revolve around the built and natural environment. Studying the diversity of homes around the world, we explore how homes represent the cultural and natural environment in which they are found. Children gain an understanding and appreciation of structures and forces that impact our world. We reflect on the significance of our own homes and how each home is unique and special. At the same time, we explore how each of us is a unique and special person. While exploring a fairy tale such as *The Three Little Pigs*, children are exposed to the subject of architecture as we investigate the strength of houses built of straw, sticks, and bricks. Our culminating activities include designing and building models of homes in different global habitats, writing original fairy tales set in chosen habitats, and dramatizing a fairy tale.

Children have been meeting in small, heterogeneous groups to read *The Three Little Pigs* and *Little Red Riding Hood* stories from around the world. They have completed graphic organizers, created small group original pop-up books, written point of view stories, built three-dimensional models of three pigs' houses, completed wolf and pig research projects, created "Warning" posters, and written and performed original scripts based on their group's particular fairy tale version. Music, art, science, math, and social studies are incorporated in all of our fairy tale studies.

The Three Little Pigs

The language arts component of this unit begins with the reading of several versions of *The Three Little Pigs*. See the attached *Three Little Pigs* bibliography list. Illustrations, as well as text, are compared and contrasted. Why did the three pigs leave their mother? How are the houses different? Who takes the role of the antagonist in each story? Is the wolf a villain or a victim? Are the three pigs innocent or at fault? Were the little pigs scared? What do you do if you are scared?

Whole class discussions which compare and contrast the story elements of different versions are recorded on a large graphic organizer. This activity models the use of a graphic organizer similar to the one which the students will use in their small heterogeneous *Three Little Pigs* groups. This graphic organizer can be utilized throughout the unit.

After the students are separated into small groups, they are given their own *Three Little Pigs* version which they use to:

- Partner read
- Complete a graphic organizer (see sample)
Given elements of the story, students will complete the graphic organizer together, thereby encouraging discussion and sharing of ideas.
- Determine the ten most important parts of their version
Discussion and idea sharing are also encouraged as the students record the ten most important parts of their *Three Little Pigs* version on strips of card stock. After these sentences are arranged in the sequential order of their version, they are typed or word processed.

- Create a pop-up book

These ten sentences become the text of a group created pop-up book. The children illustrate each sentence on a separate sheet of card stock, incorporating one to two pop-ups per page. They also design a title page and cover for their group book. For each page of the pop-up book:

- Fold the page in half
- Cut two one-inch slits about an inch apart where the pop-up is to be placed.
- Draw the background and other details on the top half of the page.
- Draw the single pop-up picture and glue it onto the front of the folded pop-up.

Glue the pages together. Make a cover out of poster board.

Students complete models of straw, stick, and brick houses. In small groups, they use spaghetti to try to build houses of straw, popsicle sticks to build stick houses, and sugar cubes to build houses of bricks. They record their findings with illustrations and written descriptions.

Children write letters to the characters in *The Three Little Pigs*.

Dear First Little Pig,

I think that you should build a stronger house to live in, like out of stucco, bricks, or strong wood. Not twigs, not sticks! Strong wood like logs! Metal might work great and I think you'll be proud.

*Sincerely,
Christina*

Dear Mama Pig,

I don't think your pigs were ready to go. You should have taught them better when they were piglets. You should have kept them home just a little tiny, incy, wincy, bit longer. I am sorry that your pigs had to face the Big, Bad Wolf. Why didn't you at least tell them what to build their houses out of? At least one of them was smart. If I were you, I would help them build houses.

*Sincerely,
Aliyah*

I am the house of straw. I was built by the first little pig. He didn't work so hard. I feel so wiggly that when the big, bad wolf comes, he will blow me down so very easily. The first little pig didn't take his time. When the wolf came, I was scared.

Francisco

We discuss the ideas of prey and predator and how the wolf can be a natural predator of the pig. We look at the popular bias against wolves and relate it to a study of bias and discrimination among people. We also complete research projects on wolves and pigs. Children learn the process of research as they study one of these animals. They read books, take notes, write a report, and complete a project to demonstrate their knowledge. See the attached *Research Report on Pigs and Wolves*.

At times we group children by their reading level. We use literature with pig characters to develop reading comprehension, vocabulary, and other essential reading skills. (See *Pig Books Bibliography*).

At holiday time, children build edible houses to take home. They use shoestring potato sticks to represent straw houses, pretzel sticks for stick houses, and strawberry wafer bars for brick houses. Peanut butter is used for mortar and small candies, cereal, marshmallows, etc. are used to decorate the houses.

We watch several Pig and Wolf videos. These include Shelley Duvall's *Faerie Tale Theatre: The Three Little Pigs*, Disney's *Three Little Pigs*, Discovery Channel: *Wolves at our Door*, and *Babe*.

Peter and the Wolf

Peter and the Wolf by Sergei Prokofiev is a musical fairy tale. It is written for a small orchestra with a narrator. In the story, a young boy captures a fierce wolf. Three friendly animals help him out: a cat, a duck, and a bird. Each character in the fairy tale is represented by a particular instrument and musical theme.

Peter - violins
The Bird - flute
The Duck - oboe
The Cat - clarinet
Grandfather - bassoon
The Wolf - French horn
The Hunters - timpani

Children gain familiarity with the sounds of instruments in an orchestra. We hang up large musical instrument pictures. They are introduced to each character in the story and its corresponding instrument and theme. We discuss how the sound of an instrument may be a good choice for a certain character such as the high fluttering sound of the flute that represents the bird in the story. We play a game in which children try to identify which character matches which musical theme in the music.

Making up words to go with each musical theme helps children remember each character's particular theme and instrument:

Peter (violins): My name is Peter and I'm off to catch a wolf today!

The Bird (flute): High up and through the trees I'm flying!

We compare and contrast the characters in *Peter and the Wolf* with the characters of other fairy tales we have read this year. How is the wolf in *Peter and the Wolf* the same and/or different from the wolf in *The Three Little Pigs*?

Children each choose a different character in *Peter and the Wolf*. They learn the melodic theme for that character. Working in small groups, they write a short script and then present a show to the class. Some children may choose to do a puppet show. Others prefer to act out the role themselves. They are required to incorporate the musical themes into their productions.

We compare and contrast two different story versions of *Peter and the Wolf*. One is retold and illustrated by Russian author/illustrator, Vladimir Vagin. The other book is adapted and illustrated by Erna Voigt. The illustrations and story versions are compared and contrasted. Both books include the musical themes from the score.

Little Red Riding Hood

The teachers read aloud different versions *Little Red Riding Hood* to the class and discuss key elements in each story. A large class graphic organizer is used to compare and contrast all the versions with the class. We discuss how Little Red is different in each story. Which Little Red would you like to be? Which Little Reds were able to take care of themselves? Which Little Reds tricked the wolf? How are the mothers' warnings different in each version? What parts of the story seem real or not real?

Children work in small cooperative learning groups to read aloud their group's version of *Little Red Riding Hood*. After reading their group's version, each child fills out a graphic organizer based on the elements of the story. (Please see the sample graphic organizer.)

The children write and perform an original script. After selecting one scene from their *Little Red Riding Hood* version, the group writes a script in which each member has a speaking part. Each student makes a puppet and/or costumes to dramatize the scene.

In small groups, the children use several of the story elements that they recorded on their graphic organizers to create a beware poster of a chosen character. They consider the issue of danger. Who is more dangerous in their group's version? Why? What is the danger? What tricks were played? Did the dangerous character have a disguise? What was it? Where was the character last seen? If the danger needs to be reported, who should be contacted?

As a culminating activity, all of the children perform a musical version of *Little Red Riding Hood*. This production is based on an Interact mini-musical set in the 1950's. Indigo Cluster children sing and dance their way through the forest to Granny's house.

Architecture

The melding of literature (fairy tales) and science (architecture) encourages both the exploration of the world of books and the real world. Children become captivated by the subject of architecture through exposure to fairy tale scenes such as the wolf huffing and puffing at the doors of the three little pigs' houses. Why did the house of the third little pig withstand the gale force winds of the wolf while his brothers' houses were destroyed?

We begin our architecture unit by reflecting on the significance of homes. We brainstorm together on how our wants and needs are met by homes. We discuss such issues as safety, communication, comfort, and protection.

Children explore their own homes and discover how each home is unique and special. They gain an awareness of the different parts of their home. See the attached *On Site Home Interior Survey* sheet in which they count, record, and graph their findings. We discuss facade elements and various building materials of homes. We look at pictures of different facades of homes and identify prominent geometric shapes. In class, they draw the facade of their home from memory. For homework, they make an "on site" home drawing of the front exterior of their home.

Children reflect on what they like best about their homes. We discuss family dynamics within the home. Communication and privacy issues are explored. Students write poems and make drawings that reflect their observations and feelings about their favorite place in their home. As a part of this project, we study the five senses as a science unit.

We investigate the sense of smell and its relationship to the

sense of taste. The children work with partners to find out what a potato tastes like while smelling a lemon or cinnamon. They go on a "touch" scavenger hunt to find objects or places which can be described with a "touch" word and they work with a partner to find the area of their arm which is most sensitive to touch. They listen to different sounds and try to identify them. The children participate in a taste test to determine what foods taste sour, bitter, sweet and/or salty. Students utilize their increased awareness of the five senses to enrich their poems. Please see the attached sheets on *My Favorite Place In My Home* as well as several student samples of this activity.

My Bedroom

*Favorite Korean dresses in my bedroom
Going there when I want to play with my stuffed animals
Looking at my black tv, my desk, and my clothes
Listening to a bird chirping, someone running
outside, knocks on the door, and my mom cooking pancakes
Touching my cozy bed and my stuffed animals
Smelling pancakes, Jolly Ranchers, and perfume
Tasting popcorn and drinking Icee
Sometimes watching the video Cinderella 2 or Dreams Comes True
Feeling excited because I can do anything I want, even dress like a
witch
Angela*

We move from the study of their own homes to an exploration of homes around the world. We read many books and watch movies that explore the diversity of homes worldwide. We explore how and why homes are built differently. Culture, economics, natural habitats and resources, technology, safety, lifestyle, status, and climate are some of the areas that we investigate. Each child chooses a home that he/she would like to research. Students draw and describe the elements of this chosen home. They include interesting facts about the people who might live there. Please see the attached sheets titled *Architecture Research Project*. Students complete a final labeled drawing of their houses for display.

Concurrently, students are studying the natural habitats of the areas in which their chosen homes are found. As a group we read about different habitats to find the characteristics which make each habitat unique. We complete a large graphic organizer which focuses on the animal and plant life found in each habitat. We discuss the adaptations, needs, and interdependence of the living things in each natural environment. We look at the different prey and predators in each habitat and how they depend on the plants and each other for survival. Guided by a graphic organizer, the students do research on the habitat of their chosen home.

The concept of prey and predator comes alive with the taking apart of an owl pellet. We see and touch the bones and fur of the owl's prey. Using jeweler' loupes, which magnify objects to the fifth power, we study the specimens. The children carefully draw what they see. They are asked to concentrate on the most minute details. The book, *The Private Eye*, by Kerry Ruef, is used for this activity.

We also conduct simple experiments to understand the scientific concepts of the water cycle in the desert and polar regions. We discover how evaporation is faster in a sunny spot versus a shady area.

We investigate how an ice cube is like an Arctic iceberg. We use a sponge to observe how a cactus plant soaks up and retains water. We make a food chain to demonstrate the interdependence of all living things.

The book, *Dream House*, by Cheng, is read to the class. This story is told from the point of view of the house. Children write stories about the homes they have researched from the home's point of view. They use their architecture research project as well as their natural habitat papers to enrich their stories. See the enclosed *I Am A Special Home* sheet as well as student samples of this activity. These stories are displayed alongside their chosen home drawings.

A House in Fear

By Eleanor K. L. Beckman

Hello. I am a house with a roof of coconut leaves. I live in Samoa. I am surrounded by orchids, bamboo, manatees, hummingbirds, and BOBCATS! The family that lives inside me is very brave.

There is a Bobcat who lives around here. He is always coming around and scaring me. His only problem? He is scared of my family. He is most scared of Nina. Nina is the daughter of my family. I love her more than anything because she protects me. When she's gone, I feel so scared. Even the Bobcat's name is scary! His name is Rasack! I'm just lucky I have one level so my family can get out quickly and protect me. My family's names are Hetta, the mother, Sarack, the father, and Nina, the daughter.

One day my family went on a vacation. They left a man named Rouool in charge of me. The problem was that Rouool lived far away. Once word got back to Rasack, he set off to catch me and I knew it.

Rasack started slowly (for he lived very close to Rouool, you see). Then, when he was sure he was far enough from Rouool, he ran. Faster and faster! When he reached me, he pounced! He chomped on my roof,

but it didn't hurt. I guess it was because my coconut leaves on my roof are too thick to reach the thatch under it. Unfortunately, that wasn't enough to make him go away. Suddenly, I felt a rain drop. That could only mean one thing. FLOOD! It started to get harder and harder until it had started a flood! Lucky for me, I had stilts, high enough to protect me. Unlucky for Rasack, he got washed away. I haven't seen him since.

We take a neighborhood walk to identify various architectural elements that we have studied. We identify and discuss structural elements that support various parts of the house. Concurrently, we look at the historical, cultural use of columns as supportive elements in architecture. Children complete experiments on the relative strengths of various types of paper columns. See the attached *Paper Columns* sheet.

We incorporate our study of fairy tales and architecture at the holiday program with a song, *Homes All Around*, to the tune of *Home On The Range*. Children draw signs to hold up showing the different pictorial elements of the song. See the attached song.

As a holiday gift, children make house-shaped photo frames with six craft (popsicle) sticks. They write one or two sentences telling what makes their home special. This writing is word processed and formatted into the shape of a triangle, to be put in the "roof" of the frame. A photo of each child is put in the "house" of the frame. Although a few children might want to create their own uniquely shaped frame, the following steps were taken to create this house-shaped frame:

- Glue the ends of three sticks to form a triangular shaped "roof". Add three more sticks to complete a square

"house". Work on a piece of waxed paper to prevent sticking. Let glue dry thoroughly.

- After the glue is dry (about one day), decorate the sticks with small pasta . We used rotelle, penne, small elbow, and salad macaroni. Be generous with the glue so that the pasta stays on the sticks. Let harden for at least a day.
- Spray paint the frame. (We use gold or silver.)
- Glue the writing and the photo onto back. Cover with a tagboard backing which is folded to include a stand, (unless you have an Ellison die-cut frame stand).

Children complete a culminating activity that encompasses our study of fairy tales, natural habitats, and architecture. They build models of their chosen home, taken from their architecture research project, and set it in its natural habitat.

We begin this project with geometry and Polydrons. Polydrons are plastic squares, hexagons, and triangles (equilateral, right and isosceles), which can be joined together at the sides. When joined in a specific pattern, the resulting two-dimensional shape can be folded to form a three-dimensional shape. This pattern or blueprint is referred to as a net. Please see the worksheet, *Introduction to Three-Dimensional Geometry*.

The children build the three-dimensional shapes of their chosen homes and record the net(s) on white tagboard. The net is cut out, folded, and then unfolded so that the details of the chosen house can be drawn. The net is glued together and the resulting three-dimensional house is glued onto a cardboard base (10" X 12"). The cardboard base is decorated with the plants and animals which were

researched for the graphic organizer. The children depict the habitat and its plants and animals with drawings or other materials (cotton for snow, moss for grass, sand, small twigs, etc.).

Students write an original fairy tale using their home/habitat models as the setting for their story. They include a prey and predator in the story. The polar bear might take the role of the big, bad wolf in a story set in the Arctic with an igloo as a house.

Children brainstorm to help each other begin their own original versions of prey/predator fairy tales. The students use the attached organizer to record ideas for their own original story. They also use the attached editing sheet to improve their stories.

Our plan is to further extend this activity by having each child make a "HyperStudio" stack of his/her story.

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Construction

The children build a model of their chosen home and set it in its natural habitat. We begin this project with geometry and Polydrons. Polydrons are plastic squares, hexagons, and triangles (equilateral, right and isosceles), which can be joined together at the sides. When joined in a specific pattern, the resulting two-dimensional shape can be folded to form a three-dimensional shape. This pattern or blueprint is referred to as a net. Please see the worksheet, *Introduction to Three-Dimensional Geometry*.

□□□ The children build the three-dimensional shapes of their chosen homes and record the net(s) on white tagboard. The net is cut out, folded, and then unfolded so that the details of the chosen house can be drawn. The net is glued together and the resulting three-dimensional house is glued onto a cardboard base (10" X 12"). The cardboard base is decorated with the plants and animals which were researched for the graphic organizer. The children depict the habitat and its plants and animals with drawings or other materials (cotton for snow, moss for grass, sand, small twigs, etc.).

Students write an original fairy tale using their home/habitat models as the setting for their story. They include a prey and predator in the story. The polar bear might take the role of the big, bad wolf in a story set in the Arctic with an igloo as a house.