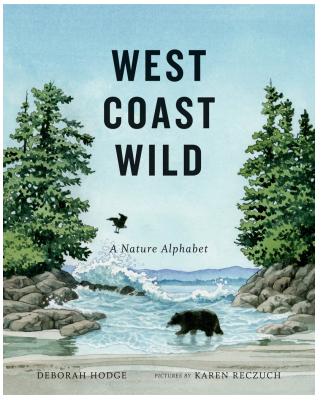
CLASSROOM ACTIVITIES FOR

WEST COAST WILD

BY DEBORAH HODGE

ABOUT THIS BOOK



West Coast Wild: A Nature Alphabet is a celebration of nature on the Pacific west coast — a spectacularly beautiful place and home to one of the last remaining temperate rainforests in the world.

The book features a fascinating ecosystem where forest meets the sea and introduces children to an eye-catching array of plants and animals thriving in an interconnected web of life.

Designed to encourage an appreciation and understanding of the natural world, *West Coast Wild* is a wonderful way to bring a little bit of the outdoors inside.

CLASSROOM ACTIVITIES

Use the following classroom activities to accompany *West Coast Wild* and to engage your students in thinking about the ecology of the unique and beautiful Pacific west coast. If you are not near the ocean, you can easily adapt the activities to suit the natural habitat found near you — pond, lake, river, forest, mountain, prairie, urban setting and so on.

LANGUAGE ARTS

Poetry: Invite the children to write a poem about their favorite animal from *West Coast Wild*. Try a cinquain (a five-line poem) using the following pattern and examples:

- Animal's name (one word)
- Two verbs describing how it moves
- Three adjectives describing how it looks
- A four-word phrase about the animal
- Another word for the animal

Limpet
Gripping, clinging
Small, strong, silent
Fastened to the rock
Snail

Sandpipers
Resting, feeding
Tiny, brown, feathered
Flocking on the beach
Birds

Alphabet booklet: Create an illustrated alphabet booklet (individually or in groups) featuring plants, birds and animals found at the seashore, or in nature near you. Choose the number of letters you would like your students to include in their booklet. (The full alphabet may be too long.) For example:

A is for _____.
B is for _____.

A is for algae.
B is for birds.

Make it more challenging by adding a verb and setting to the sentence. For example:

A is for (plant or animal) that (verb and setting).

A is for algae that grows on the rocks.
B is for birds that flock on the beach.

Five senses poem: Choose a setting in nature (seashore, forest, mountain, desert, urban etc.) and describe it using your five senses.

At the (setting):

I see ____
I hear ____
I smell ____
I feel ____
I taste ____

For example:

At the Seashore

I see shells
I hear waves crashing
I smell the saltwater
I feel mist on my face
I taste my yummy picnic lunch.

ANIMAL RESEARCH PROJECT

Choose an animal, bird or fish from *West Coat Wild* to research. Then write and illustrate a report or make a presentation to the class describing what you learn. Here are some questions to research:

Appearance: What does your animal look like? How big is it?
Home: Where does the animal live? What kind of home does it have?
Food: What does the animal eat?
Babies: How many babies does the animal have? How do the parents care for their young?
Enemies: Who are the enemies or predators of the animal? How does it protect itself?
Habits: What are some interesting facts about the animal?

SCIENCE

Nature notes: Go on a nature walk (at the seashore, if you are near it) with a notebook and sketch or write a list of the plants and animals you see. Can you find examples of 10 plants and animals? Think about how they are suited (adapted) to the place where they live. Give examples.

Nature map: After going on a nature walk, make a map, drawing in the nature areas, large and small (trees, bushes, ponds and so on), that are found near you.

Bird watching: What birds live in your area? Go on a bird watching trip and take a notebook to keep track of the birds you see. Note their color, markings, songs and behavior. When you get back to your class, learn more about the birds by checking a field guide. Write, draw or give a talk about an interesting bird you saw. Optional: Discuss some similarities and differences between birds that live near the ocean and birds that live inland.

Life cycle diagram: Choose an animal, bird or fish from *West Coast Wild.* Make an illustrated diagram, with labels, showing the stages of its life — from newborn, to young animal, to adult. For example, a Pacific salmon goes through 6 stages in its lifetime: egg, alevin, fry, smolt, adult, and spawner. (Check your library for books that feature information on the life cycles of animals.) Optional: Compare a human's life cycle to the life cycle of the animal you choose.

Compare whales and fish: Make a chart recording the similarities and differences between two ocean species: fish and whales. (For example: Whales are mammals that breathe with lungs; fish have gills. Whale babies are born live; fish hatch from eggs. What other similarities and differences can you discover?)

Tide pool animals: Plants and animals that live in tide pools are hardy creatures built to survive in a rugged seascape that changes frequently. At high tide, the animals must withstand rolling waves and crashing surf and at low tide they are exposed to the air for hours. Anemones, sea stars, sea urchins and limpets are just a few examples of the intertidal creatures living on the west coast. Using a field guide for the area, find out how these animals' bodies and habits are adapted to the ever-changing environment of high and low tides.

Aquarium field trip: Is there an aquarium near you? Visiting an aquarium is a great way to learn about the ocean and its creatures. Many aquariums also have excellent online resources that you can access from your school or library.

Floating egg: If you have ever gone swimming in the ocean, you will know that it is easier to float in the salty sea than in a fresh water lake or pool. Here's an experiment that demonstrates the buoyancy of the ocean. Fill two large glasses each with a cup or so of water. Into one of the glasses, stir in 6 tablespoons of salt. (The salt water will look cloudy.) Place an egg on a spoon and carefully lower the egg into the glass that holds water only. What happens? (The egg will sink.) Place a second egg on a spoon and lower it into the glass with salty water. What happens? (The egg will float.) Optional: Research why the ocean is salty. Hint: It has to do with rain and the rocks on land.

Tree study: Some of the ancient trees in the west coast rainforest are hundreds (or maybe thousands!) of years old. Make a diagram labeling the parts of a coniferous tree, such as a spruce or cedar. Include: roots, trunk, outer bark, inner wood, branches and needles. Discuss the purpose of each part of the tree. Find out what a tree needs to grow. Brainstorm suggestions from the class (e.g. sun, rain, nutrients from the soil, space to grow and so on).

Salmon in the forest: Research the role of salmon in the west coast rainforest. (Bears, wolves and eagles take salmon carcasses into the forest. The remains of the fish decompose and add nutrients to the soil, creating an enriched environment for the trees to grow.)

Field guides: There are some excellent first field guides for young children that you can borrow from the library and bring to the classroom. Invite the children to look through the guides to discover the plants and animals that can be found in various habitats such as the seashore, the forest and so on. Discuss the qualities and characteristics that make a particular habitat unique.

GEOGRAPHY

Locate the west coast: On a wall map of North America, point out the Pacific Ocean and the far west coast (as featured in *West Coast Wild*), stretching as far south as California and as far north as Alaska, and including the west coast of Vancouver Island and the Haida Gwaii archipelago. Point out your location, too.

Gray whale migration: On a wall map showing the Pacific west coast, trace the migratory route of gray whales, believed to be the longest mammal migration journey in the world — a round trip of over 10,000 miles (16,000 km). The whales travel from lush summer feeding grounds in the Arctic to warm calving lagoons off Mexico's Baja peninsula, where they give birth to their babies in winter. Cut out small paper whales and pin them along the migration route.

MATH

Comparing and classifying: Gather a collection of seashells or rocks of varying shapes and sizes. Classify the objects into categories based on their properties. For example: compare size, color, shape, texture and so on. How many different categories can you make?

Measure a whale: In the gym or on the playing field, measure the size of a gray whale — up to 14 meters (46 feet). Compare this to the size of an orca — up to 9 meters (30 feet). Have the students stand side-by-side with arms outstretched in a line to mark out the length of each whale.

Pebble towers: Gather a collection of beach pebbles and invite the children to make towers by piling and balancing the pebbles on top of one another. How strong can they make their structure? How high can they build it? How can they use different sizes and shapes of pebbles to create a balanced structure?

FINE ARTS

Crayon resist painting: Make an underwater ocean picture using a crayon resist technique. Draw whales, salmon, sea jellies, sea stars, kelp and other forms of ocean life with wax crayons. Then paint over the drawing with a light blue watercolor wash.

Clay modeling: Use modeling clay to form seashore creatures such as crabs, sea stars, whales or shorebirds, and rainforest animals such as bears, wolves, cougars and deer. Construct a classroom seashore or rainforest scene on a table.

Nature diorama: Create a 3-D scene of an ocean or rainforest habitat inside a shoebox, turned on its side. Add fish, or animals and trees cut from cardboard or sculpted from modeling clay. Suspend fish from the top of the box with string to make it look like they are swimming. Make water by gluing foil to the bottom of the box. Create sand by sprinkling salt or sand on top of glue.

Nature rubbings: Collect textured items such as shells, rocks, feathers, leaves, bark and so on. Place a piece of paper over each item. Rub the paper gently with colored wax crayons or pencil crayons until the textured image appears. Optional: Take this a step further by cutting out the designs and arranging them in an eye-catching nature collage.

Nature mural: Make a mural (or individual pictures) using objects collected from nature: shells, rocks, twigs, grasses, feathers, leaves, seeds and so on. Paint or draw in some birds and animals that live in nature. Optional: Can you make some of the creatures camouflaged?

Salt pictures: Just as the ocean is salty, so is this art project. On colored construction paper, draw some designs with white glue. Next, sprinkle salt on top of the glue. (Shake off the excess salt into a plastic washtub or sink.) With a paintbrush, place dots of liquid watercolor paint on sections of the salt. Watch the colors travel!

Tissue paper fish: Cut a piece of stiff white paper into a fish shape. Then tear or cut colored tissue paper into small squares (about 1 inch). Use a paintbrush dipped into a mixture of white glue and water (approx. 2 parts glue to 1 part water) to paste the tissue paper on to the fish. When the fish is covered in colorful squares, paint over the tissue with the glue/water mixture. (Note: The paper squares can be overlapped to make new colors and interesting designs.) When the fish are dry, hang them from ceiling for a fun ocean effect.

Pinecone creatures: Many of the evergreen trees in the west coast rainforest produce pinecones. Gather a collection of pinecones and provide art supplies such as scraps of colored felt or paper, pipe cleaners, miniature pom poms, wool, glue and so on. Invite the children to create a pinecone creature such as a mouse, owl or other forest animal.

Sand pictures: If you can get to a sandy beach, suggest that the children make pictures in the sand by using pebbles, shells, pieces of driftwood, seaweed, feathers or other natural materials they find. Can they make a face? Or an animal or bird? Or an eye-catching abstract design?

Panoramic paintings: If you look closely at the art in *West Coast Wild* you will see a series of beautiful panoramic paintings. Invite children to create their own panoramic paintings of a wild landscape, such as the seashore or rainforest.

PHYSICAL EDUCATION/DRAMA

Animals in action: Choose a wild animal, bird or fish from *West Coast Wild*. Ask for action words that describe how it moves. For example: leap, run, swoop, scurry, dive, glide and so on. Write the suggestions on cards. Once you have a set of verbs for a number of animals, go to the gym or playing field. Select a card and announce an animal movement for the children to act out. Repeat with other verbs.

Mime a wild animal: Choose several animals from *West Coast Wild* and mime their behavior as a "day-in-the-life" activity. For example, role-play a cougar climbing a tree, waking up from a nap, stretching or pouncing. Or mime a crab scurrying across the ocean floor, opening and closing its pinchers and shedding its shell, or a sea jelly drifting in the waves, or an eagle soaring in the sky, catching a fish and feeding its babies. How creative can you be?

ADDITIONAL RESOURCES

Learn more about the PACIFIC RIM REGION, where *West Coast Wild* is set:

Pacific Rim National Park Reserve www.pc.gc.ca/eng/pn-np/bc/pacificrim/index.aspx

Select "Natural Wonders and Cultural Treasures" to read about the rainforest, seashore and Nu-chah-nulth, the first residents of the Pacific Rim region. Choose "Activities" to see information on hiking trails, beach walks and bird watching. See "Learning Experiences" to find out about public summer programs.

Raincoast Education Society http://raincoasteducation.org
Find out about west coast educational and interpretive programs for children and youth, including a young naturalist's program, a streamkeeper's program and an annual shorebird festival.

Ucluelet Aquarium www.uclueletaquarium.org
This is a catch and release aquarium, where at summer's end, all the marine creatures are released back into the sea. Click on "Gallery" to see close-up photos and videos of local ocean species.

GREAT BEAR RAINFOREST

Pacific Wild http://www.pacificwild.org
Learn about conservation efforts in the Great Bear Rainforest. Select "Great Bear Live" and "Visual Media" to see field cameras and videos of coastal wildlife in action, including bears, wolves, salmon, birds and more.

WEST COAST AQUARIUMS

There are many excellent aquariums along the Pacific coast. Here are some you can visit, in person or online. Check out their websites for close-up photos and videos of west coast marine creatures. Some also have live web cams. If you are able to go to an aquarium, many have realistic seashore displays, touch pools and programs for children.

Aquarium of the Bay (San Francisco) http://www.aquariumofthebay.org
Aquarium of the Pacific (Long Beach, California) http://www.aquariumofpacific.org
Monterey Bay Aquarium http://www.montereybayaquarium.org
Oregon Coast Aquarium (Newport, Oregon) http://aquarium.org
Seattle Aquarium www.seattleaquarium.org
Vancouver Aquarium www.vanaqua.org

BOOKS

For younger readers:

Ancient Ones: The World of the Old-Growth Douglas Fir by Barbara Bash. San Francisco: Sierra Books for Children, 2002 (first published, 1994)

Bears, *Salmon, Whales* and other titles in the Wildlife series by Deborah Hodge, Kids Can Press

First Field Guide to Shells by Brian Cassie, National Audubon Society, Scholastic Inc., 2000. (See also: *Birds, Fishes*, *Trees* and other titles in this series.)

One Small Place by the Sea by Barbara Brenner, Harper Collins, 2004

Salmon Creek by Annette LeBox, illustrated by Karen Reczuch. Toronto: Groundwood Books/Douglas & McIntyre, 2002.

Star of the Sea: A Day in the Life of a Starfish by Janet Halfman, Henry Holt and Company, 2011

For older readers:

Beachcomber's Guide to Seashore Life in the Pacific Northwest Rev. Ed by J. Duane Sept. Harbour Publishing. Madeira Park, BC Canada. 2009.

The Great Bear Sea: Exploring the Marine Life of a Pacific Paradise by Ian McAllister and Nicholas Read, Orca Book Publishers, 2013

Nowhere Else on Earth: Standing Tall for the Great Bear Rainforest by Caitlyn Vernon, Orca Book Publishers, 2011

FOR MORE INFORMATION

For more information on Deborah's books or school visits, please see her website. Thank you for your interest!

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