Introduction  Why environmental education is so important

LET THEM LOVE IT B4 WE ASK THEM TO SAVE IT!

27 Major Topics in each activity in the book - within each Topic are these headings:

Growing up WILD website:
- all “Copy Me Pages”, including Home Connections (these are in Spanish and English)
- “Show me Wildlife” section with videos of wildlife features in each activity
- Correlations to the following standards
  - NAEYC
  - The Next Generation Science Standards
  - Head Start

Activities modeled in the Workshop

*NATURE NOTEBOOKS mentioned in many activities, including Field Study Fun*

Spider Web Wonders  pg 14  Mighty Math = legs game

Hiding in Plain Sight  pg 34  Warm Up activity = Hide & Seek  Take Me Outside = Freeze Birds
Healthy me = wearing protective clothing

First Impressions  pg 10  Main Activity = How do certain animals make you feel?

Aqua Charades  act out water uses

Stations:
- **Aqua Charades**  float/sink, measure, dancing raisons, music glasses, nature’s crayons
- **Backbone Bonanza**  pg 40  Separate the vertebrate animals with into the right categories
- **Owl Pellets**  pg 46  Center: Put together the food chains
- **Fishing Fun**  pg 32  experiment with different bait, measure your fish, put together the puzzle
- **Spider Web Wonders**  pg 14  experiment with the web
- **Grow as We Go**  pg 38
- **The Deep Blue Sea**  – sorting shells and ocean cards
- **Who Lives in a Tree**  – “feely bags”
- **Who Lives in a Tree**  – mural
- **Who Lives in a Tree**  – signs squirrel dinner, roller muncher scraper, bark beetles
- **Nature’s Crayons**

Addtl Resources: Golden Guides, Worms Ate my Garbage, Audubon Birds, Mac Guide, Beachcombers Guide to Seashore life in the Pacific Northwest  *(These are all listed on the bottom of this agenda)*

Bird Beak Buffet  pg 42  main activity under Procedure = feeding game
Home Connection = bird walk  Art = binoculars  Snack = seeds, berries, gummy worms & goldfish

Who Lives in a Tree  –  Pg 30  Close Look @ Trees  seasonal observations w/Nature Notebooks
Look for colors, nests, bark, bring in buds, spring flowers new growth
Looking at Leaves  pg 16  Main Activity = Observe your leaf find it again
Observation sheet w/the senses

The Deep Blue Sea – mural and pace a whales’ length

Conclusion
HAND OUT BOOKS
Pick out an activity to share
Evaluations

Additional Natural History information shared during the workshop

Look at a Spider or Insect up close
- Count the legs (Insects: 3 body parts, 6 legs. Spiders: two body parts 8 legs all coming out of the head). Male spiders have balls at the end of their special feelers by their head, females do not.
- What does its’ mouth look like?  -Does it have an odor?
- Insects and spiders have a hard skeleton on the outside of their body. Each time they grow they need to shed this and harden a new one. Keep an eye out for these empty skeletons.

Search for Spittlebugs
In the spring the nymph (pre-adult), faces head down on a plant stem, stabs it’s straw like mouth into the plant stem and sucks up the juices to feed on. The excess juice comes out of its’ backend. As the goo cascades over the body, the insect uses its back legs to froth up the secretion.

Look for Evidence of Engravers/Bark Beetles
Bark beetles, like butterflies, go through complete metamorphosis: means complete change. Life stages are EGG, LARVA (this is the caterpillar stage), PUPA (this is the chrysalis stage) and ADULT. The female bark beetle burrows into a tree and lays her eggs just under the bark. The larva hatches and as they eat they make tunnels in the wood. Sometimes you can see how the tunnel gets wider as the larva gets bigger. Look for tiny exit and entrance holes on the outside of the bark. To see tunnels on the inside, peel back bark of fallen limbs or observe where bark has already fallen off of sticks on the ground.

Look for Evidence of Critters on Leaves
Rollers: green leaves that have been rolled or folded under and held this way with silk. Carefully unroll these to see if the insect or spider that made the hiding place is home.
Munchers: look for leaves that have been eaten or have holes in them. Decide if the same type of insect was responsible for all of the holes or not.
Scrapers: look for leaves where the surface has been eaten either in a race track like fashion or in blobs. The tunnel starts where the adult insect, known as a Leaf Miner laid as egg. Then the larva hatched and started eating between the layers of the leaf. Sometimes the tunnel gets wider as the larvae (the caterpillar stage) gets fatter. Where the tunnel stops is where the creature went into a pupa (the cocoon stage) and then came out an adult.
Adopt a Caterpillar
In its' homemade habitat include a stick for the chrysalis and provide daily fresh leaves from the plant you found it on. Not sure what it eats? – experiment, do some research and check the Washington Butterfly Association’s website.

Look for Evidence of a Squirrel’s Lunch
Squirrel’s peal the scales off of pine and fir cones to get at the nutritious seeds inside. They drop the scales and finally the peeled off mid-rib of the cone on the ground.

Take a Close Look at Plants
Although you don’t need to know the names of plants and animals to enjoy them, it can make a closer connection to know a name. It also trains the observer to look more closely for certain characteristics.
Stinging Nettle: leaves shaped like tear drops, have a toothed margin and come out of the stalk opposite of each other.

In Spring Notice the New Growth
This is the evergreen state and in the spring the evergreens put out the new growth which will be bright green and very soft unlike the older, tougher dark green growth from past years.

Scratch and Sniff Cedar
Gently scrape a bit of the outer layer off the green scaly leaves. Now smell.

Match Nature’s Colors and Shapes
Using construction paper, paint chips, & paper cut into shapes, help your child find shapes and colors that match.

Draw a Picture with Nature’s Crayons
Flowers and soft green growth can make bright colors when smashed and shmeared onto paper. Try dandelions and experiment to figure out which plants and kinds of dirt make the best colors.

Books and Equipment

Worms Eat My Garbage  Excellent guide to get you started on a worm bin. By Mary Appelhof
Peterson First Guide to Caterpillars  Nice illustrations and very inclusive.
Bug Containers  Allows for close observation without hurting the critters. nature-watch.com/bug-box-with-magnifying-lid or Oriental Trading Co. “See-Through Bag jars”
Beginner’s Guide to Birds – Western Region by Stokes
Golden Guide pocket field guide series includes: Insects, Spiders, Butterflies and Moths, Pond Life, Stars, Fossils, Geology
Backyard Birdsong Guide by Kroodsma includes recordings
Audubon Plush Birds  Squeeze the birds and you hear the birds call
The Beachcomber’s Guide to Seashore Life in the Pacific Northwest by J. Duane Sept
MAC’S Field guides (laminated sheets with pictures and names)
Best Hikes with Kids - Western Washington and Cascades by Burton