

# CURRICULUM CONNECTIONS

A Guide to Using **NatureWILD** Magazine with your class

Fall 2017: Eelgrass, Weasels Galore, Mole and Worm



Henderson Island, a tiny island in the Pacific with unique plants and wildlife and no human inhabitants, has beaches covered in plastic trash. Although plastic has many uses, it can cause damage to wildlife in the ocean because it does not decompose.

**Grade: 6**      **Subject: Social Studies**

**HENDERSON  
ISLAND -  
PLASTIC BAGS  
(PAGES 10 & 11)**

**Big Idea:** Complex global problems require international cooperation to make difficult choices for the future.

**Curricular Competency:**

- > Differentiate between short- and long-term causes, and intended and unintended consequences, of events, decisions, or developments (cause and consequence)
- > Ask questions, corroborate inferences, and draw conclusions about the content and origins of a variety of sources, including mass media (evidence)
- > Develop a plan of action to address a selected problem or issue

**Content:**

- > International cooperation and responses to global issues
- > Globalization and economic interdependence

**Teaching Idea**

1) Read the article "Henderson Island". Research the Great Pacific Garbage Patch. Investigate ocean currents to see where the plastics on Henderson Island and the giant plastic mass may have originated.

2) Students research stores/cities/provinces/countries that have banned the use of plastic bags and why. Are there any local stores/organizations that are addressing this issue? Post on #oceanoptimism with the positive info found about local stores that have banned plastic bags.

Note: ensure to end on a positive note – there are actions being taken to reduce the continued use of plastic bags and other plastics, it is important students realize they can invoke change.

3) Set up debate teams to argue for and against the banning of plastic bags.

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## HENDERSON ISLAND, PLASTIC BAGS (CONT'D)

4) Follow the instructions on page 11 to make the **10 Minute reusable T-shirts bags** in class. Have students draw designs on their bags and make a commitment/ pledge to use their reusable bag.

**Extension:** Prepare a petition/letter to send to the local government or local stores supporting a ban on plastic bags in stores.

**Links:** <https://www.nationalgeographic.org/encyclopedia/great-pacific-garbage-patch/>

<http://www.earthresource.org/campaigns/capp/capp-background-info.html>



## LEAF LITTER

(PAGE 4 & 5)

Discover the characteristics and diversity of small animals within your local ecosystem by going on a 'Leaf Litter Safari'!

**Grades:** 1 & 3      **Subject:** Science

**Big Idea Grade 1:** Living things have features and behaviours that help them survive in their environment.

**Big Idea Grade 3:** Living things are diverse, can be grouped, and interact in their ecosystems.

**Curricular Competency:**

> Grades 1 & 3 - Questioning and predicting; Planning and conducting (all).

**Content:**

> Grade 1 - Classification of living and non-living things; Structural features; Behavioural adaptations.

> Grade 3 - Biodiversity in the local environment; Energy is needed for life.

**Teaching idea:**

Most children are not familiar with soil and leaf litter organisms so a collecting trip to gather a variety of these life forms will bear much investigation.

First, make your animals comfortable in an observation dish by providing a piece of scrunched up paper towel you have soaked in water. Cover it with clear food wrap to prevent its escape and punch a few holes in it to provide some ventilation. Keep the animals separate if you can to prevent any damage to them.



## LEAF LITTER (CONT'D)

Use the **Life in the Leaf Litter ID Card** on the NatureKids website to determine what type of animal you have found and then draw it. If you cannot find a picture of it make a drawing and colour it so it will help you find it later in an insect identification book. Draw a line below your sketch that is as long as the animal. Make sure you draw all the legs, the mouthparts and any wings, antennae and things that stick out from the body. You could also note whether it moves quickly or slowly. If you can identify what kind of animal you have found label your diagram.

Add information about what type of special 'equipment' your animal has e.g. claws, jaws, sucking tubes, wings, number and size/shape of eyes, poison, smell, slime, silk, sting, speed, strength, jumping legs, antennae, feelers, hairs, camouflage, armour, and colour. Does it have any special behaviours to escape predators like staying still or rearing up to scare attackers?

A discussion after the first observations would result in a more complete set of observations being made and can be posted on a chart. Perhaps you can put your animal in a food web. What do you want to know about your animal now? How can you find the answer to your questions?

When you have finished with your animal, place it back in the soil litter where it was found.

### Extensions:

1. Make a bulletin board display with student drawings clumped under labels such as: carnivores, herbivores, detritivores or in a food pyramid with predators and prey.
2. Create some small terraria in 2 litre soda bottles in the fall.
  - Have an adult punch small holes in the top curved bit with a sharp metal skewer or awl.
  - Fill with 1 litre of loose soil and about half a litre of wet brown leaves and litter gathered from a damp forest.
  - Keep the terraria moist by adding water every few days but don't waterlog the soil.
  - Put caps on the bottles to keep any flying or crawling animals from escaping.
  - Release the animals in weather suitable for their survival before summer.
3. Carry out a safari in the fall and then again in the spring.



## EELGRASS

(PAGES 8 & 9)

There is a saying can you “see the forest from the trees?” This activity is more like, can you see the Sea Life from the Eelgrass?

Grade: 5      Subject: Arts Education

**Big Idea:** Artists experiment in a variety of ways to discover new possibilities and perspectives

**Curricular Competency:**

> *Exploring and creating*

- Intentionally select artistic elements, processes, materials, tools, techniques, and environments to express meaning in their work
- Explore connections to identity, place, culture, and belonging through creative expression

> *Reasoning and reflecting*

- Reflect on creative processes as an individual and as a group, and make connections to other experiences

**Content:**

> Elements and principles that together create meaning in the arts, including but not limited to: *visual arts*: elements of design: line, shape, space, texture, colour, form, value; principles of design: balance, pattern, repetition, contrast, emphasis, rhythm, unity, harmony, variety.

> Processes, materials, technologies, tools and techniques to support creative works.

> Image development strategies.

**Teaching idea:**

1) Read the Eelgrass story from NatureWILD and conduct some research on the various animals that live in Eelgrass beds (see links below). Examples: Fish: such as juvenile Pacific salmon, herring, pipefish, sole, perch and smelt. Invertebrates: such as isopods, amphipods, polychaete worms, crabs, sea stars, clams, snails, anemones, sea urchins and many others.

2) Create small group sets of questions regarding what they have read and the animals that depend on Eelgrass as their habitat - home. Have students separate the animals that they have read about that live in the Eelgrass and those that depend on the Eelgrass. Explain that you want students to focus on the animals that live in Eelgrass rather than ones that live around it or depend on Eelgrass.

3) Once student research is complete try the following art project.

Materials

- 1 pc per student – Hard card stock
- Strips of various green colours of tissue paper
- White glue or glue sticks
- Water-based shellac (see #5)

# NATUREWILD MAGAZINE (CURRICULUM CONNECTIONS)

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- Variety of construction and other craft materials
  - Old magazines such as National Geographic, Diver Magazine, decommissioned library books etc. (these can often be found at students' homes or at a second hand / thrift store)
1. Students create drawings, paper models, and/or cut out pictures from magazines. They should focus on different "eelgrass" animals or multiples of the same animal but in different sizes and / or colours. It is important that these animals are matched to the size of card stock. It is also important that the created animals are opaque.
  2. Students cut and/or tear strips of multiple shades of green tissue paper about 1 cm width approximately the length of the card stock. There should be enough tissue strips to cover the hard card stock.
  3. Once the students have their animals and tissue strips ready ask students to create a layered mosaic of animals and Eelgrass tissue strips. Let students experiment with some animals in the background with tissue strips overlaying them, others in the foreground with them being on top of the strips, and others weaving through the Eelgrass.
  4. Once students are happy with their arrangement and orientation they can tack the strips and animals into position waiting for them to dry, at least 24 hours.
  5. Once the drying process is complete now it's time for the shellac- a good demonstration of this can be seen on YouTube / Tissue Paper collage <<https://www.youtube.com/watch?v=fDX7QRL3NpE>>
  6. After these have dried you can assemble a class Eelgrass bed on the wall in your class or on your classroom hall bulletin board.

## Links:

Eelgrass <http://www.gibsons.ca/include/get.php?nodeid=387>

Bedwell Bay Eelgrass [http://www.belcarra.ca/reports/Protecting\\_Bedwell\\_Bay\\_Eelgrass\\_Habitat.pdf](http://www.belcarra.ca/reports/Protecting_Bedwell_Bay_Eelgrass_Habitat.pdf)

BC Eelgrass conservation and restoration: <https://seagrassconservation.org/conservation/>



In this article you get directions for a great experiment that will have your students pretending they are birds trying to get food while also teaching them how different bills are suited to different food sources. Use this article as an opportunity to launch your Science unit on animal adaptations.

**Grade: 1 Subject: Science**

**Big Idea: Living things have features and behaviours that help them survive in their environment.**

**Curricular Competency:**

- > Questioning and predicting (all)
- > Planning and conducting (all)

**Content:**

- > Names of local plants and animals
- > Structural features of living things in the local environment
- > Behavioural adaptations of animals in the local environment

**Teaching idea:**

1. Teach students some observation and naturalist skills, by reading them the story "The Boy Who Drew Birds: A Story of John James Audubon" by Jacqueline Davies. This is a great story for discussing how to get good information and be persistent.
2. Do the experiment 'The Right Beak for the Job' on page 14. See the full experiment in the resource, "Growing Up WILD" and use these "Bird Beak Buffet" activity pages (<http://www.projectwild.org/growingupwild/CopyMePages.htm>)
3. Take students outside to look for birds and see if they can identify the most common type of beaks in your school neighborhood. You don't need to be able to identify birds for this activity, just recognize different types of beaks (use the back cover of NatureWILD magazine as a reference). Students keep a tally of the number of each type of beak found and try to identify some of the types of birds you may have seen.

**Links or additional reading:**

- "The Boy Who Drew Birds: A Story of John James Audubon" by Jacqueline Davies  
[https://www.goodreads.com/book/show/886449.The\\_Boy\\_Who\\_Drew\\_Birds](https://www.goodreads.com/book/show/886449.The_Boy_Who_Drew_Birds)
- Recommended bird ID books: <http://www.birdbookshop.com/youngreaders.html>
- 'Growing Up WILD' resource available for purchase through Habitat Conservation Trust Foundation / WildBC <https://hctfeducation.ca/>



**RIGHT BEAK  
FOR THE JOB  
(PAGE 14)**