

Unit Plan: A Combination Approach
Transdisciplinary Theme: How the World Works



ECED 416
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Rationale:

This unit plan is designed under an International Baccalaureate (IB) framework; however the big ideas and concepts are transferable for any school setting. I will be using a combination approach. This unit will combine aspects of IB, inquiry and integrated thematic approaches. The transdisciplinary theme that this project will focus on is How The World Works with the central idea being: People can discover the natural world through investigation and observation. The goal is for students to be able to thoroughly understand this central idea by the end of the five-week period. Inquiry is a major component of the IB philosophy therefore when creating lessons and activities an inquiry approach will also be utilized. When designing this IB planner there were lines of inquiry that helped to drive the inquiry process including: tools for discovery, types of change in the natural world and evidence of change. This unit also incorporates aspects of the thematic approach as not only is this a very hands on unit but I have chosen to integrate Social Studies, Language Arts, Math, and Art into the plan but it also incorporates natural play and exploration. Moreover, centres, tubs and calendar time will also have a focus on nature!

Ideally I will implement this unit in late April till the beginning of June. In April students are able to observe natural changes in the environment such as flowers blooming, plants growing, and changes in weather patterns. This unit is also very hands on and the majority of the time will be spent outdoors, which is why it will be nice to do when the weather is more reliable and consistent. Near the end of the school year, students are more excited and restless therefore this unit is ideal to implement as students will be outdoors and have numerous opportunities to release some of that excitement and extra energy. Studies have also shown the many benefits of learning outside in nature including increased engagement, focus, self-regulation and cognitive development.

In British Columbia (B.C.) we are very fortunate to live in such a beautiful province where forests, mountains and the ocean are within proximity to many schools. It is because of our natural setting that makes this unit an ideal fit for implementing in Kindergarten. In Kindergarten students have an innate curiosity, wonder and excitement about the world they live in and this unit challenges students to inquire and think critically about their natural surroundings. It is pivotal that observation skills such as the five senses and tools for discovery are explored at the Kindergarten level as particularly at this age students are constantly questioning and wondering about the world around them. Everyday students utilize their senses when they come across familiar and unfamiliar objects. This unit is more than the study of the senses as it is conceptual and focuses on the discoveries and changes in the natural world.

This unit is also important for encouraging place-based learning so that students develop an appreciation of nature and the features of their immediate environment. Teaching students in Kindergarten to care and respect nature is significant because as leaders of future generations students must be able to reflect on how their own personal actions impact the natural world. Teaching students about other cultures and integrating First Nations content is also important so that students learn to respect and appreciate different traditions, rituals and cultural perspectives. Overall, this unit encourages students to be inquirers and thinkers about the natural world!

Curriculum and Foundational Statements Covered:

New Curriculum:	<p><u>Science:</u> Big Ideas:</p> <ul style="list-style-type: none">• Daily and seasonal changes affect daily life. <p>Curricular Competencies:</p> <ul style="list-style-type: none">• Demonstrate curiosity and a sense of wonder about the world• Make exploratory observations using their senses• Discuss observations <p><u>Socials:</u> Big Ideas:</p> <ul style="list-style-type: none">• Communities are made up of individuals from diverse cultural backgrounds and traditions. <p>Curricular Competencies:</p> <ul style="list-style-type: none">• Use Social Studies inquiry processes (ask questions, gather, interpret and analyze ideas, and communicate findings and decisions)• Recognize causes and consequences of an event, decision, or development in their lives (cause and consequence)• Recognize that there may be different perspectives on people, places, issues, and events in their lives (perspective) <p><u>Language Arts:</u> Big Ideas:</p> <ul style="list-style-type: none">• Responding to and creating text develops and deepens our understanding of language and literacy, while developing our abilities to think critically, creatively and reflectively. <p>Curricular Competencies:</p> <ul style="list-style-type: none">• Express thoughts, feelings, opinions, and ideas through oral, written, and visual presentations and contribute as a member of a classroom community• Use the writing process to create written forms <p><u>Math:</u> Big Ideas:</p> <ul style="list-style-type: none">• Objects and shapes can be described, measured, and compared in many ways <p>Curricular Competencies:</p> <ul style="list-style-type: none">• Develop mathematical understanding through concrete, pictorial, and symbolic representations• Connect mathematical concepts to each other and make mathematical connections to the real world <p><u>Art:</u> Big Ideas:</p> <ul style="list-style-type: none">• We create art to express who we are as individuals and community members <p>Curricular Competencies:</p> <ul style="list-style-type: none">• Describe and respond to works of art• Express feelings, ideas, stories, observations, and experiences through the arts
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	<ul style="list-style-type: none"> • Create artistic works collaboratively and as an individual using ideas inspired by imagination. Inquiry, experimentation, and purposeful play
Primary Program Foundation Statements	<p>Aesthetic and Artistic Development:</p> <ul style="list-style-type: none"> • Develop enthusiasm and appreciation for the arts <p>Emotional and Social Development:</p> <ul style="list-style-type: none"> • Share, co-operate, and learn from others <p>Intellectual Development:</p> <ul style="list-style-type: none"> • Develop reading and viewing abilities • Develop writing and representing abilities • Develop an understanding of the world around them <p>Development of Social Responsibility:</p> <ul style="list-style-type: none"> • Value and respect diversity and the contributions people make to the community • Contribute to a collaborative environment

Morning Activities:

Question of the Day:

This activity is to be completed in the morning when students are putting away their jackets and backpacks and are getting ready to start the day. The question of the day will correspond to the unit of inquiry as well as to the learner profile words and attitudes that are to be covered for that unit. As a class we will go over the question of the day during calendar time and I will have students expand on why they said yes, no or maybe. Moreover, in order to encourage open-mindedness I will have students say the question of the day in their native tongue to encourage awareness of different cultures. Examples of possible questions include:

- Will you be an inquirer today?
- Did you use your five senses this morning?
- Is a rock a living thing?

Calendar Time:

In order to integrate nature into the calendar time as well as the central idea (People can discover the natural world through investigation and observation) there are several calendar activities that I will implement. First, I will have a nature inspired calendar

background. I will use neutral colours that can be found in nature such as browns and greens, as well as natural items to decorate including leaves, wood chips and shells. I will also use natural sticks or pebbles to count the number of days that we have been in school. For the calendar itself, I will have a puzzle inspired calendar. I will find a picture of nature and divide it into pieces so that there will be one piece for each day. As a class we will flip over one piece each day to correspond to the day of the month. I will encourage students to use their investigation and observation skills to work together to determine what the picture could be. This activity will promote inquiry and wonder among the students. Another important activity that I will implement is for students to observe and investigate the weather throughout the day. We could go outside in the morning and afternoon and record changes that we observed in the natural world (temperature, weather patterns, etc.). We will also discuss the seasonal changes and make comparisons (e.g. how will our clothing differ in the seasons of Winter and Spring). To integrate the Language Arts and strengthen students' phonemic awareness and decoding skills, I will ask certain students (special helper) to be word detectives and use the "scientific tools" such as their magnifying glasses and "home-made" binoculars to look around the room and find certain words (e.g. find "ing" words). This way student are interacting with "scientific tools" in a fun and playful way but are still practicing their Language Arts.

Centres:

Building/ Construction Centre:



This centre will be equipped with natural items for students to build with. I will have pinecones, shells, different sizes of pebbles, rocks, twigs and wood stumps. For this centre, I will make sure that as a class we go over safety rules such as not poking friends with twigs and handling the items with care. This centre allows students to bring the outdoors inside and build and construct using natural items and their imagination.

Paint Centre + Art Centre

For both of these centers I will have natural items (pinecones, sticks, leaves, rocks, shells). For the paint centre, I will also make nature paintbrushes where I will attach the bushy parts of a plant together and attach them to a stick with an elastic rubber band. I will have at least three different textured brushes to allow students to play and experiment and see how they create different lines and strokes. I will also have varying shades of a specific colour for children to explore. For example, I will have different shades of blue for students to use for the sky. At these centers students could experiment by using natural items to create pictures. I may also ask students if they are completing a more teacher driven centre to create certain pictures related to our unit. For example, at the paint centre I may ask students to paint a forest by using different shades of green.

Dramatic Play Centre

This centre will have a nature-based focus. Each week I will have a different natural environment for the students to explore and discover. For example, one week the centre will be based on the ocean and beach. I will provide student with dress up clothes and accessories (sunglasses, beach towels, arm-floats, goggles) as well as replicas of creatures that you may find at the beach including crustaceans, sand dollars, sea stars, killer whales). The next week I will have a temperate rain forest theme. I will put up some “trees” on the wall to make the environment come to life. I will provide students with an assortment of tools of discovery including magnifying glasses, binoculars etc. I will also have replicas of items you will be able to find in our forests including mushrooms, snails, leaves and butterflies. For both of these themes I will also have a CD that will play near that centre of waves crashing, birds chirping and/or streams flowing to set the ambience of the centre.

Sensory Centre

For this center I will have approximately three tubs filled with different terrains (sand, dirt, little pebbles). Within each tub I will have a variety of plastic creatures that the students can search for and play with. For example, in the dirt tub I will have plastic insects that can be found in the dirt such as worms, snails, and beetles. For the sand tub I will have sea stars, sand dollars, crabs and shells. This is a very kinesthetic station, as students will be feeling the different textures. For an extension to this center I can have matching picture cards where students can search and find the insect in the tub and then place it on the matching card to find out the name of the insect. This allows the activity to be self-checking.

Inquiry Provocation Table

At this centre, I will have several items from the natural world that will promote wonder, exploration and challenge students to think critically. At the table I will provide students with paper, pencils, crayons, magnifying glasses, scales and measuring tape. Students will be free to explore, investigate and observe the items. I will also have a question to help guide students such as what do you notice? Students will be encouraged to discuss and collaborate with their peers and to share their findings with the class.

Library Centre:

This centre will be equipped with a variety of books that are focused on the unit of inquiry.

Tub Time:

Math Tubs: For this unit of inquiry because it is nature inspired I will have math tubs that reflect this unit.

Non-Standard Units of Measurement Tub:

This tub will focus on non-standard units of measurement. I will have several natural items for students to measure including pinecones, leaves, twigs, nest and flowers. Students will use the non-standard units of measurement including geometric blocks, paper clips, plastic chains and popsicle sticks to measure and record each item.

Nature Patterns:

For the pattern station, I will again have groups of similar natural items including the same colour leaves, rocks and twigs. Students will be asked to create patterns from the objects following basic patterns such as ABAB, ABBA, AABB.

Geometric Shape Pattern Blocks:

This tub will be equipped with an assortment of basic pattern blocks. Students will then be asked to follow and put the geometric shapes on a pattern block design that is nature inspired (e.g. the blocks would form a tree).

Nature Sorting:

This tub will have several natural items (leaves, sticks, rocks, shells and plastic bugs). The goal of this tub will be for students to categorize the items based on certain attributes including (shape, size and colour). As an extension, students can categorize items based on textures including rough, smooth, bumpy, flat etc. This way science will be incorporated into this activity.

Literacy Tubs:**Letter Formation:**

For this station, I will provide a variety of blocks (e.g. Mat Man Blocks) for students to use to form the letters of the alphabet. Students will be asked to practice lower case letters one day and upper case letters the next day so that students strengthened all letter formation.



Alphabet Sounds

For this tub, I will have small plastic containers labeled with each letter of the alphabet. I will also have a bucket of several random natural items. Students will then be asked to categorize the items based on their starting letter. For example, a plastic snake will go into the plastic container that is labeled with the letter S.

Sight Words Practice:

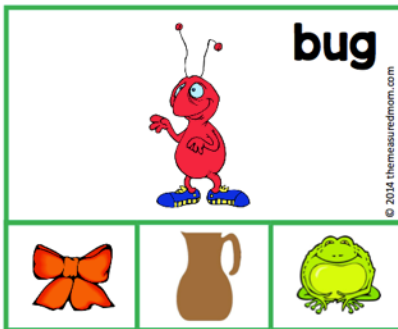
For this tub, I will have all the letters of the alphabet written on individual smooth pebbles. Students will be practicing sounding and writing out sight words. I will have an iPad at the station or a voice recording on the CD player where students will hear a sight word and then be asked to spell the word with the pebbles. This tub helps students develop their sight word recognition.

Nature Matching Cards:

At this tub, students will be asked to find matching pairs of cards. The cards will have nature pictures as well as the words written below. Students will be asked to find the matching pairs and say the word of the card out loud.

Rhyming Cards:

At this tub, students will have a set of rhyming cards and paper clips. Students will be asked to find the picture that rhymes. For example students will put a paper clip on jug because it rhymes with bug. The cards will have a nature theme.



Instructional Strategies:

Clocktime Partners:

Have students fill out the clock buddy worksheet (a picture of a basic clock with numbers, there will be a place for students to print a partner's name on 12, 3, 6, 9) and then the teacher will call out a time and students will find their clock buddy to do a specific activity.

Carosel Activity:

Charts and or activities are placed around the room in stations. The teacher will ask students to rotate between stations following a carousel motion. Once students reach a new station they will add on their ideas to the existing question or perform the activity at that station.

Gallery Walk:

Students move from table to table to see other classmates' work.

Think Pair Share:

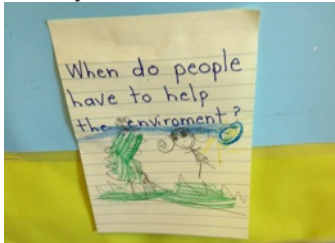
Pair up with a partner, have students share their ideas and then present to the class.

Inquiry Photos/Items:

These are wonderful provocations to start a unit as they encourage wonderings and questions.

Unit Plan:

Day 1: Introduction/Provocation to the new transdisciplinary theme: How the World Works

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Science:</p> <ul style="list-style-type: none"> -Develop curiosity and wonder about items from the natural world by investigating and observing the artifacts - Work collaboratively with fellow classmates when at each station 	<p>Carousel Activity: Provocation: 5 stations are set up and students are asked to explore the items at each station and sound out and write down their questions that they have about the item. A discussion will be held at the end and I will ask “what did you discover?” “How did you discover that?”</p>	<ul style="list-style-type: none"> - Inquiry materials (e.g. abalone shell, seed pod, pinecone, sedimentary rock) 	<p>Observation: Observe students’ questions and interactions with the items.</p>	<p>Learner Profile (LP) Attributes:</p> <ul style="list-style-type: none"> -Inquirers -Thinkers <p>Concepts:</p> <ul style="list-style-type: none"> - Function - Connection <p>Approaches to Learning:</p> <ul style="list-style-type: none"> - Thinking Skills -Communicating Skills
<p>Language Arts</p> <ul style="list-style-type: none"> - Create a wondering that they have about the natural world through written (scribe if necessary) and pictorial representation 	<p>1st Think: Together the whole class brainstorms (teacher scribes on padlet) and creates a first thinking of what they think the central idea is about. We will break down the central idea and we will discuss some of the key terminology such as observation, natural world, and investigation.</p> <p>Wonder Wall + First Wondering: Students create a wonder on a sticky note that they have about nature/ the central idea. The teacher will scribe if necessary but all students can draw their wondering while waiting. Post students wonderings on the wonder wall *Sing the IB inquirer song</p>	<ul style="list-style-type: none"> - Create the first think on padlet an online brainstorming tool (https://padlet.com) - Sticky notes 	<p>I will assess students’ background knowledge through the first think to better understand what students already know in order to create a unit that is exciting and builds upon their existing schema.</p>	<p>Learner Profile:</p> <ul style="list-style-type: none"> -Inquirers -Thinkers <p>Attitude:</p> <ul style="list-style-type: none"> - Curiosity <p>Approaches to Learning:</p> <ul style="list-style-type: none"> -Thinking skills

Day 2: Exploring our senses and starting a school garden

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Language Arts: - Demonstrate their writing abilities: neatness and ability to sound out words.</p>	<p>At the beginning of the day I will read <i>T.U.R.N & LEARN SENSES Picture Book</i>, no author but published by Phidal Publishing. This book asks questions to help stimulate discussion and it also has a wheel with pictures of the five senses for students to actively engage and discuss which senses the pictures uses.</p> <p>Journal Entry: Students complete a free write journal entry to the stem of: Over the weekend I observed... I tasted, I smelt, I heard, I saw, I touched. Ask them to write about as many things as they can.</p>	<p>- <i>T.U.R.N & LEARN SENSES Picture Book</i> - Journals</p>	<p>Anecdotal Comments: Evaluate students' journal entries and write anecdotal comments.</p>	<p>LP Traits: - Students will be thinkers when writing - Students will be communicators as they are communicating through their written words Approaches to Learning: - Students will be using their thinking skills when writing in their journals - Students will be communicating their thoughts through their writing - Students will be self-managing their bodies</p>
<p>Science:</p> <ul style="list-style-type: none"> - Identify the 5 basic senses - Describe the function of the 5 senses - Use their 5 senses to observe <p>*Note students will already have an idea of the senses as they would have been touched on throughout the year but not in-depth</p>	<p>Senses Carousel Activity (stations): Have 5 stations where each station requires students to use a different sense. One of the stations students will make popcorn with the teacher (this station will be done as an entire class). At the end have students reflect on the lesson with a group flashback answer game where the teacher shows them some objects from the stations in which they have to identify which senses they used from their senses cue</p>	<p>Station 1: Smell: Smelly Markers, smelly stickers, flower, different perfume sprayed on cards Station 2: Taste: popcorn Station 3: Touch: Smooth, rough, dull, etc. (rocks, branches, leaves etc.) Station 4: Hearing: bells, clappers, wind chimes Station 5: Sight: lights, water bottle with sparkles</p>	<p>Observation/Check for Understanding Flashback assessment: -Have students sit down on the carpet. Each student will have a set of the five senses flashcards on a ring. The teacher will show a specific object from the stations and individually students must find the sense/senses that they think they used. Once selected when the teacher says 1,2,3 they must flash their sense card. The teacher than asks what that sense is used for.</p>	<p>LP Traits: -Thinkers -Inquirers Attitudes: -Curiosity</p>

	cards.		Also will ask students to discuss certain stations (e.g. what did it feel like, look like) When students flash their cards, the teacher will check for understanding to see what areas need strengthening.	
<p>Socials</p> <p>- Demonstrate respect and care when learning how to create a garden</p>	<p>Creating a school garden: In the afternoon a First Nations Elder will come to work with the students to create an outside garden. This is to build and create a sense of connection with the local community. The Elder will be asked to share a personal story about gardening or read <i>Giving Thanks</i>” by Chief Jake Swamp. As students are planting vegetables the Elder will say the names of the vegetables in their local language. Due to limited space, not all students will be able to plant at the same time. When students are waiting for their turn, have them use their magnifying glasses to observe the seeds. Students will also complete the first page of their garden journal drawing the seeds. Ask students to think-pair share about why it is important to look after a garden.</p>	<ul style="list-style-type: none"> - School garden or tubs - Variety of vegetable seeds (potatoes, beans, carrots) - Gardening tools (watering cans, gloves, mini shovels) 	<p>Evaluate how students interact and handle their seeds/tools during the planting process.</p>	<p>IB Learner Profile</p> <ul style="list-style-type: none"> -Caring: Students will show empathy and respect towards First Nations Culture -Open-Minded: Students will be introduced to First Nations culture and some of their values and traditions <p>Attitudes:</p> <ul style="list-style-type: none"> - Appreciation

Day 3: Appreciating and respecting nature


Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Socials - Identify the proper etiquette when being outside observing nature.</p>	<p>Create a Nature Agreement with the students (i.e. student involved criteria): Outline expectations when we go out in nature (e.g. not pulling off parts from the living trees, not stepping on flowers, boundaries, importance of the whistle etc.). Students will create a handprint and sign their name to the agreement. Teacher places emphasis on the importance of caring for our environment</p>	<p>-Poster board for nature agreement -Paint for students to put their handprints on the paper - Students will put their handprint and sign their name to the agreement</p>	<p>Observe students responses to how they should interact in nature.</p>	<p>Learner Profile: -Caring Approaches to Learning: -Thinking skills - Self-Management</p>
<p>Science - Apply the observation skills and tools that they have been learning in the classroom outdoors -Use their senses and record their observations while participating in a nature walk. Students will also be able to act responsibly and safely in nature by reviewing their nature agreement.</p>	<p>Hearing/Listening to our surroundings activity: take students outside and go on a listening walk. Also ask students to use their senses as they walk around the school grounds. Students will record the senses used through a tally method.</p> <p>At the end of the day after students have gone outside for a nature listening walk, Return to the classroom and reflect as a class using the compass point strategy: S (what surprised you?) E (excited you?) N (new to you?) W (worried you?) about our outside experience with the senses</p>	<p>-Nature Environment -Mini clipboards - Senses worksheet + pencils</p>	<p>Student Self Assessment: Have students complete a self-assessment worksheet. Possible rubric criteria: I respected nature, I did not pull off living branches, I did not litter, I stayed within the boundaries, I listened to my teacher and I did my best to stay safe in nature. Students will have to circle a happy, or sad face for each question.</p>	<p>Approaches to Learning: - Observing: Students use their senses to observe nature - Collect Data: Students collect samples of texture in nature - Listen: Students have to listen to the environment and listen to how it communicates Learner Profile/Attitudes: - When outside students are inquires and exhibit curiosity - Curiosity: Being outside provides opportunities for exploration and wonder Concepts: Form: What is it like? Students explore nature through their senses (e.g. listen to the sounds, feel the trees, look at the plants)</p>

Day 4: Learning about the tools for discovery and First Nations Seven Teachings


Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Science</p> <ul style="list-style-type: none"> - Identify and explain some of the tools used for discovery - Recognize the tools that we can use to make observations - Identify the function for the tools for discovery (magnifying glass, telescope) - Demonstrate how to use scientific tools 	<p>Inquiry Photos: On the SMART board have a mixture of photos of tools for discovery (ear, microscope, magnifying glass, eye, test tube) and normal objects. Ask students to stand up when they think they see a tool of discovery. Using a talking stick like it was a microphone I will ask students why they think that is a tool of discovery? I will also ask students if they agree/disagree?</p> <p>-Tools of Discovery Station rotations (thermometer, balance/scale, magnify glass, meter stick/measuring tape)—students complete a question sheet at each station.</p>	<ul style="list-style-type: none"> - Thermometer, balance/scale, magnify glass, meter stick/measuring tape -Tools of discovery PowerPoint - Tools of discovery worksheet 	<p>Assess students’ tools of discovery worksheet for completion.</p>	<p>IB learner profile:</p> <ul style="list-style-type: none"> -Inquirers -Thinkers <p>Approaches to Learning:</p> <ul style="list-style-type: none"> -Self-management -Exploring our line of inquiry of tools for discovery
<p>Socials:</p> <ul style="list-style-type: none"> - Explain the importance of spirituality in First Nations culture through the Seven Teachings 	<p>The teacher will go through the significance of the Seven Teachings and each animal and expand on what the book says. The Seven Teachings include: Eagle, Buffalo, Beaver, Wolf, Bear, Turtle, and Honesty. The teacher will also mention the significance of the Killer Whale in First Nations Culture.</p>	<ul style="list-style-type: none"> - Seven teachings booklets 	<p>While students are learning about another culture I will be watching and listening to ensure that we treat every culture with respect and care.</p>	<p>IB learner profile:</p> <ul style="list-style-type: none"> - Caring: Students will show empathy and respect towards First Nations Culture - Open-Minded: Students will be introduced to First Nations culture and some of their values and traditions

	<p>Students will start to colour their Seven Teachings booklets. I will make sure to discuss the significance of the traditional colours. I will also ask students if certain colours have another meaning in their own culture.</p>			
<p>Language Arts</p> <p>-Categorize and organize as a whole class students original wonderings (from day 1 wonder wall) into the appropriate lines of inquiry</p>	<p>Previously on day 1 (wonder wall questions), students had recorded some of their wonderings that they had about the unit of inquiry. Now as a class we will categorize the questions organizing them under the lines of inquiry as well as add additional categories. I will ask students question such as: How can we find this information, where can we go? What can we do? Who can we ask? As a class we will discuss that to find the answers to our questions we can use books, websites and experts. As the unit progresses we will come back to our lines of inquiry and our questions and add on information that we find as we go along to increase students knowledge of their questions.</p> <p>As an at home extension, students will be asked to ask their parents or guardians about their question.</p>	<p>- Chart paper that is labeled with the lines of inquiry: tools for discovery, types of change in the natural world and evidence of change + new categories will be added as created by children)</p> <p>-Sticky notes of students' wonderings</p>	<p>Observe students' wonderings and questions and ability to organize into categories. I will record students' initials beside any comment or question that they asked to document their learning.</p>	<p>Learner Profile:</p> <ul style="list-style-type: none"> - Inquirers (when asking questions) - Thinkers (when thinking of questions) <p>Attitudes:</p> <ul style="list-style-type: none"> -Curiosity * Put students names by learner profile words if they exhibit that they are inquirers or thinkers (e.g. way to be an inquirer _____ let's put your name by the inquirer learner profile)


Day 5: Understanding the importance of caring for our earth


Learning Outcomes (The Students Will Be Able To)	Activities	Materials	Evaluation	IB link
<p>Language Arts - Express their feelings on how to take care of Mother Earth</p>	<p>Read The Earth Book by Todd Par. This book is great to demonstrate ways that we can take care of our earth. The book is very child friendly and students should be able to relate.</p> <p>Have a discussion with students asking how did this book make you feel?</p>	<p>-The Earth Book by Todd Par</p>	<p>NA</p>	<p>IB learner profile: -Caring - Thinkers -Inquirers</p>
<p>Socials: - Understand the importance of caring for Mother Earth (reciprocal relationship) -Students will also print and draw how they care for mother earth.</p>	<p>As a class, pose the question: why is it important that we look after our earth? What are the consequences of not looking after our earth?</p> <p>Together as a class discuss how we can take individual action to make a difference and care for our environment. Go over the action cycle of choose→ act→ reflect as well as go over the IB learner profile of caring.</p> <p>Caring Document: Students write how they care for the earth (scribe if necessary). Students will draw a picture to accompany what they wrote.</p> <p>Music: Introduce students to the song Going Green.</p>	<p>- The Earth Book by Todd Par - Caring page - Chart paper</p> 	<p>Review students caring document</p> <p>* At a later date, to culminate this unit students will be asked to orally describe how they take action to care for Mother Earth. I will record their responses to make a class video and invite parents to watch the video.</p>	<p>-Learner Profile: -Caring Approaches to Learning: -Thinking skills</p>

Day 6: Learning about the scientific method

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Language Arts + Art</p> <ul style="list-style-type: none"> - Observe a stick and use the stick as inspiration to create and design a picture - Students will use their imagination to design and create a picture that represents the natural world - Express their ideas and inspiration for their artwork through oral sharing 	<p>Together as a class read Not a Stick. This is a great book to promote creativity and imagination. For the main activity, provide students with a stick and ask them to share with a partner what they notice about the stick...what do they observe, how does it feel, is it big, small? Students will be asked to observe and investigate their sticks and use their imagination to think about what they could create from the natural world with their stick. Students then glue their stick on their paper and create a nature inspired picture with the stick as the main focus (e.g. could create a ladybug with the stick representing the divide in the wings). Students will then be asked to share with the class what they turned their stick into.</p>	<ul style="list-style-type: none"> - Not a Stick by Antoinette Portis - Outside sticks 	<p>Evaluate students picture for creativity, imagination and incorporation of the stick.</p>	<p>Attitudes:</p> <ul style="list-style-type: none"> -Creativity <p>Approaches to Learning:</p> <ul style="list-style-type: none"> - Thinking Skills
<p>Science:</p> <ul style="list-style-type: none"> - Engage in the scientific process by making predictions, observations, and reflecting on a teacher lead experiment 	<p>Introduce the scientific method (go over the steps): I wonder (ask a question), I think (form a hypothesis), I see (perform an experiment), I discovered (record observations), I know (form a conclusion). The teacher with help from the students will complete the water experiment. Before conducting the water experiment students will complete the first two steps of the scientific method. After students have recorded the information, I will begin the experiment. In a plastic zip lock bag I will put some dry dirt, and with the help of the students we will spray the bag with a spray bottle, seal the bag and tape it to the window. Throughout the day condensation will form in the bag and students will be able to record their findings and complete the stages of the scientific method. This will lead to a discussion about the water cycle and the changes that can occur.</p>	<p>-Experiment material: zip lock bag, spray bottle, dirt, tape</p> 	<p>Students' scientific method sheet will be checked for understanding and comprehension.</p>	<p>IB learner profile:</p> <ul style="list-style-type: none"> - Inquirer <p>Attitudes:</p> <ul style="list-style-type: none"> -Curiosity

Day 7: Exploring and writing about bugs

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Science: - Explore and observe the bugs in the natural world by investigating and recording their findings.</p>	<p>Go outside with the magnifying glasses and have students explore looking for bugs</p>	<p>-Magnifying glasses</p>	<p>Have a one- on-one temperature check with students asking for them to show on their thumb how comfortable they are feeling about the unit of inquiry. Ask them to tell you something they know and something they are unsure of.</p>	<p>Concepts: - Function: how we explore the natural world Approaches to Learning: -Research skills: observing and recording their findings about bugs through hands on investigation</p>
<p>Language Arts: - Demonstrate their observation skills and writing abilities by scribing and illustrating in their bug books</p>	<p>After looking at bugs come back in the classroom and read: <i>On Beyond Bugs: All About Insects</i> by Dr. Seuss. This is a great book to reinforce what an insect is as well as students will have previously finished a unit on rhymes and patterns.</p> <p>After going on a bug hunt and reading the story for inspiration, students will write in their bug books about the bugs that they observed and investigated and accompany their writing with a picture.</p>	<p>- <i>On Beyond Bugs: All About Insects</i> by Dr. Seuss</p> 	<p>Students bug books will be assessed for completion</p>	<p>Approaches to Learning: -Research skills: observing and recording their findings about bugs through hands on investigation</p>
<p>Socials + Art -Recognize that individual community members play roles in our communities - Demonstrate their use of warm and cool colours</p>	<p>Introduce students to Roy Henry Vickers, a BC First Nations artist who has a very close relationship to the environment (talk about his stance on protecting the ocean). Discuss his work for</p>	<p>- Access to internet to show Roy Henry Vickers Website -Cardstock paper and pastels</p>	<p>Observation: I will circulate while students are creating their artwork and ask students what is a warm colour? What is a cool colour?</p>	<p>IB learner profile: - Caring: Students will show empathy and respect towards First Nations Culture/artists -Open-Minded Concepts:</p>

	<p>the community and environment and ask students why do you think he is an important person?</p> <p>Students will be introduced to his artwork and his use of warm and cool colours. They will then create warm and cool fireworks using pastels.</p>			<p>- Connection: Students will learn about the intimate relationship between First Nations and the land</p> <p>-Responsibility: Students will be reminded that we have a responsibility to care and look after our environment</p> <p>Attitudes:</p> <p>- Appreciation:</p> <p>- Respect:</p>
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Day 8: Observing nature and our school garden

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Science</p> <p>- Observe and describe changes that have occurred in the school garden</p>	<p>Have students go outside and visit their garden. They will be asked to complete a garden journal that asks students to draw the changes that they can see, or write what has happened.</p>	<p>- Clipboards</p>	<p>Evaluate Students' Garden Journals</p>	<p>Approaches to Learning:</p> <p>-Research Skills</p> <p>- Thinking Skills</p>
<p>Language Arts:</p> <p>- Express through written form what they observed in nature</p>	<p>Provide students with a "camera" (camera printed on cardstock). Have students cut out and colour their camera. Review with students how to cut out the center of the circle). Once completed I will attach a string on both sides so it resembles a real camera.</p> <p>Go outside and have students take "pictures" with their camera. Give students 10 min</p>	<p>-Camera pictures</p> <p>-String</p> <p>-Felt pens</p>	<p>I will be checking their journals for completion and writing mechanics.</p>	<p>LP Traits:</p> <p>-Thinkers when writing</p> <p>-Communicators as they are communicating through their written words</p> <p>Approaches to Learning:</p> <p>-Thinking skills</p> <p>-Communicating skills</p>

	to explore and then ask them to take a picture that they can write about in their journals. Ask them to remember the colour, size, texture (feeling) of their picture so that they can then return to the classroom to write about their picture.			
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* Ask students to look for a tree over the weekend and “adopt a tree”. Students will be provided with a sheet that asks them to name the tree, draw the tree, touch and feel the texture of the tree, and see if they are smaller or larger than the tree as well as a question will ask if they can wrap their hands around the tree.


Day 9: Learning about living and non-living things

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
Math - Measure their vegetables using a variety of measuring tools including unifix cubes, popsicle sticks and paper-clips	Students will go outside and use a variety of non-standard measurement units to measure any growth in their garden (e.g. measure how tall the beans are). Students can measure the width and length of the garden bed, tools, watering can etc. Students will record their findings on a measurement sheet provided on their clipboards.	- School Garden - Non- standard measurement units: unifix cubes, paper clips, popsicle sticks - Clipboards -Measurement sheet	Students’ measurement sheets will be checked for completion	Approaches to Learning: - Research Skills - Communication Skills - Thinking Skills
Science: - Identify the characteristics that distinguish living and non-living things.	As a class show students a PowerPoint that has living and non-living things. Pose the question how do you know that something is living on chart paper. Write down all ideas even if they seem out of the box. Once the list of characteristics has been created go back to the PowerPoint and	- PowerPoint of living and non-living pictures - Chart paper	Put students initials beside the characteristics that they believe are true of all living things to check for understanding	-Approaches to Learning: -Thinkers -Communicators IB Learner Profile: -Inquirers -Thinkers Attitudes: -Curiosity

	review/discuss the pictures. Put checkmarks beside the characteristics that are applicable to the pictures of living things and cross out the other characteristics if not applicable.			
<p>Brain Break Activity:</p> <ul style="list-style-type: none"> - Demonstrate and imitate different shapes with their bodies - Listen and replicate specific body movements 	Have students act out the name of an animal that is called out. Remind students that our bodies can create all different shapes: they can be tall, small, twist, bend etc. For example, call out Mr. Snake and students will put arms together and try and slither like a snake. Mr. crab: students walk around like a crab. Other examples: Mr. Bunny, Mrs. Butterfly and Mrs. Eagle etc.	NA	If students are having difficulty with some of the coordination we can make the activity stationary or we can have those students do the sounds and hand actions rather than the full body movements	NA

Day 10: Roy Henry Vickers and field trip to the beach

Learning Outcomes (The Students Will Be Able To)	Activities	Materials Needed	Evaluation	IB Link
<p>Arts</p> <ul style="list-style-type: none"> - Explore the different types of lines (straight, wavy, curved) in their art - Explain that Aboriginal art tells a story and is often connected to the land and generational responsibility 	Read some pages from the Elders are Watching. Review Roy Henry Vickers and discuss what we might see at a beach (look at his pictures for inspiration). Students are given a black piece of construction paper as well as a variety of coloured strips of	<ul style="list-style-type: none"> - Coloured Construction paper: black, dark blue, light blue, yellow, orange, red, grey -Scissors, Glue Sticks, Pencils, White crayons -The Elders are Watching Book -Chart paper and markers <p>Sample:</p>	Students will complete a self-assessment on their Roy Henry Vickers inspired artwork.	<p>Attitudes:</p> <ul style="list-style-type: none"> - Appreciation: Students appreciate the beauty of the environment and First Nations culture - Respect: Students gain a greater respect for the environment

	<p>paper. Once students have the dark blue strip of construction paper have them draw on the length side in pencil a line (could be wavy, straight, curved have students choose) approx. 1 cm away from the edge of the paper. Have students then cut along their lines and once finished they can glue the strip of paper at the top of their construction paper to form the first layer of the sky. Repeat this process with light blue, yellow, orange and red to form the remaining lines of the sky.</p>			
<p>-Identify features of their immediate environment - Describe how they are taking action in their local community</p>	<p>Field trip to White Rock Beach (permission forms required + parent assistance required)</p> <p>Before going to the beach discuss the IB action cycle of (choose, act, reflect). Brainstorm as a class things that we can do to take action at the beach. The goal of the field trip is for students to engage in action by helping to clean up garbage around the beach. Students will pick up garbage and will also recycle any items they find.</p> <p>After students have helped to pick up garbage. Ask them to investigate and observe their surroundings. Ask students</p>	<ul style="list-style-type: none"> - Comfortable walking shoes - Sunscreen - Hat - Snack + lunch - Water bottle - Backpack - Magnifying glasses, paper, pencils, mini clipboards (provided by teacher) 	<p>Checklist: Have a checklist to observe students when they are outside on the field trip.</p>	<p>- Action Cycle (Students will review the action cycle). Later in the week the action bulletin board will be redone to demonstrate how students took action on their field trip. Students will be able to review and reflect on their actions.</p>

	<p>what sounds do they hear? How are they different from the sounds that they normally hear?</p> <p>Students will then explore and investigate the beach using their magnifying glasses and their senses. Students will be asked to draw a picture of something that they observed at the beach (their pictures will be assembled to form a class book).</p> <p>After returning to the school, together as a class we will complete 2 stars (things we did well at during the field trip) and a wish (something we will work on for next time). Students will also have time to share their pictures and discuss with their peers what they observed at the beach.</p>			
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* The Vancouver aquarium AquaVan will be another wonderful resource that I hope to bring to the school. The AquaVan will come and have interactive hands on activities for students. They will also speak to the students about environmental stewardship. This is a nice connection to the beach field trip that we had experienced and it is hoped that students will be able to gain a greater appreciation for marine organisms.

Typical Full Day Schedule (Independent School)

Day 1	Introduction/ Provocation to the new transdisciplinary theme of: How the World Works
7:50-8:00	Students arrive, put backpacks away and answer question of the day (Will you be an inquirer today?)
8:05- 8:20	Students work on the next page of their morning booklets (cut and paste short vowel letter e worksheet + colour the pictures)
8:20 – 8:40	Calendar routine lead by special helper (Say good morning in the different languages, weather graph—go outside and have students draw a picture under the morning column of today’s weather, count how many days we have been in school using nature sticks, days of the week song, read and discuss the question of the day, complete guessing bag, read the plan for the day)
8:40- 8:45	Movement Break: Play nature animal sounds and have students act out and move like that animal (e.g. eagle, bear, wolf)
8:45- 9:35	Transdisciplinary theme: How the World Works. Carpet Time: Discuss and break down the central idea/lines of inquiry. Brainstorm what students already know about nature and the central idea. Independent time: Have students go back to their desk and complete a wondering that they have about the central idea that will be posted on the wonder wall.
9:35-10:05	Before going to DPA put snacks on their tables. DPA: Take students outside, play there and back (walk like a bear there and on the way back swim like a dolphin) + “changes” tag: the students running around are flowers, the student that is “it” is the sun. If they get tagged the flower wilts as it got to close to the sun so the student tagged will bend over to signal they have wilted.
10:05- 10:10	Sanitize +Start Snack
10:10- 10:30	Recess
10:30-10:50	Silent Reading (play nature music while students are reading) +Sanitize + Snack (if students didn’t finish their snacks before recess)

Day 1	Introduction/ Provocation to the new transdisciplinary theme of: How the World Works
10:50-11:40	Transdisciplinary Theme- How The World Works: Provocation Inquiry Items. Have students rotate from table to table recording their questions and ideas of the items on the chart paper.
11:40- 11:45	Brain Break Dance Edition: Put the youtube version of everybody dance now with the dancing slugs onto the SMARTboard and have students dance!
11:45- 12:10	Journal Write: Have students free write to the journal stem of: I wish I could...
12:10- 12:30	Wash hands + have lunch
12:30 -1:15	Lunch Playtime Outdoors
1:20-2:00	Math Tubs- students will be assigned to a math tub
2:00-2:45	Nature Centre Time – Play time
2:45- 2:50	Clean up time (students stack chairs, sweep, tidy tables, line up backpacks at door)
2:50- 3:00	Read a picture book to end the day, reflect on the day and say good-byes at door
3:00	Dismissal

Assessment and Modified Work Plans:

Assessment for this unit of inquiry will be ongoing. One of the forms of assessment that I will use is self-assessment; having students reflect on their own work/progress as well as another will be peer assessment in which students will check their peers' work to ensure that they have met all necessary criteria. I will make it a point to teach students the term criteria and to have the criteria posted on the board when students are working. This sets up students for success, as they will understand what I will be looking for when I evaluate their work. Another form of assessment that I will be using is anecdotal comments; I will have a chart with individualized boxes for each student in which I will write comments and thoughts throughout the unit. I will also assess through anecdotal comments in students' journals and students' interactions/comments with their peers during centres. I will also use observations and checklists on a regular basis. Moreover, for the formative assessment of this unit of inquiry I have designed a graphic organizer that students will complete after going on a nature walk. The graphic organizer will have three components. First the organizer will ask student to colour/circle the tools that they can use to observe and explore outside (e.g. an ear, an eye, magnifying glass, binoculars). Next, students will draw some changes that occur in nature, which they may have noticed, or know about them from inquiries/discussions or observations from the nature table. The last part will have students explain 'How they knew that the change has happened? Explaining what sense helped them to know about the change after the nature walk. For the summative assessment students will be shown an unusual object in nature. They will be asked to be detectives and observe/investigate the object. They will be given a graphic organizer that focuses on using their senses and scientific tools that they can use to explore the object. The teachers will scribe the students' responses in a one-on-one situation. They will also be asked: How could this item change in nature? Students' responses will be assessed based on a predetermined rubric.

To assess the Language Arts component of this unit, I would assess students' journals and writing booklets by making anecdotal comments. To assess students' Mathematical skills, I would have one-on-one work time with students asking them to show me how to create a pattern, measure a natural item using a non-standard unit of measurement etc. For Social Studies, I will observe students responses to how they can positively help the environment and I will create a rubric for their class presentation to assess their oral and presentation skills. Lastly, for Art, I will assess students' abilities to cut and glue as well as the amount of detail that they used for creating their artwork.

To ensure that all students are set up for success, I will make modifications to the lessons to best support all learners. When I am teaching this unit of inquiry in order to assist English Learners (ELLs) as well as all learners I will use pictorial representations as well as have tangible items to show students. I will also be using word walls accompanied with pictures. Moreover, I have lots of group work throughout the inquiry unit and there are many benefits for collaborative learning where ELL students will be learning from their peers. For students that need enrichment options, I will have an iPad set up with apps that are based on this unit of inquiry. This way a student can go to the iPad if they are finished early or if they need enrichment. I will equip the iPad with auditory lessons or activities

to help spark inquiry and further discussion. Having additional books on the unit of inquiry is also beneficial to promote future wonderings. Moreover, I will encourage students that need enrichment to strive higher in their abilities and be “risk-takers” (IB learner profile). For example, if a child has strong writing skills I will challenge them to write more than what is required. For students that need extra support, similarly to the enrichment option, I will put apps on the iPad to help students as well as create auditory lessons that will guide the students through a specific concept that they are struggling with. I will also encourage students who need extra enrichment to teach/guide students that need additional support, as they can both learn from each other. At the end of this unit, we can discuss what we enjoyed the most/least and new ideas (chart this) so it gives me direction for the future.

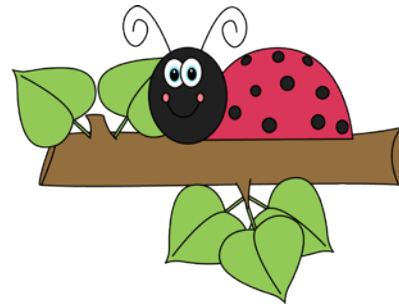
Dear Families,



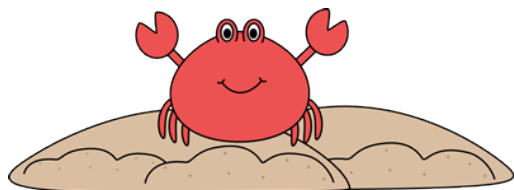
On April 24, our class will be starting a new transdisciplinary theme of How the World Works. This is a very exciting and engaging unit for the students, as they will have the opportunity to explore, investigate and discover the natural world. Students will be learning about changes that occur in nature, “scientific” tools that can be used to make observations and what they can personally do to make a positive impact on nature. We will also be going on several day field trips (more information to come) and inviting experts to come into the classroom to share their knowledge. This unit is very “hands on” therefore do not be alarmed if there are not as many papers coming home in their home-folders. Please encourage your child to go outside and explore, ask questions and read books about nature. We will still be continuing the morning guessing bags on your regular sharing day; however please have your child bring a natural item for their guessing bag to share with the class.

Thank you for your continued support!

Sincerely,
Miss McArthur



Dear Families,



On **Thursday May 7th, 2015** our class will be going on a field trip to White Rock Beach by school bus! The cost of this trip will be \$4/ child. The goal of this field trip is for students to participate in taking action in their local community, as we will be picking up garbage around and near the beach (tongs and gloves will be provided). As a class, we decided that this was how we were going to take action to make a positive difference in the environment. The class will be observing and investigating the beach as this is a wonderful opportunity for students to engage and interact with another local ecosystem. We will also be staying to have a picnic lunch at the beach. Please have your child wear comfortable walking shoes and wear appropriate clothing for the weather. Also please have your child bring a backpack with their lunch, water bottle, sunscreen and hat. This will be a very exciting and rewarding trip for your child! If you would like to accompany your child please let me know so you can join us on the bus or if you prefer meet us at White Rock Beach by the White Rock.

Please fill out, sign the next page of this form, attach the \$4 and have your child bring it back by May 4th, 2015.

Thank you for your support.

Sincerely,

Miss McArthur

Agenda (Approximate Times):

Leave School at 10:30

Meet at the White Rock for 11:00

Explore and pick up litter at White Rock 11:00-12:00

Lunch 12:15- 12:40

Free Time 12:40-1:15

Return to school for 1:45

Regular classroom activities till dismissal at 3:00

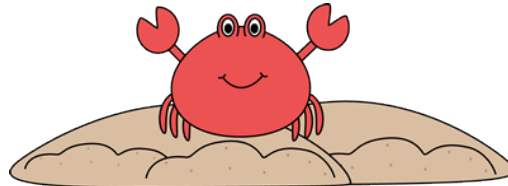
Please return the “**SIGNED PERMISSION FORM**” and **\$4.00/child** by **Monday, May 4th, 2015**.

_____ has my permission to attend the field trip to
(Child’s Name)
White Rock Beach on Thursday, May 7th, 2015 from 10:30 – 1: 45 pm under the direct supervision of Miss. McArthur and parent helpers.

Parents or Guardians Signature

Date

Please put a checkmark in the box if you would like to accompany your child on the field trip to White Rock Beach



Inquiry questions to help guide students learning:

- How do people discover the world around them?
- What kinds of changes happen in nature?
- How do we know _____ has changed?
- If we did not have all of our senses, how would this affect our ability to observe the world?
- What are the consequences of not caring for our environment?

Poem:

This is a sample of a weekly poem. Accessed from <http://just4teachers.blogspot.ca/2011/04/i-like-bugs-poemjust-because.html>

I Like Bugs:
Black bugs, green bugs
Bad bugs, mean bugs,
Any kind of if bug,
I like bugs.

A bug on the sidewalk,
A bug in the grass
A bug in the rug
A bug in the glass
I like bugs.

Round bugs, shiny bugs,
Fat bugs, buggy bugs.
Big bugs, lady bugs,
I like bugs.

Music + Songs:

I would incorporate nature CDs into the classroom when students are quietly working (journal time) or when they are silently reading. In terms of incorporating songs into the classroom, I would do this during calendar time, or when we need a brain break!

Here are two of the songs that I will introduce:

I'm a Bug Watcher!
Written by J. Albright & K Turner
(Tune: Are You Sleeping?)

I'm a bug watcher,
I'm a bug watcher.
Don't you know?
Don't you know?
When I'm finished watching,
When I'm finished watching.
I let them go!
I let them go!

Going Green by Harry Kindergarten

(Accompany the lyrics with the youtube video <https://www.youtube.com/watch?v=8DJ45Yc3urg>)

We're going GREEN We're going GREEN We're gonna' take care of the Earth We're going GREEN You can go GREEN at your home or school REDUCE REUSE RECYCLE REDUCE Be careful how long you take a shower You don't need to stand there for 70 hours! Turn off the water when you're brushin' your teeth ...and only use the necessary energy Turn off the lights when they're not in use Think how much ELECTRICITY you produce! Take quick drinks Walk to school REDUCING energy is really cool! Pull out plugs when you're not using them Turn off the computer every now and then Throw away litter Pick up trash ...and you'll save the Earth in a flash! We're going GREEN We're going GREEN We're gonna' take care of the Earth We're going GREEN You can go GREEN at your home or school REUSE RECYCLE REUSE Reuse stuff when you're OUT and ABOUT	If you can use it again, don't throw it out! REUSE bottles REUSE bags REUSE containers REUSE rags DONATE toys so someone else can use 'em! DONATE clothes Don't just lose 'em! We're going GREEN We're going GREEN We're gonna' take care of the Earth We're going GREEN You can go GREEN at your home or school REDUCE REUSE RECYCLE RECYCLE Just throwing away is not enough RECYCLE some things to make new stuff! Paper Cans Plastic Glass Cardboard Games, CDs, and DVDs Light bulbs, cartridges, and batteries Laptops, cell phones, and the news Lots of METALS you can choose We're going GREEN
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Book List

A is for Action: The ABC's of Taking Action by Jeff Hoffart and Tosca Killoran

Giving Thanks: A Native American Good Morning Message by Chief Jake Swamp

If You Find a Rock by Peggy Christian

In The Ocean by A.J. Wood

Not a Stick by Antoinette Portis

On Beyond Bugs: All About Insects by Dr. Seuss

Taste... Touch... See...Smell... Hear... Series Picture Books by Patrick George

The Curious Garden by Peter Brown

The Earth Book by Todd Parr

T.U.R.N & LEARN SENSES Picture Book, no author but published by Phidal Publishing

Questions, Questions by Marcus Pfister

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