A Trail To Every Classroom (TTEC)
Curriculum Development Tool

UNIT DESIGN COVER SHEET

Author contact: Eliza Hutchinson

School name, state and town: Ottauquechee School, Quechee, VT

Title: “KinderGuiding”

Abstract/Vignette: There are outdoor spaces and features one can explore and learn about using ones’ senses. There are outdoor spaces that belong to us all that we can share and protect.

Grade level(s): Please check all that apply.

☑ K-2 ☐ 3-5 ☐ 6-8 ☐ 9-12 ☐ College and Lifelong Learning

Discipline: Please check all that apply.

☑ Art and Music ☑ Health and PE ☐ Foreign Language

☐ Literature and Language Arts ☐ Mathematics ☑ Science

☑ Social Studies and Geography ☐ History ☐ Technology

Year Developed: 2011

Period (month long unit vs. week long): Year Long

Teaching environment:

☑ In the Classroom (indoors) ☑ On the Trail

☑ In the Community ☐ Online/Virtual
Service Project
What project(s) could your class undertake that would actively engage your students in learning about this theme? What could the final product be? Trail Guiding—leading local retirees on our trail, and then on the Appalachian Trail, to demonstrate our trail-walking and nature observation expertise.

Partnerships & Benefit(s)
Who are potential community partners that could assist you in this project? What are the potential benefits for your class and your partners of working together?
- Quechee Library
- Quechee Garden Club
- Quechee Lakes Landowners’ Association
- Green Mountain Club, Dartmouth Outing Club
- Ottauquechee Health Partnership

Big Idea
What is the main idea you want your students to come away from the unit knowing? There are outdoor spaces and features one can explore and learn about using one's senses. There are outdoor spaces that belong to us that we can share and protect.

Skills and Habits of Mind
What are the academic or life skills students will gain from this unit? What habits of mind do you expect them to demonstrate?
- Think all disciplines.
- Observation
- Theory of Mind—understanding the perspective of others
- Isolation of sensory input

Knowledge of the State Framework of Standards
Which elements of the state framework of standards does this unit address? What are the skills and outcomes you will help guide students toward?
- SPK (Unit Objectives/Anchors/Outcomes)
- K:48 Weather observation
- K:38 Classification of living things
- K:41 Students demonstrate their understanding of human body systems by identifying the five senses and using the senses to identify objects in their environment.
- SPK-K:32 Weather observation

Essential Questions (Unit Objectives)
What are the essential questions that will help guide students toward understanding the Big Idea? What are the body's five senses? What is understanding the Big Idea?

Student Role
How will you guide your students to express ideas, be involved in project decisions, and evaluate outcomes?
- Students will predict experiences in group settings, and will journal with photos about a favorite spot on the trail. Students will make choices about how they share the trail with their buddies, including what to make for snack, and what to point out. Students will make guided decisions about who to invite on the trail and when to hold the trail walks. Students will develop rules for trail-walking.

Community Connections
What opportunities or needs exist in your school or community that could be addressed by a student project related to your big idea for learning?
- Ways to get other classes on the trail
- Ways to get community members involved/aware with/of our school
- Ways to improve trail

Resource
Describe resources (books, articles, materials, supplies) you will use to support this unit?

Models & Examples
How will students understand the expectations for their project? What exemplars of student work will they see?
- T-shirt, button, hat, bandana?

Your Evaluation of the Unit
How will you evaluate the unit and make note of what worked well and what could be improved? How will you analyze and interpret project outcomes?
- Feedback from my principal and participant adult buddies, interest in continued participation the following year will be indicative of success for the volunteers
- Participation the following year will be indicative of success for the volunteers

Final Celebration
How will you celebrate the success of your unit and share its results with the school and community?
- Year Long Hike together on the AT
- Guide retiree buddies on our trail
- Sensory trail walks
- End of year banquet for the buddies

Student Assessment
How will you assess student learning? How will you know if they have met the goals for the established outcomes?
- Participation, anecdotes from adult buddies, ability to describe the trail as it changes throughout the year, ability to answer specific verbal questions about isolated sensations (what do you hear, what can you smell, etc.)

Project Name: KinderGuiding
Teacher(s): Eliza Hutchinson
Grade Level: Kindergarten
Time Frame: Year Long

How will you share your learning? How will you share the results of this project?
- Partnership, anecdotes from adult buddies, ability to describe the trail as it changes throughout the year, ability to answer specific verbal questions about isolated sensations (what do you hear, what can you smell, etc.)
## Ross McGee
### Animal Adaptations unit

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Ross McGee

Ecosystem Lesson Plan

**Hook:** Ecosystem activity

**Material:** Index cards with names of ecosystem inhabitants, transparency overheads

**Learning experiences:** The ecosystem activity will help students internalize and conceptualize what an ecosystem is.

**Adaptations/Accommodations:** By having the students participate in the Ecosystem activity, they will move around the classroom, interact with one another and discuss their ideas together.

**Procedure:**

Does anyone know what I mean when I say system? Lets brainstorm some different kinds of systems. **System: A whole that is made up of parts that work together.** Brainstorm a couple of different kinds of systems. Solar System (interaction: planets/moons, planets/sun, planets/planets, energy: gravity, the sun), Respiratory System (interaction: lungs/oxygen, oxygen/blood, nose/mouth, energy: muscles), Political System (interaction: democrats/republicans, senators/congressmen, country/country), Healthcare System, Transportation System (cars/trucks/buses/trains/airplanes/bicycle, energy: gas/humans), Criminal Justice System, **Ecosystem (interaction: animals/animals, animals/plants, energy: sun).** So in an ecosystem, we have animals that interact with each other and with plants, and depend on each other for survival.

I am going to pass out some index cards. On each of these cards you will find the name of something found within a certain kind of ecosystem. Once all the cards are distributed, you need to find the other people that belong with you in your ecosystem. For example, if someone had a card that said ‘Whirligig Beetle,’ you would look for other people with cards that belong in a wetland environment.

Pass out cards.

Once you have found your group (there will be five people in each group), come up to me and I will give you the rest of your assignment.

Now that you know your environment, and some of the biotic things found there, I want you all to come up with an idea for a video game that takes place in your ecosystem. You will need to come up with the main character/ hero of your game, what happens in the actual gameplay, what things they need along the way to help them reach the end of the game, where they will battle against the enemy (given to students). Think about the different interactions that take place in your environment, and what your hero will need.
to have in order to reach the end bad guy (energy). Try not to have the character do things they might not otherwise do normally in their environment (i.e. a jaguar cannot fly), but it is ok if they can talk to other animals etc. Write down your ideas and then try to organize them in a way that makes your game understandable. Once you have done this, bring your game ideas to me, and try to ‘sell’ me your game. Pretend I am the CEO of Nintendo and you want me to make your game.

Index Cards:

**Desert Environment**: Cactus, Tarantula, Giant Scorpion, Horned Lizard, Rattlesnake
   Enemy: Heat Monster ?
**The Ocean**: Seaweed, Shrimp, Herring, Tuna, Hammerhead Shark
   Enemy: Pollution Monster ?
**Tundra**: Arctic grass, Caribou, Arctic Fox, Arctic Wolf, Polar Bear, Snow Rabbit
   Enemy: Cold Monster ?
**Tropical Rainforest**: Coconut Tree, Parrot, Tree Frog, Howler Monkey, Jaguar
   Enemy: Wildfire Monster ?
**Ross McGee**

**Food Web Activity**

**Objectives:** Students will understand what a food web is. Students will understand the complexity of energy transfer in a forest ecosystem. Students will understand how things in an ecosystem are interdependent.

Focusing Question: It is important to understand food webs because they help illustrate the connections between all animals/plants in an ecosystem. They learn that even harming/removing one species can have a ripple effect felt through the entire system.

**Procedures:**

Brainstorm different life forms found in our local forest ecosystem, discuss the Food Chain of certain animals, predator/prey scenario

Food Web Activity

Discussion of Chief Seattle’s Quote

“Teach your children what we have taught our children that the earth is our mother. Whatever befalls the earth befalls the sons and daughters of the earth. This we know. The earth does not belong to us; we belong to the earth. This we know. All things are connected like the blood which unites one family. All things are connected. Whatever befalls the earth befalls the sons and daughters of the earth. We did not weave the web of life; we are merely a strand in it. Whatever we do to the web, we do to ourselves.”

“When one tugs at a single thing in nature, he finds it attached to the rest of the world.” John Muir

**Material:** Ball of string, Food Web Badges, tape

**Hook:** The Food Web Activity involving the Ball of string

After brainstorming some ideas and talking about the results, tell the kids:

We are going to go to the multi to create a model of a food web. It is important that you guys listen carefully to directions once we get out there, or this won’t work. Discuss proper nature trail walking etiquette, and remind students about our rules on TONTO. Assign badges to the students. Ask the students to tape them to their chests. Go to TONTO and hike to the upper classroom. Explain that we are going to simulate a food web. So-and-So is the Sun. All energy on Earth comes first from the sun, so this person will start with the ball of string. They then pass it one level up the food chain, to
someone who is a plant. The plant can then throw to someone who eats plants, that person to someone who eats them and so on. You can either move up or down the food chain as you see fit, and you need to try to toss to someone who hasn’t yet been brought into the food web. Toss the ball under the Web.

Once students have completed making the Web, ask them to slowly step back until all the slack has gone out of the string.

What happens when a predator goes on a hunt?

What happens when one organism leaves the web? Goes extinct/eliminated?

What happens when a new predator is introduced to the ecosystem?

What happens when you place a weight on the web? Other factors are affecting it

FOREST ECOSYSTEM

1. Sun
2. Grass - Sunlight
3. Shrubs - Sunlight
4. Young trees - Sunlight
5. Deer – young trees, shrubs
6. Bobcat – Rabbit, deer, skunk
7. Coyote – rabbit, deer, skunk
8. Great Horned Owl - skunk, insects, small rodents
9. Skunk – eggs, insects
10. Porcupine – insects, eggs
11. Rabbit - grass
12. Black Bear – berries, wasps, fish
13. Beaver – young trees, waterlilies
14. Squirrel
15. Mouse
16. Fox
17. Fish

WATER ECOSYSTEM

1. Sun
2. Caddisfly Larva – algae and plants, some insects
3. Damselfly larva – other larva
4. Dragonfly – carnivore, other flying insects
5. Yellow perch – insects, crayfish, fish eggs
6. Largemouth bass – smaller fish, crawfish, eggs, eels
7. Crayfish – living and dead plants and animals
8. Algae globe – sunlight
9. Eel grass – sunlight
10. Whirligig beetle – insects and invertebrates
11. Snails – algae and plants
12. Water strider – insects, other small invertebrates
13. Chain pickerel – fish, crayfish, newts
14. Dobsonfly larva – insect larva
15. Diving beetle – carnivore, small fish
16. Cattails – sunlight
17. Minnow – plants and small fish
18. Otter – animals and fish
19. Pike – fish
20. Humans – Fish and Plants
21. Osprey - Fish
...Into the Forest...

from the Appalachian Trail to Forest Kindergarten
Ottauquechee School, Hartford, Vermont
It’s August...
It’s already there...
KinderGuiding

A program to connect kindergartners with their community and environment by bringing in local retirees to join our students for nature-based events throughout the year, culminating in a hike on the Appalachian Trail.
We start with a get-to-know you indoor activity in September or early October. This can include a tour of the school led by the kindergartners, showing off school work, and a nature-based craft project.
A week or so later we get together again and head out on our trail. We’ve had great success with building fairy houses as a focusing activity for the retiree-KinderGuides buddies.
Students are encouraged to be guides, helpful, knowledgeable about our forest, and thoughtful about their retiree buddies. The retirees in turn bring building supplies from their own gardens and local/historical
We reconvene in the spring for two more outings together. One year we did a sensory walk on the trail, another year the retirees chaperoned a field trip to our local nature center.
We coordinate stops along the trail with a local thru-hiker and an educator from the local nature center. We also usually run into a current thru-hiker or two.
We hike a mile on the trail at a spot where the bus can drop us off in one spot and pick us up from another road at another spot. We eat lunch at the “top” actually a river bed under pines. We hike in groups of ten or less, with activities (leaf rubbing, bubbles, jumping in the river) at the bottom or top to stagger the groups.
so then... http://www.schoolsoutfilm.com/
we found a cohort looking to do the same thing

http://www.antiochne.edu/teacher-education/med-working-teachers/educating-for-sustainability/
...and then we went outside.
In the morning, as students arrive, some illustrate Forest Plans, others learn from non-fiction books, like Naturally Curious by Mary Holland.
Usually on our way into the forest we stop at the ampitheater to think about what we might be noticing on the way up, these days we are focusing on our five senses...we never forget to put on our owl eyes!
Our first order of business was to build a debris shelter.
First thing every Forest Friday we meet together for a greeting and to note the temperature, we have two different thermometers and a rain gauge.
We read at least one story every Forest Friday. We also have a rest time, one child, one tree.