

	GE's	TOPIC	ACTIVITIES	Lesson
A Sense of Place: Introductory Activities	IT3-4:1	Our Local Community- Natural Areas	Develop a Sense of Place- read <u>Pumpkins</u> & discuss special places in our community. Write to the town Conservation Commission about preserving special natural areas.	1
			Take photos around town & create a PhotoStory exhibit or display of photos titled "Richmond-Through Our Eyes".	2
	S3-4:47	Lake Champlain Basin Watershed	<ul style="list-style-type: none"> • KWL- What is a watershed? • Water Naturally (<u>This Lake Alive</u>, p. 415-420). 	3
			<ul style="list-style-type: none"> • Identify important parts of Lake Champlain Watershed and our place within it using topographic maps & 3D Watershed Model with guest speaker. • Where are you in the Watershed? (<u>This Lake Alive</u>, p. 461). 	4
Field Naturalist Skills: Data & Observation Stations	S3-4:4	Tools of the Trade	Demonstrate proper use of data collection tools that will be used in field study, including thermometers, soil samplers, tape measures, light meters, etc.	5
	S3-4:4	Doing What Field Naturalists Do	Discuss why these skills are important, who uses them and how the data collected is used. Practice skills and use of tools in the classroom to prepare for field study. Complete Observation & Data Collection Stations & review results.	6
Fall Exploration	S3-4:36	Introduce Natural Communities	<ul style="list-style-type: none"> • Create charts in groups listing what we know about different local habitats, including what types of plants, animals & special conditions that exist • Discuss elements of a Natural Community • Lake Champlain as an Ecosystem (<u>This Lake Alive</u>, p. 424-430) 	7
	S3-4:36	Predator-Prey Relationships	<ul style="list-style-type: none"> • Predator-Prey (<u>Project Seasons</u>, p. 153) Students will understand and dramatize predator-prey relationships. • "Oh Deer" (Project Wild) outside game 	8-9
	S3-4:35	Food Chains & Food Webs	<ul style="list-style-type: none"> • Food Chain Game (<u>This Lake Alive</u>, p. 397) • Popcorn Food Chain (Hands-On Nature, p. 73) • Bill Nye movie- Food Webs. • "Yesterday's Lunch" activity- create a food pyramid by categorizing producers and consumers. 	10-12
	S3-4:34	Flow of Energy through the Food Chain	Run for the Sun (<u>Project Seasons</u> , p. 55) Students will demonstrate how energy flows through a food chain. (best played outside in nice weather)	13
	S3-4:4	Outdoor Exploration/Field Trip	School Yard, Local Park, Audubon Ctr. <ul style="list-style-type: none"> • General exploration w/nature journals • Microhabitats w/data collection • Fall Scavenger Hunt • Digital photos 	14
		Case Study: Canada Geese Migration	Internet Resources: www.learner.org/jnorth	15
		Extensions	Write Haikus about "Our Place" w/ watercolor illustrations	16

Winter Exploration	S3-4:36	Cold Weather Adaptations	Coping w/ the Cold (<u>Project Seasons</u> , p.145) Students will learn about the winter survival strategies of New England animals.	17
	S3-4:36	Review New England Habitats	Who am I? (<u>Project Seasons</u> , p.155) Students will learn effective questioning techniques through an activity on the habitats of New England animals in the winter	18
	S3-4:4	Observation & Detective Skills	<ul style="list-style-type: none"> Sharp Eyes (<u>Project Seasons</u>, p.151) Students will sharpen observation skills by determining small changes in a partner's appearance. Gifts from the Forest- Students will sort & discuss important items (include foods, products, environmental benefits, recreational benefits) 	19-20
	S3-4:36 S3-4:4	Tracking / Looking for Animal Signs	<ul style="list-style-type: none"> Sole Search (<u>Project Seasons</u>, p.149) Students will use observation skills to distinguish different footprints. Pitter Patter (<u>Project Seasons</u>, p.157) Students will learn to observe animals by studying their tracks and will understand how animals can be grouped according to the way they move. 	21-22
	S3-4:36 S3-4:4	Outdoor Exploration / Field Trip	<ul style="list-style-type: none"> School Yard, Local Park, Audubon Ctr. General exploration w/nature journals Tracking, data collection & sorting w/ dichotomous key Snow-shoeing Take digital photos 	23
		Case Study: Dormancy- Black Bear	<ul style="list-style-type: none"> Internet Resources: National Wildlife Federation website VT Department of Fish & Wildlife website & outreach 	24
		Extension	Create Bird Feeders (<u>Project Seasons</u> , p.178)	25
Spring Exploration	S3-4:36	VT Habitats through history	Students will use historic maps, repeat photography, and VT history books to learn how the landscape in our area has changed over time, due to human and natural causes.	26
	S3-4:36	Maintaining Natural Communities	<ul style="list-style-type: none"> The Lake Champlain Basin as an Ecosystem (<u>This Lake Alive</u>, p. 424-430) Human Impact (<u>This Lake Alive</u>, p. 431-446) 	27
	S3-4:4	Field Naturalist Tools & Techniques	Create waterscopes. Organize tools: collection nets, jars, reference guides, etc. (<u>This Lake Alive</u> , p. 424-430)	28
	S3-4:4	Outdoor Exploration / Field Trip	<ul style="list-style-type: none"> School Yard, Local Park, Audubon Ctr. General exploration w/ nature journals Observing Water Creatures (<u>This Lake Alive</u>, p. 475-476) Water sampling to look for macro- invertebrates, data collection Digital photos 	29
	S3-4:35	Case Study: Raptors	<ul style="list-style-type: none"> Fill the Bill (<u>Project Seasons</u>, p.175) Discuss raptors in the Food Web, types of raptors in our area. Read <u>Owl Moon</u> and discuss owls' habitat Read <u>Meerie Meets the Ospreys</u> and discuss endangered raptors, threats to their survival and ways to conserve their habitats. Dissect Owl Pellets & identify bones and recreate skeletons of their prey. 	30-34

Culminating Activity, Final Assessments & Service Learning Project		Culminating Activity: "Richmond Through Our Eyes"	Photostory Display or Photo Exhibit in Town Hall, Library or Community Center (also at school)	35
	S3-4:4 S3-4:35 S3-4:36	Group Project	Group Project: Local Ecosystems- Students will work in teams to research ecosystems within the Champlain Basin (VT Fish & Wildlife website). Each Ecosystem Team will create a large educational poster about the important aspects of their ecosystem.	36
	S3-4:4 S3-4:35 S3-4:36	Individual Project	Individual Project: Local Animals- Each student will choose a wild animal found in one of the local ecosystems and research its important characteristics, including adaptations to the local area, its place in the food web, its preferred habitat, threats to its survival, etc. <ul style="list-style-type: none"> • Make track stamp for animal (to use on poster). • Each student will create an informative poster & share with the class. 	37-39
	S3-4:35 S3-4:36	Written Assessment	Students will study one plant & one animal in order to design a field guide that describes its characteristics, home, food sources, adaptations for survival, role in the food chain/food web, & niche in the ecosystem. Using the information they have gathered, they will describe the role of their plant & animal in the flow of energy through the ecosystem, the food web and their habitat.	40
		Service Learning Project in the community	Students will brainstorm a plant, animal or habitat that needs assistance in our community based on their field study and knowledge of local issues. They will identify a need and propose a solution for the problem. After consulting experts in the area, they will plan and organize a project that will begin to solve the problem. They will share their project with other students and community members to reinforce the importance of stewardship of the land and respect for nature. Some examples might be: <ul style="list-style-type: none"> • Re-stocking trout • Habitat restoration • Salamander crossing • Other topics, as determined by the students 	41