A Trail To Every Classroom (TTEC) Curriculum Development Tool

UNIT DESIGN COVER SHEET

Author contact: **Caitlin Ward**

School name, state and town: **Berkshire School, Sheffield MA**

Title: **Teacher- Biology and Environmental Studies**

Abstract/Vignette:

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

Year Developed: **2015**

Period (month long unit vs. week long): **Month long**

Teaching environment:

☐ **In the Classroom (indoors)** ☐ On the Trail

☐ **In the Community** ☐ Online/Virtual

Caitlin Ward

Berkshire School

245 North Undermountain Road

Sheffield, MA

A Trail to Every Classroom

Fall 2015

STAGE 1- DESIRED RESULTS

A. Big Ideas

- Develop a sense of place
- Environmental stewardship
- Interdisciplinary thinking
- Every student will feel a connection
- Leadership affecting change

B. Enduring Understandings

- Question the philosophy and ethics of what you are learning
- Multi-disciplinary thinking: Environmental science, philosophy, biology, history, english
- Developing a sense of place builds awareness, stewardship, and ultimately civic responsibility

C. Essential Questions

- How does "place" influence lifestyle and point of view (borrowed this)
- How can you connect this material to your other classes?
- What is important about the ecology, geology, and history of the Berkshire region?

D. Content Standards

- N/A

E. Place-based Service Learning Lens

Grounded in Place

We will be sampling salamander abundance and diversity in several local sites, both on campus and off campus. Not only will this allow students to draw greater connections to our own mountain, but it will also provide opportunities to connect with places and people outside of our boarding school campus.

Real

Salamander abundance and diversity is an indicator of the health of an ecosystem. By surveying multiple study sites using proper sampling techniques, students will be able to draw comparative conclusions from their data.

Empowering

The foundation of this project was based in a group research project on salamanders on campus, designed and executed by students. Students will have the opportunity to determine how the final results of this project are presented.

Collaborative

The Kellogg Conservation Center has a population of Jefferson salamanders on which they are looking for more information. This project will allow for a mutually beneficial collaboration between Berkshire School and the Kellogg Conservation Center.

F. Acquisition (of Understanding)

Students will know…

- basic ecological principles
- salamander identification

Students will be skilled at…

- asking questions
- communication skills: formulating and articulating ideas and opinions
- research skills

Resources

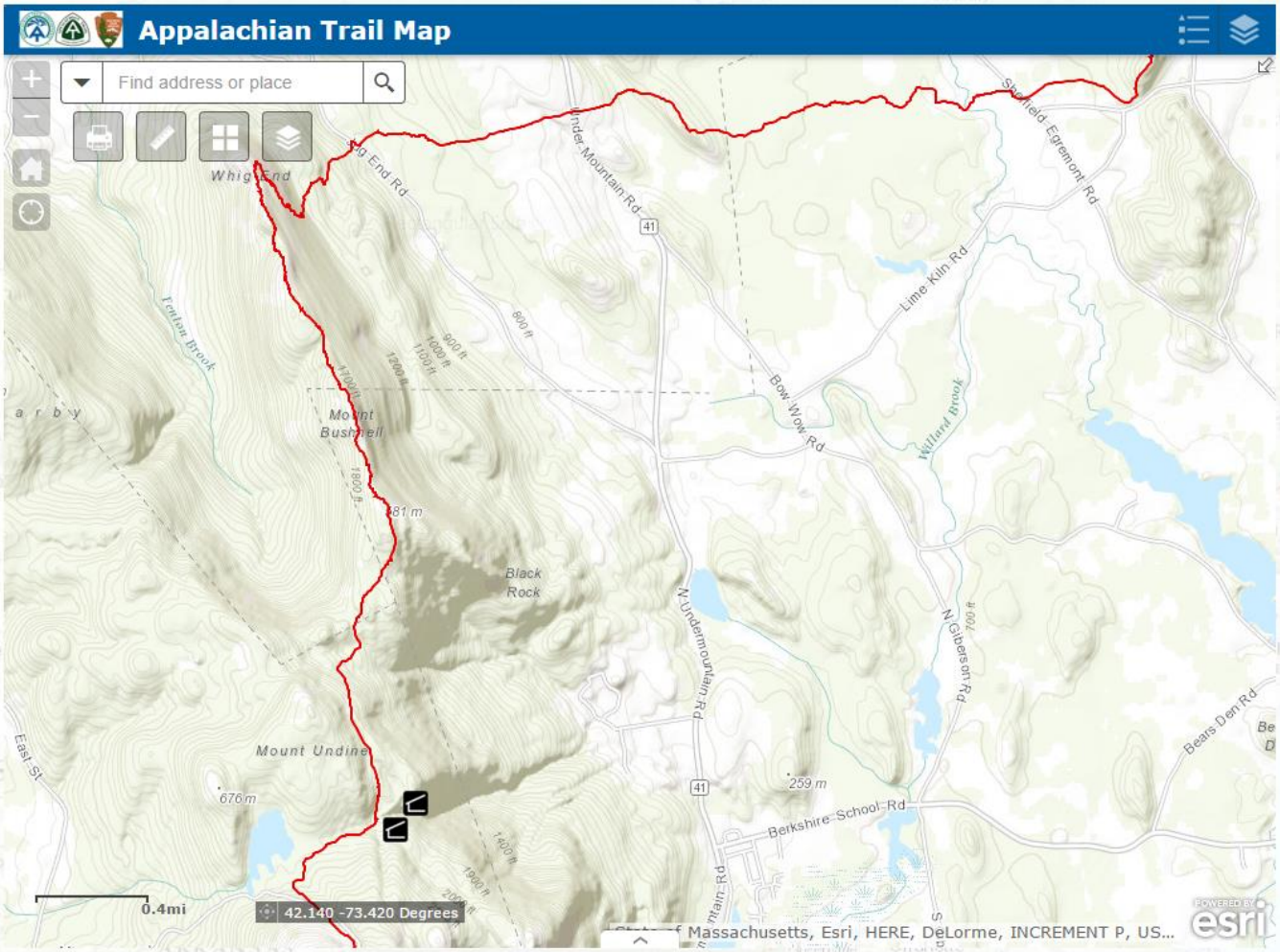
Salamanders

- *A Field Guide to the Animals of Vernal Pools*, Leo P. Kenney
- Massachusetts Herpetological Atlas Project
- Mass Audubon Wildlife Research and Conservation
- Jefferson Salamander Identification and Information

Partners contact list

Name	**Organization**	**Email**
Christine Ward	Ward's Nursery	ch.wards@verizon.net

Adam Brown	Kellogg Conservation Center	abrown@appalachiantrail.org
Deborah Phillips	Nutritionist/ ATC	deb@debphillips.biz
Silvia Cassano	KCC- Seasonal Technician	scassano@appalachiantrail.org
Cosmo Catalano	ATC	catalano.cosmo@gmail.com
Gary Briere	ATC	gary@riversedgecycling.com
Sue Garcia	Elementary School Teacher	smgarcia227@gmail.com.
Will Conklin	Greenagers	director@greenagers.org
Karen Lyness LeBlanc	Project Native	kleblanc@projectnative.org
Jim Pelletier	AMC	wanderer0131@yahoo.com
Christopher Cabot	Farm Mapping	chris.c.cabot@gmail.com
Kathy Orlando	Sheffield Land Trust	shefland@bcn.net
Ellie	Hotchkiss Farm Manager	eyoungblood@hotchkiss.org
Cricket Hill Garden	Shiitake mushroom farm	orders@treepeony.com
Chris Lee	GreenCore Building	swagmanlee@gmail.com



The Appalachian Trail (A.T.) interactive map, built cooperatively by the Appalachian Trail Conservancy (ATC) and National Park Service using ERSI's Arc GIS Online mapping technology. While useful, this map is for general reference purposes only and not intended to replace the more comprehensive and accurate A.T. printed hiking maps, available from the Ultimate Appalachian Trail Store.

Salamander Study Lab Report Checklist

Abstract [5 pts]

☐ Review of entire lab

☐ Contains one sentence of introduction, one sentence of methods, one sentence of results, and one sentence of discussion

Introduction [20 pts]

☐ Includes necessary background information

☐ Background information begins general and focuses in on more specific

☐ Last sentence(s) state hypothesis and link introduction into method used

Methods [10 pts]

☐ Paragraph form

☐ Condensed- does not contain any unnecessary information

[Unnecessary information = Pre-lab procedure, details on how to use equipment, details of math]

☐ Detailed enough to be duplicated

Results [15 pts]

☐ One- two sentences describe results of lab (this may vary)

☐ Result sentences are clear and concise

☐ Data is presented, but no conclusions are drawn

☐ Figures and tables are...

- ☐ Neat and organized
- ☐ Labeled correctly (Figures: x-axis, y-axis, title)
- ☐ Equipped with figure legends, which are located below figures

  For example: (Figure 1. This is a sentence that describes your figure or table)
- ☐ Cited within the text (Figure 1)
- ☐ Embedded in the lab report

Discussion [20 pts]

☐ Major conclusion is drawn

☐ All outside sources are cited in APA format

☐ Detailed explanation of major results

- If results make sense, supported with outside research
- If results do not make sense, possible explanations are described

☐ Sources of error are described

☐ Improvements to the experiment are detailed

☐ Suggestions for future experiments are mentioned

References [5-10 pts]

☐ All sources in APA format

☐ Sources are organized alphabetically

Formatting & Voice [20 pts]

☐ Times New Roman, 12 pt font

☐ Text is left-justified, titles are centered

☐ Appropriate heading (Name, Date, Class)

☐ Voice active and in past tense ("I" or "we")

☐ Audience awareness- no assumptions are made

☐ Correct spelling and grammar

☐ All text is in your own words!!

☐ Lab report is "*as long as necessary, but as short as possible*"

SALAMANDER BOARDS

Site Name:

Date:

BOARD #	SALAMANDERS (ID and abundance)	INSECTS (ID and abundance)	SOIL MOISTURE (1-3)
1 N			
1 S			
2 N			
2 S			
3 N			
3 S			
4 N			

4 S			
5 N			
5 S			
6 N			
6 S			
7 N			
7 S			
8 N			
8 S			

Soil Moisture: 1 = little to no moisture, 3= very moist

SALAMANDER PROJECT PRESENTATIONS

PEER AND GROUP FEEDBACK

Please write the name of your group members in each column. For each person, indicated the extent to which you agree with the statement on the left, using a scale of 1-4

1= strongly disagree
2= disagree
3= agree
4= strongly agree

Please make notes of any large discrepancies below.

Evaluation Criteria	**Your Name:**	**Group Member:**	**Group Member:**	**Group Member:**
FIELD WORK				
Focused and engaged in the field				
Contributed meaningfully to group work				
Played an equal part in contributing to data collection				
PRESENTATION PREP				

Attended group meetings and arrived on time				
Contributed meaningfully to group discussions				
Completed group assignments on time				
OVERALL				
Prepared work in a quality manner				
Demonstrated a cooperative and supportive attitude				
Contributed significantly to the success of the project				

How effectively did your group work?

Was there any additional guidance Ms. Ward could have provided for this project?

Please share any additional comments and/or recommendations: