Forestry in the English Classroom; Bridging the Curriculum
By Dixie McCormick

11th/12th Grade English/Language Arts

Unit Overview
These lessons are not specifically designed to be used as a stand-alone unit, but rather individual lessons to be inserted into existing units.
These lessons are designed to assist students in developing and using Language Arts skills in a variety of cross-curriculum situations, specifically pairing elements of the Science curriculum with benchmarks in the English/Language Arts Curriculum. While the lessons need not be presented as a unit they do share a Michigan Forestry theme, with individual topics that include different elements of forestry, such as the history of Michigan’s forests, tree identification and terminology, and stream characteristics. This unit expands upon and enriches the Language Arts units on analyzing, summarizing, and comparing informational texts, contrast and comparison, and in class presentations, as well as applying knowledge from grade level science texts.
The Goal of these lessons is to allow students to use and refine Language Arts skills in a variety of subjects and settings.

Lesson #1
<http://www.teachervision.fen.com/group-work/cooperative-learning/48532.html?page=1>
<http://www.slideshare.net/ageller/marzano-summarizing-and-note-taking>
<http://www.michigan.gov/documents>

Lesson #2
<http://www.michigan.gov/documents>

Lesson #3

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**Lesson #4**


**Lesson #5**


**Teaching and Learning Objectives**

Students will develop effective communication and literacy skills by engaging in cross-curricular activities and learning experiences by focusing on:

- *The History of Michigan’s Forests*
- *Michigan Tree Identification*
- *Physical Stream Assessment*

Students will work together in cooperative groups to summarize and present relevant material. Students will collect, describe and analyze physical data.

**Content and Benchmarks Addressed**

**STANDARD 1.1 Understand and practice writing as a recursive process.**

**CE 1.1.1** Demonstrate flexibility in using independent and collaborative strategies for planning, drafting, revising, and editing complex texts.

**CE 1.1.2** Know and use a variety of prewriting strategies to generate, focus, and organize ideas (e.g., free writing, clustering/mapping, talking with others, brainstorming, outlining, developing graphic organizers, taking notes, summarizing, paraphrasing).

**CE 1.1.3** Select and use language that is appropriate (e.g., formal, informal, literary, or technical) for the purpose, audience, and context of the text, speech, or visual representation (e.g., letter to editor, proposal, poem, or digital story).

**CE 1.1.4** Compose drafts that convey an impression, express an opinion, raise a question, argue a position, explore a topic, tell a story, or serve another purpose, while simultaneously considering the constraints and possibilities (e.g., structure, language, use of conventions of grammar, usage, and mechanics) of the selected form or genre.

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CE 1.1.5 Revise drafts to more fully and/or precisely convey meaning—drawing on response from others, self-reflection, and reading one’s own work with the eye of a reader; then refine the text—deleting and/or reorganizing ideas, and addressing potential readers’ questions.

CE 1.1.6 Reorganize sentence elements as needed and choose grammatical and stylistic options that provide sentence variety, fluency, and flow.

CE 1.1.7 Edit for style, tone, and word choice (specificity, variety, accuracy, appropriateness, and conciseness) and for conventions of grammar, usage and mechanics that are appropriate for audience.

CE 1.1.8 Proofread to check spelling, layout, and font; and prepare selected pieces for a public audience.

STANDARD 1.2 Use writing, speaking, and visual expression for personal understanding and growth.

CE 1.2.1 Write, speak, and use images and graphs to understand and discover complex ideas.

CE 1.2.2 Write, speak, and visually represent to develop self-awareness and insight (e.g., diary, journal writing, portfolio self-assessment).

CE 1.2.3 Write, speak, and create artistic representations to express personal experience and perspective (e.g., personal narrative, poetry, imaginative writing, slam poetry, blogs, webpages).

STANDARD 1.3 Communicate in speech, writing, and multimedia using content, form, voice, and style appropriate to the audience and purpose (e.g., to reflect, persuade, inform, analyze, entertain, inspire).

CE 1.3.2 Compose written and spoken essays or work-related text that demonstrate logical thinking and the development of ideas for academic, creative, and personal purposes: essays that convey the author’s message by using an engaging introduction (with a clear thesis as appropriate), well-constructed paragraphs, transition sentences, and a powerful conclusion.

CE 1.3.7 Participate collaboratively and productively in groups (e.g., response groups, work teams, discussion groups, and committees)—fulfilling roles and responsibilities, posing relevant questions, giving and following instructions, acknowledging and building on ideas and contributions of others to answer questions or to solve problems, and offering dissent courteously.

CE 1.3.8 Evaluate own and others’ effectiveness in group discussions and formal presentations (e.g., considering accuracy, relevance, clarity, and delivery; types of arguments used; and relationships among purpose, audience, and content).

STANDARD 2.1 Develop critical reading, listening, and viewing strategies.

CE 2.1.2 Make supported inferences and draw conclusions based on informational print and multimedia features (e.g., prefaces, appendices, marginal notes, illustrations, bibliographies, author’s pages, footnotes, diagrams, tables, charts, maps, timelines, graphs, and other visual and special effects) and explain how authors and speakers use them to infer the organization of text and enhance understanding, convey meaning, and inspire or mislead audiences.
CE 2.1.10 Listen to and view speeches, presentations, and multimedia works to identify and respond thoughtfully to key ideas, significant details, logical organization, fact and opinion, and propaganda.

CE 2.1.11 Demonstrate appropriate social skills of audience, group discussion, or work team behavior by listening attentively and with civility to the ideas of others, gaining the floor in respectful ways, posing appropriate questions, and tolerating ambiguity and lack of consensus.

CE 2.1.12 Use a variety of strategies to enhance listening comprehension (e.g., monitor message for clarity and understanding, ask relevant questions, provide verbal and nonverbal feedback, notice cues such as change of pace or emphasis that indicate a new point is about to be made; and take notes to organize essential information).

STANDARD E1: INQUIRY, Reflection, and Social Implications

Students will understand the nature of science and demonstrate an ability to practice scientific reasoning by applying it to the design, execution, and evaluation of scientific investigations. Students will demonstrate their understanding that scientific knowledge is gathered through various forms of direct and indirect observations and the testing of this information by methods including, but not limited to, experimentation. They will be able to distinguish between types of scientific knowledge (e.g., hypotheses, laws, theories) and become aware of areas of active research in contrast to conclusions that are part of established scientific consensus. They will use their scientific knowledge to assess the costs, risks, and benefits of technological systems as they make personal choices and participate in public policy decisions. These insights will help them analyze the role science plays in society, technology, and potential career opportunities.

E1.1C Conduct scientific investigations using appropriate tools and techniques (e.g., selecting an instrument that measures the desired quantity—length, volume, weight, time interval, temperature—with the appropriate level of precision).