

## **Unit Title: A Multimodal Urban *Walden***

*Subject/ Age: Middle School Science*

*Thread: Being Awake, Aware, and Alive*

*Background & Overview:* Henry David Thoreau grew up in Concord, Massachusetts. His surroundings for his time period included nature and small towns and villages. Students in urban environments often can't relate to the power of nature in Thoreau's sense. This lesson sequence instead focuses on middle school students' backgrounds and knowledge to relate Thoreau's 'Walden' to an urban landscape. Using the primary tool of photo-journaling students will express themselves through each of the five senses to relate to Thoreau's sense of wonder.

### *Objectives:*

SWBAT identify abiotic and biotic factors of different ecosystems

SWBAT utilize multimodal tools to document their living environment

SWBAT design a photojournal describing the world and the community around them

SWBAT describe a nonliving environment to intensify the meaning of a more natural environment

### *Essential Questions:*

What does it mean to use your senses?

How do living and nonliving things interact in an environment?

What does it mean for organisms to be interdependent on one another?

How can a writer's tone be described using abiotic and biotic factors?

How can nature be used to personify events?

### *Lessons and Assignment Directions:*

#### *Lesson 1/ Day 1: Introducing Nature*

Students will be prompted to begin analyzing the quote, "Will you be a reader, a student merely, or a seer",

- Leading questions may include:
  - What does this quote mean?
  - Do you identify with this quote?
  - What does it mean to be a seer
- They will have five minutes to complete this independently and then have three minutes to share their responses with their shoulder partner.
- Students will then be introduced to the lesson focus of being a 'seer'
- Students will define two terms: biotic factors and abiotic factors as such:
  - Biotic factor: living things that shape an ecosystem
  - Abiotic factor: non-living things that affect living organisms and the functioning of ecosystems
- Students will then participate in an item sort in identifying examples of biotic and abiotic factors through a slide show presentation.

- Example items to include: Air, Trees, Birds, Bees, Sunflower, Soil, Rocks, Lichen, Sunlight, Temperature, etc.
- Students will first label a column of paper with #1-10 and place an 'A' for abiotic next to the numbered examples that they believe to be abiotic and a letter 'B' for biotic next to the numbered examples that they believe to be biotic
- After going through the ten picture examples as a class, the students will then trade papers with a partner who will then mark their answers as correct or incorrect
- The teacher will then discuss the homework assignment for the class that requires students to take a picture on their cell phone that shows an abiotic and biotic factor in the same picture. The students are instructed to bring in and/or take three pictures: (1) around school (2) on their commute to/from school (3) at home
- Throughout the lesson there is a formative assessment as students work to classify biotic and abiotic factors

### *Lesson 2/ Day 2: Photo Journaling an Urban Landscape Using our Senses*

- The starter for today's class will be to take out the three photos that they have collected and to write one fact about the picture and one question that they have about the picture.
- Students will once again turn to their shoulder partner and share one picture, one fact and one response to the picture
- The teacher will ask one student to share one of their photos with the class on the document camera. Before the student's whose picture it is says anything the remaining students in the classroom will ask the student questions about the picture. As the student responds to each question, the teacher will generate a list of the different types of questions asked. Some possible examples include:
  - What is that orange object?
  - Why did you take this photo?
  - What were you doing before/ after this photo?
  - Were there other people in the photo or around you as you took the photo?
- After a list of 7-10 questions are generated, the teacher will then ask students to list off the 5 senses writing these on a board next to the questions.
- The teacher will then ask students to work with their shoulder partner to classify each of the questions based on what senses you had to use to answer each of them.
- Students will share their responses and the teacher will write their responses on the board.
- The teacher will include some commentary as to how in a single observation you are often using multiple senses to make sense of the item and how a picture captivates our 'sight', but often doesn't tell us the full story
- Students will then begin to look at one of their photos. They will be asked to choose one picture that they believe they can answer the most questions about similar to the activity they just participated in as a whole class and complete the same exercise as the one above independently writing a paragraph answering the questions that they have generated under their picture.

- Formative or summative assessment includes students' writing to an analysis of their photo as well as question lists generated and sorted based on the senses.

### *Lesson 3/ Day 3: Investigating Senses in Journaling*

For this lesson, students will be looking at some of Thoreau's writing analyzing the dichotomy between living and nonliving items to express meaning. The primary resource for this activity are a variety of passages from *Walden: Sounds*. Therefore, copies of the following excerpts should be made prior to instruction as well as a dictionary:

- "The whistle of the locomotive penetrates my woods summer and winter, sounding like the scream of a hawk sailing over some farmer's yard" (*Walden, Sounds*)
- "I heard the bells, the Lincoln, Acton, Bedford, or Concord bell, when the wind was favorable a faint, sweet, and, as it were natural melody, worth importing into the wilderness" (*Walden, Sounds*)
- "Air is full of invisible bolts. Every path but your own is the path of fate" (*Walden, Sounds*)
- "I would rather sit on a pumpkin and have it all to myself than be crowded on a velvet cushion. I would rather ride on earth in an ox-cart, with a free circulation, than go to heaven in the fancy car of an excursion train and breathe a malaria all the way." (*Walden, Economy*)
- "The laborer's day ends with the going down of the sun, and he is then free to devote himself to his chosen pursuit, independent of his labor, but his employer, who speculates from month to month, has no respite from one end of the year to the other" (*Walden, Economy*)
- "In the silicious matter which the water deposits is perhaps the bony system, and in the still finer soil and organic matter the fleshy fibre or cellular tissue. What is man but a mass of thawing clay?" (*Walden, Spring*)
- Using these passages, students will be asked to identify any biotic factors in the passage and asked to circle these. Students will then be asked to underline any abiotic factors in the passage. They will complete these in small groups.
- The teacher will then write the question on the board: "How does the use of biotic and abiotic factors help the writer portray his/her surroundings?"
- The teacher will select three-four students to share their thoughts on the topic leading a discussion surrounding this question.
- Students are then asked to look back on the piece they wrote yesterday describing the senses they used and added to give life to the image. Students independent task is then to go back to their original writing and include abiotic and biotic factors to add to the 'ecosystem' of their piece and help shape their writing like the example quotations explored earlier in the day.
- The teacher may choose to provide some sentence stems to get students started in editing their piece of writing such as, "The sun gleamed on the lone tree outside the school...."
- As an assessment, the teacher has the choice of collecting students' pieces or providing them with more time to edit them and make them into final products alongside their picture.

- As an extension to this activity, the teacher may choose to provide an introduction to Henry David Thoreau and his principles as expressed through the quotes chosen for them to analyze as an introduction to an environmental education lesson.

#### *References*

Thoreau, H. D., & In Atkinson, B. (1937). *Walden and other writings of Henry David Thoreau*. New York: The Modern Library.