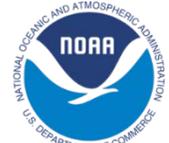


Literacy & Land Use Analysis



Grades	4 th and 5 th
Time	35-45 minutes
Overview	Students conduct field observations of how land is being used and consider the community's impact on the watershed system. Students connect local land use to land use and improvement movements in Kenya.
Objectives	<p><u>Understanding</u>: Students understand that there can be a variety of land uses and that humans affect these land uses.</p> <p><u>Skills & Processes</u>: Students develop observation skills and deepen understanding of the impacts of human land use on erosion.</p> <p><u>Values</u>: Students develop an appreciation for land management and the importance of this management to the Chesapeake Bay watershed.</p>
Essential Question	How does our management of the land affect water flow and water quality?
Primary VA SOL	Science (2018): 5.8d
Related VA SOL	Science (2018) 4.1, 4.8, 5.1 English (2017) 5.1, 5.4

Activity adapted from [Mpalala Alive](https://www.mpalalive.org/stories/nkcc-reading-corner-planting-the-trees-of-kenya)

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NOTE: We used excerpts from purchased copies of *Planting the Trees of Kenya* for our instruction but due to copyright, are not including the book or scans of the book in this lesson plan. You can borrow copies from your library, purchase at an independent bookstore, or watch at the YouTube video linked above. Pages 1-4 are from time mark 1:50-2:36. Pages 5-6 are time mark 4:26-4:43 and Pages 7-10 are time mark 6:45-8:18.

<p>Materials</p> <ul style="list-style-type: none">• Clipboard• Pencil• Datasheet• Selected pages (1-10) from <i>Planting the Trees of Kenya: The Story of Wangari Maathai</i> by Claire A. Nivola• OPTIONAL: large whiteboard & markers	<p>Special Safety</p> <p>Watch for any holes or branches on the ground that could cause tripping.</p>
<p>Set Up</p>	

- Choose 2-3 areas that show erosion & has multiple land uses (at Blandy: Peetwood, Picnic Grove, Lake Georgette).
- To drive home erosion & weathering concepts, be ready to ask: how does erosion occur; what are the effects; how can we prevent or lessen it?
- Each day, check sites in case a grounds crew has done erosion mitigation.

Instructional Strategy	
Recommended Grouping/Instructional style	Large Group setting Auditory and Action based instruction
Steps	<ol style="list-style-type: none"> 1. Engage: Show students the cover page of <i>Planting the Trees of Kenya</i>. Ask: what do you think this book is about based on the title and the illustration on the jacket cover? How can we relate this to our field investigation? How do you feel this connects to your other learning and life experiences? <ol style="list-style-type: none"> a) Take a moment to slowly look around the landscape and ask for at least three examples of how the land is being used. Bring the class together to share student observations (optional whiteboard to jot down responses). Based on responses, guide the discussion to consider human impacts, water flow, and land usage. 2. Review student journal: If this is the first station, distribute clipboards and field journals, otherwise have students turn to the appropriate page. Explain that the goal is to connect the book to land use in our watershed. 3. Explore: <ol style="list-style-type: none"> a) Read the first four pages of the book. (time mark 1:50-2:36) In small groups, students discuss the questions and compose responses in their journals. Instructors move around the groups to help stimulate conversations. b) Read 5-6 of the book (time mark 4:26-4:43). Again, students discuss and compose responses in groups. c) Repeat with pages 7-10 of the book (time mark 6:45-8:18). d) Discuss journal questions and facilitate conversations. 4. Evaluate land use: Go to the site locations, encouraging students to ask questions of one another and the instructor about the land use, structures, etc. as students consider and clarify human impacts. 5. Conclusion: Give students a few minutes to review their datasheets. What did they see as potential erosion problems? What can you do to improve the land in our area just as Wangari and others did in Kenya?

Literacy and Land Use Analysis:
Planting the Trees of Kenya: The Story of Wangari Maathai

As you read, pause and ask the following questions:

Pages 1-4: Wangari Maathai grew up in Kenya in a place with many trees.

- What does the figurative language on page one mean: "...for the earth to be "clothed in its dress of green?"

- Describe what Wangari's home environment looks like in these first pages of the book.

Pages 5-6: Wangari has gone to school in America, and then returns to Kenya five years later to discover all the trees had been cut down for big one-crop farms.

- How has the environment changed when Wangari returns from America?

- What does her home look like now?

- What is gone?

Pages 7-10: Wangari and the women of Kenya grow and plant millions of trees.

- How does the environment begin to change again when Wangari and the other women start to plant trees?

- The replanting of the millions of trees in Kenya is referred to as the Green Belt Movement. Why do you think it is called that?

- What can you do to improve the land in our area just as Wangari and others did in Kenya?

Literacy and Land Use Analysis

Record your specific location at Blandy.	
What is here? (circle any that apply) trees plants bare soil grass path road mulch other _____	How do humans use this space?
Is erosion controlled here? (circle one) Yes a little bit No	Describe any evidence of erosion:
If there is erosion, how do you think it happened?	How can this area be improved?

Record your specific location at Blandy.	
What is here? (circle any that apply) trees plants bare soil grass path road mulch other _____	How do humans use this space?
Is erosion controlled here? (circle one) Yes a little bit No	Describe any evidence of erosion:
If there is erosion, how do you think it happened?	How can this area be improved?