

# LAND USE ANALYSIS- FCPS MWEE

**Driving Question:** How can I, along with my family and community, positively affect our watershed?

**Investigative Question:** How does land use impact erosion?

## **Learning Objectives:**

Knowledge- Students conduct field observations of water flow over the schoolyard (or another site), land surrounding the site, and consider the community's impact on the watershed system. Students examine where water comes from and where it goes.

Skills- Students develop observation skills.

Values- Students develop an appreciation for land management and the importance of this management to the Chesapeake Bay.

**Special Safety:** Watch for any holes or branches on the ground that could cause tripping

**VA Standards (2018):** Sci 4.1, 4.8

**Materials:** (for each student)

- Clipboard
- Pencil
- Datasheet

**Setup Notes:** Choose an area at Blandy that shows erosion & has multiple land uses (Peetwood, Picnic Grove, Lake Georgette). To drive home erosion & weathering concepts, ask: how does erosion occur; what are the effects; how can we prevent or lessen it? Each day, check sites in the field in case the Grounds crew has done erosion mitigation.

## **Instructional Strategy**

1. Engage: Take a moment to slowly look around the landscape and ask for 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. Student Observations: Instruct students to make careful observations of the land, consider how water flows, erosion, and land use. Distribute clipboards and data sheets and students fill out the data sheet. Give groups a few minutes to review the questions before they ask instructors for clarifications.
3. Travel around 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.
4. Conclusion: Give students a few minutes to review their data sheets. What did they see as potential erosion problems? What human land uses can alter water flow and create/reduce erosion?

Date	Temperature	Weather
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Circle any water ecosystems you see throughout your day.

wetland    pond    lake    stream    river    other:

Where does water go when it rains? (Circle all that apply)

Into the ground                      Across a field of grass                      Causes Erosion  
 Flows downhill                      Puddles

## LAND USE

	Feature	Check if present ✓	What is the impact on the land? (circle)	Explain
<b>1</b>	Buildings		Positive Both Negative Unsure	
<b>2</b>	Roads		Positive Both Negative Unsure	
<b>3</b>	Paths		Positive Both Negative Unsure	
<b>4</b>	Gardens		Positive Both Negative Unsure	
	Other (describe)		Positive Both Negative Unsure	

Describe evidence of erosion that you see.

How did this erosion happen?

What are some ideas for how to improve or fix the area to positively affect the watershed?