

Resource Use Assessment/Schoolyard Report Card

(Completed during fall visit to Blandy & again on school campus.)

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

Investigative Question: How can buildings affect the health of our watersheds?

Learning Objectives:

Students assess the long-lasting efforts of their school by making and recording observations pertaining to energy use, water use, waste, and transportation. After calculating the long-lasting (sustainable) resource score for their school, students will analyze how they can improve the location to, consequently, improve their local watershed. This assessment can be applied back in their schoolyards.

VA SOL:

Sci (2018) 4.1 science process skills. Identifying a problem and developing possible solutions.

Materials:

- Clipboard
- Datasheets and pencils
- Informational Signs
- Large Post it notes and Markers

Instructional Strategy

1. **Introduction:** Show students the classroom space and explain the objective of this activity. Their task is to explore the building and the informational signs both in and out of doors to learn more about the building and how well it is using resources in a way that is long lasting.
 - a. Ask: What does it mean to use resources? What does it mean to use resources wisely?
Today we are going to figure out how this building and the area around are being used and if they are being used in a way that will help the resources to be long-lasting.
 - b. Part of long-lasting resource use is thinking about how to protect natural resources and keep our watershed healthy now and in the future.
 - c. Ask for examples of "green buildings". A building that is engineered to reduce the impact of the building on the environment. It can be in what the building is made up of, where the energy comes from, how energy efficient the building is, etc.
2. **Student Observations:** Instruct students to use their data sheet and the signage around the classroom and outdoors to assess or score how well the resources to make, use, and maintain the building are being used. Distribute clipboards and data sheets for students to fill out the data sheet.
3. Move around the space to encourage students to ask questions of one another and the instructor about the building, its uses, energy, etc.
4. Students then score their building using the data sheet.
5. **Conclusion:** Students will identify areas for improvement (water/waste/transportation/energy) and offer solutions to increase the resource use score. If time allows, students can write their suggestions on post-it notes and place them on a large Improvements Board.

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The Blandy Community Classroom (BCC) is one of Blandy's teaching classrooms. Your job is to assess how the building and its surrounding habitat are using long-lasting resources. Is this building contributing to or reducing the watershed's health? Or is it neutral to the health?

Inside, look for signs around the room to learn more about the building. Outside, use your powers of observation to figure out how water moves over the building and around it.

Think- how does this building affect the land and the watershed?

In the Building

For each question, circle the answer that best fits. These numbers will be used to give a score.

| | | |
|---|---|---------------------|
| Is there a motion sensor for the light? | Yes No | (+1) (0) |
| What kind of lights are used in the classroom? | LED CFL Incandescent | (+2) (+1) (0) |
| Are recycling bins present? | Yes No | (+1) (0) |
| Where does the energy for the building come from? | Biofuel, wind, solar Both renewable and nonrenewable Coal, oil, gas | (+2) (+1) (0) |
| Are there any signs that remind people to reduce energy use? | Yes No | (+1) (0) |
| Is the building energy efficient? How much insulation does it have in the walls? | More than 2 inches Exactly 2 inches Less than 2 inches | (+2) (+1) (0) |
| Are there signs to remind people to use less paper products? | Yes No | (+1) (0) |
| What type of paper is used for your journals? | Recycled Unknown | (+1) (0) |

Bathroom

| | | |
|-------------------------------|----------------------------|---------------------|
| What kind of lights are used? | LED CFL Incandescent | (+2) (+1) (0) |
|-------------------------------|----------------------------|---------------------|

| | | |
|--|--|---------------------|
| Is there leaking water? | No Yes | (+1) (0) |
| How much water does this toilet use per flush? <i>(discuss with your custodial staff)</i> | 1.6 gallons 3.5 gallons 5+ gallons | (+2) (+1) (0) |
| How are hands dried? | Air dryer Recycled paper products Paper towels | (+2) (+1) (0) |
| Are the paper products recycled? <i>(discuss with your custodial staff)</i> | Yes No | (+1) (0) |

Outside

| | | |
|--|--|-----------------------------|
| What are the surfaces around the building? Circle each that you see. | Plants Bare soil Gravel | (+1) (0) (0) |
| What type of plants do you see around the building? | Trees, flowers, bushes Grass None | (+2) (+1) (0) |
| Look at the roof. Where does rainwater that falls on this roof go? (choose just one) | Into an area with trees, plants, and grass Into an area with only grass Into an area with only gravel Directly into a storm drain | (+3) (+2) (+1) (0) |
| Are there rain barrels to collect rainwater? | Yes No | (+1) (0) |
| Do you see evidence of erosion? Circle each erosion area you see: | None Muddy area Rocks or ground eroded away | (+1) (0) (0) |
| What score did you give the building? | (Add up your numbers!) | |

The highest possible score is 28 points.

The lowest possible score is 0 points.

Commented [1]: Blandy's building score was between 15 and 18

Are resources being used wisely in and around this building? Explain your reasoning.