

ACTION PROJECT: STORM DRAIN STENCILING

Teacher: Storm drain stenciling is a relatively simple project for students which has the potential of making a big difference in reducing the amount of trash entering local waterways. Have students practice stenciling letters onto paper grocery bags or newsprint, so that they can become comfortable with using the right amount of paint- using too much paint will cause the color to drip under the stencil and letters will be unreadable.

INTRODUCTION:

Storm drains were designed to be the fastest and most efficient way of getting rainwater off streets and parking lots. Think about the way that water rushes into a storm drain in the middle of a parking lot, or alongside a street. Have you ever stopped to wonder where that water goes? Most storm drain systems empty directly into a local waterway. If you live in the Chesapeake Bay watershed, that local waterway eventually empties into Chesapeake Bay. Unfortunately, the water that flows into your storm drain often carries trash and sediment from the street; nutrients in the form of fertilizers, toxics in the form of pesticides, household cleaners, gasoline and motor oil. Imagine all of these things rushing into your small stream, your local river, and into the Bay!

Stenciling storm drains in your community with the words “DON’T DUMP! CHESAPEAKE BAY DRAINAGE” may encourage people to think twice about putting trash into a storm drain or putting pollutants on their lawns and driveways. Teaching people that storm drains are connected to our waterways helps them to remember that only clean water should enter the storm drains.

OBJECTIVE: To raise community awareness about the function of storm drains and their link to water quality, both locally and watershed-wide.

MATERIALS

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| Water | sc | rewdriver | trash | bags |
| drop cloth | paint | stirrers | traffic | cones |
| masking tape | | “Wet Paint!” signs | | exterior latex paint |
| wire brushes and hand brooms | | 3’ paint brushes | | 3” sponge brushes |
| “Don’t Dump! Chesapeake Bay Drainage” stencils | | | | |

PREPARATION:

Locate a storm drain near your school. Look for storm drains in your school parking lot and/or along the streets that surround your school. Consider contacting your Department of Public Works for a map of the storm drain system in your area to find out where the storm drain system empties.

Get permission. If you are planning to stencil storm drains on school grounds, you will need to get permission from your principal. For all other sites, contact your local Department of Public Works for permission. You may need to obtain a permit, so contact them several weeks prior to the date you want to begin. Be prepared to provide the following information:

- The location of the storm drain(s) you wish to stencil.
- What you plan to stencil onto the storm drain: “Don’t Dump!” on the horizontal side, “Chesapeake Bay Drainage” on the vertical side.
- Who will provide supervision for the project.

Purchase or borrow supplies. Some of the materials required for this project (paint brushes, masking tape, etc.) can probably be borrowed from your homes. Ask people in the community, local businesses, or organizations to donate supplies or money for the supplies. This is your chance to get people in the community involved and educate them about the storm drain issue. Storm drain stencils can be borrowed from the Maryland Department of Natural Resources. Contact Stacy Epperson at (410)260-8832 or sepperson@dnr.state.md.us for more information.

Publicize. Contact the news media (radio and television stations) at least two weeks in advance and provide them with details about the project (time, location, and contact names). Remind the media of the event a day or two before. If possible, announce the project over the school’s PA system. In addition, distribute flyers to residents who live near the storm drains to be stenciled. Your flyer should include:

- the date and time;
- the purpose of the event;
- the exact location of the drains to be painted;
- a person to contact with question or concerns, and
- a request to move cars blocking designated storm drains on the day of the event.

Safety first! Since drivers may not see you standing or kneeling near parked cars, plan to have an adult hold a traffic flag and alert oncoming cars. If your storm drain stenciling is on a very busy street, arrange for police to direct traffic. Call your local police station several weeks in advance to ask for help.

Practice. Use a flat paper bag to do a practice run with the stencil. Remember, less is more with paint- if applied too thick it will “run” under the stencil. *Dab* the paint into the stencil, to get into the crevices of the surface you are stenciling.

ACTION:

The pavement must be dry for the paint to stick. In addition, the paint will not dry well if it is colder than 50 F. If it is raining cancel the project and choose an alternative date instead.

Place traffic cones 2-3 feet in front of the storm drain and clean up any debris on or around the storm drain. Be sure to wear protective gloves and put all debris found in a trash bag. Separate any recyclable materials from regular trash. Use a wire brush to remove rust if you will be stenciling any metal part of the storm drain. Place the dropcloth in front of the drain to prevent any of your materials from falling into the storm drain.

Center the “Don’t Dump!” stencil on the horizontal (top) face of the storm drain, and the “Chesapeake Bay Drainage” stencil on the vertical (bottom) face. Outline the stencils with masking tape to create a straight, rectangular border on the areas you are painting. Set the stencils aside, leaving the rectangular borders.

Paint inside the rectangular borders with white or beige paint. Wait 15-30 minutes, or until paint is dry to the touch.

Once again, center the “Don’t Dump!” stencil on the horizontal surface and the “Chesapeake Bay Drainage” stencil on the vertical surface. Tape both stencils into place.

As one or two students apply paint to the letters, other students can help them, by holding the stencil flatly and firmly in place. Be careful not to use too much paint or it will run and smear! Generally, if you are using the right amount of paint, you will need to “reload” your brush with paint every two letters. When you are finished stenciling all of the letters, lift the stencils off carefully so that you don’t smudge the wet paint. Remove the masking tape borders.

Clean up the stenciling site. Use paper towels to wipe any excess paint from the stencil. Place any paint brushed used in a plastic bag and while you go to the next stenciling site. Tape a “Wet Paint!” sign next to drain. Clean your brushes thoroughly with water and dry them with newspaper. Since you have used a water-based latex paint, it is safe to rinse brushes and containers in a bathroom sink.

REFLECTION:

Group

Extend your project to a cross-aged teaching experience - teach older and younger people in the community why it is important to stencil storm drains.

Monitor trash around storm drain one-week prior to and one week following stenciling. Assess whether the project has made a difference in the amount of trash that enters the storm drain.

Individual

In your journal, reflect on the project. What went well? What didn’t? How would you change the project if you were to do it again? What were the benefits of the project—to the community, the environment, to you?

Design another stencil or sticker that you could use in a similar way to encourage people to help the environment by changing the behavior.