

Orientation Information
URBAN HYDROLOGY TOUR

6th Grade Full-Day Trip

GOALS

- Provide an outdoor environmental field experience to enhance the study of 6th grade Earth Science in ways classroom teachers could not easily accomplish.
- Provide teachers/students historical and current hydrology information with hands-on experience to develop their knowledge of local "built environments."
- Help students and their families become part of the solution to environmental problems such as poor water quality.
- Make direct connections to local issues that are important to the health of the community.

SCHEDULE

Schedule A

9:30 Depart School
9:45 Arb
10:30-11:30 Gallup Stations
11:30 Lunch
12:25 Argo
1:10 Olson Park
2:00 Return to School

Schedule B

9:30 Depart School
9:45 Olson Park
10:15 Argo
11:00 Lunch
11:30-12:30 Gallup Stations
12:45 Arb
2:00 Return to School

FIELD TRIP DESTINATIONS

Gallup Park Water Testing Stations hosted by the Huron River Watershed Council
Topics - conductivity, turbidity, and stream erosion are modelled at each station. Students conduct test and log results. Also opportunity to see bioswale used for runoff control.

Classes will be divided into 3 groups at this station and rotate through activity.

First Class ~10:30 to 11:30 AM (3 rotations)

Second Class 11:30 AM – 12:30 PM (3 rotations)

GROUPS	1 st activity	2 nd Activity	3 rd Activity
~12 each	Conductivity and turbidity	Stream erosion model	Watershed model

Visit the links below to become familiar with the station content

<http://www.hrwc.org/wp-content/uploads/2013/09/Conductivity.pdf>

<http://www.hrwc.org/wp-content/uploads/2013/02/Turbidity.pdf>

http://www.hrwc.org/wp-content/uploads/2016/06/Stream_Erosion.pdf

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Mary Beth Doyle Park OR County Farm Park

Malletts Creek Project

OR

West Park

Allen Creek Project

Topics - flood control, sediment & phosphorus removal, swirl concentrators, and habitat improvement.

Doyle Park:

<http://www.a2gov.org/government/communityservices/ParksandRecreation/parks/Features/Pages/Brown.aspx>

County Farm:

http://www.ewashtenaw.org/government/drain_commissioner/project-status/malletts_creek/dc_mc_update.html

West Park:

<http://www.a2gov.org/government/communityservices/ParksandRecreation/parks/Features/Pages/West.aspx>

Argo Dam/Geddes Dam to study the Huron River Management Plan

Topics - historical use of river, hydroelectricity, recreation, water quality and safety

<http://www.a2gov.org/departments/water-treatment/Pages/Dams-and-Hydros.aspx>

UM Arboretum @ School Girls Glen and Clean Water Trail

Topics - human impacts both positive and negative, erosion, and erosion control

<http://www.lsa.umich.edu/mbg/see/NASchoolGirlsGlen.asp>

Depending on timing and middle school location these sites may also be destinations:

Downtown - former Y parking lot

Easy Street

Lilley Park

Lakewood Drain

Thurston Pond

Parker Mill

Olson Park

A2 WTP Sludge pond

Topics – impervious surfaces, pervious pavement, point and non-point pollution sources, detention and retention ponds, flood plain forest, and more.

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SCOPE and MANAGEMENT

The trip runs a full day (9:30-2:00) and participants should pack a low-impact lunch. **We will be gathering some simple water quality data.**

STUDENT PREPARATIONS

Clothing: this is a full day trip, with time spent travelling on the bus and walking outside.

- **Boots or tennis shoes and socks** (no sandals or dress shoes)
- **A t-shirt AND a sweatshirt or jacket** allowing for temperature changes between the bus and outside
- **Hats** are useful on rainy and sunny days
- **Raincoats** if raining (no umbrellas, they are a nuisance)

Lunches: a “low-impact” lunch is easy to eat on site and has minimal packaging for disposal. Containers, etc. will be brought home for recycling/reuse. A small bottle of water helps offset thirst. There will be no food or drinks available for purchase at any of the field trip locations.

Equipment: Science notebook and a pencil, with a copy of the recording sheet to keep track of your learning and data. Alternates/additions include clipboard, paper, notecards, etc. Equipment such as binoculars, cameras, etc. are not necessary and can get damaged, wet, or lost.

Bathrooms: students should use the bathrooms at school prior to departure on the field trip. Bathrooms are available at Gallup.

Chaperones: are welcome to join us. Chaperones must ride the bus, as it is not practical to arrange meetings or caravans. Siblings are not permitted on this field trip.

TEACHER PREPARATIONS

Family information letter: please print and send home in advance of the trip.

This helps ensure parents send their children to school prepared for the field trip. A copy is included in this website section.

Special student needs: if you have a student with special medical needs, carry the necessary supplies with you and plan to have that student on your bus. Please advise Environmental Education staff of any special student needs prior to departure. Special transportation requests must be submitted at least one week prior to the field trip date.

It is the responsibility of the classroom teacher to ensure that a signed [permission slip](#) is on file for all students attending the trip. The departure time is 9:30 am and the return time is 2:00 pm. Trip locations can be found [here](#).

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Partners

The City of Ann Arbor (Matt Naud, Molly Wade, Jerry Hancock, Mary Sell) www.a2gov.org

The Washtenaw County Drain Commission (Harry Sheehan)

http://www.ewashtenaw.org/government/drain_commissioner

University of Michigan Nichols Arboretum (Catriona Mortell, April Pickerel)

<http://www.lsa.umich.edu/mbg/>

Further Information

Lake Erie "dead zones" from watershed wide non-point pollution

<http://www.detroitnews.com/search/Lake%20Erie%20algal%20bloom/>

Soil Production and Erosion Rates

<http://www.ipm.iastate.edu/ipm/icm/2000/7-24-2000/erosion.html>

<http://www.thesolutionsjournal.com/node/651>

Stormwater Project at Pioneer

<http://news.a2schools.org/project-helps-storm-water-improves-pioneer-grounds/>