

# Urban Environmental Excursions

**Field trips to connect urban geology  
students with the world around them**

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**Urban Students, Urban Issues: Opportunities and Challenges  
for Teaching Geoscience Courses  
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# **Motivation**

## **(Why organize an urban field trip?)**

- 1. Attempt to attract and engage more students.**
- 2. Opportunities to connect course content with the “real world.”**
- 3. Provide a chance to experience and discover a side of our city that most students never see.**

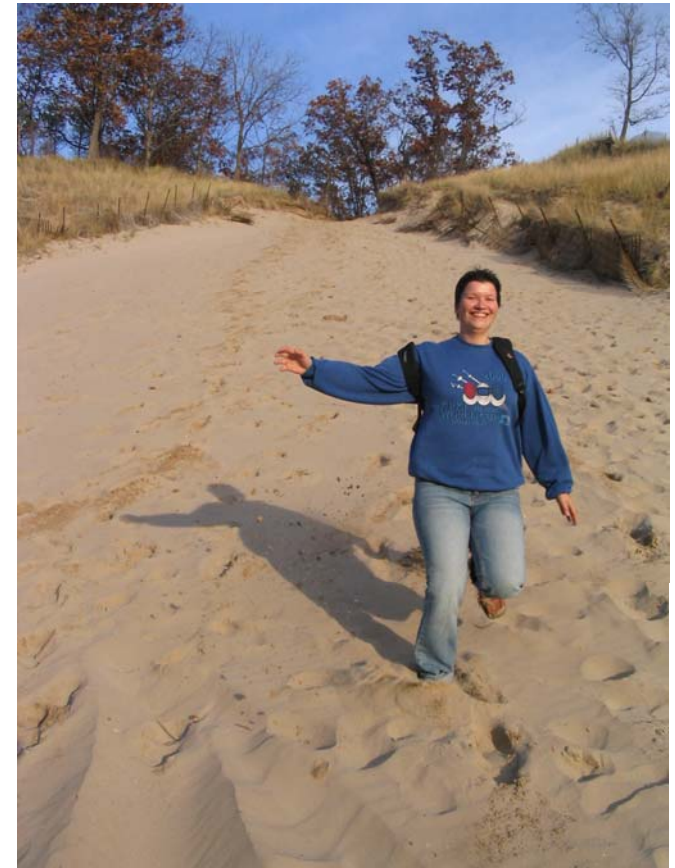


**World-Class Education in the Real World.™**

# Our Traditional Model

- **Voluntary One-Day Field Trip on a Friday or Saturday to look at rocks in Canada**
  - Fossil collecting
  - Sand Dune
  - Oil Field

- 20 students (out of 400) sign up
- 10 to 12 students show up
- We go and have fun!



# Our Revised Model

- **Voluntary One-Day Field Trip in Detroit on a Friday**

- Practical
- Relevant
- Local

**“Urban Environmental Excursions”**

- 40 students (out of 400) sign up
- 30 students show up
- We go and have fun!





# Field Trip Themes

- **Air Quality**
- **Water Quality**
- **Energy**
- **Economic Development**
- **Brownfield Redevelopment**
- **Environmental Justice**
- **Waste Disposal**



# Curricular Connections

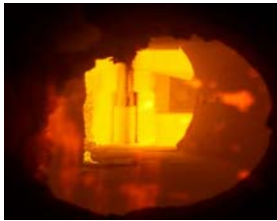


- **Greenhouse gases, global warming, climate change**
- **Surface water, groundwater, water supply**
- **Sources, transport, and fate of environmental contaminants**
- **Urban development, watershed management, flood control**
- **Fossil fuels and alternative energy sources**
- **Solid and liquid municipal waste disposal**
- **Geologic hazards and engineered solutions**
- **The role of science in economic and political decision-making**
- **Geoscience and Environmental Careers**

# Curricular Connections



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# If you run it, will they come?

## Promotion Helps!

- Catchy Name
- Field Trip Flyers
- On-line Announcements
- In-Class Announcements

WAYNE STATE UNIVERSITY - ENVIRONMENTAL SCIENCE PROGRAM

### URBAN ENVIRONMENTAL EXCURSIONS

**FALL 2007: ENERGY AND AIR QUALITY**

Where does our **GASOLINE** come from?  
How is our **ELECTRICITY** made?  
What ultimately happens to our **TRASH**?  
And how does this impact the **AIR** we breathe?  
(The answers may surprise you!)



**When:** 8am-5pm Friday, October 19, 2007  
**Depart:** from Old Main (bus transportation provided)  
**Visit:** • DTE Rouge River Coal-Fired Power Plant  
• Marathon Detroit Petroleum Refinery  
• Greater Detroit Resource Recovery Authority  
**Cost:** Free for GEL 1000 and GEL 1010 students  
**Sign up:** Before October 12<sup>th</sup> in the GEL 1010 lab.

*We will tour three local facilities that manufacture energy (gasoline, electricity, and steam) using crude oil, coal, and municipal waste. Each contributes jobs, resources, and pollution to our urban environment. Come and see how these facilities work and learn how they monitor and control their airborne emissions.*

DTE Energy M Marathon GORRA

**"TOXIC TOUR OF DETROIT"**

**Urban Environmental  
Excursions**



# Safety First!

## 1. Field Trip Policy

- Health Forms
- Liability Release Forms
- Field Trip Policy Forms (the rules!)

## 2. Supply necessary *Equipment*

- Hard hats, safety glasses, ear plugs, etc.

## 3. Tap into the *Safety Ethic* of the places you visit.



# Invite More Advanced Students

What happens on the bus can be just as important as what happens at your scheduled stops...

- informal discussions
- socialization
- attitude sharing
- peer mentoring
- recruiting



# Field Trip Guidebooks

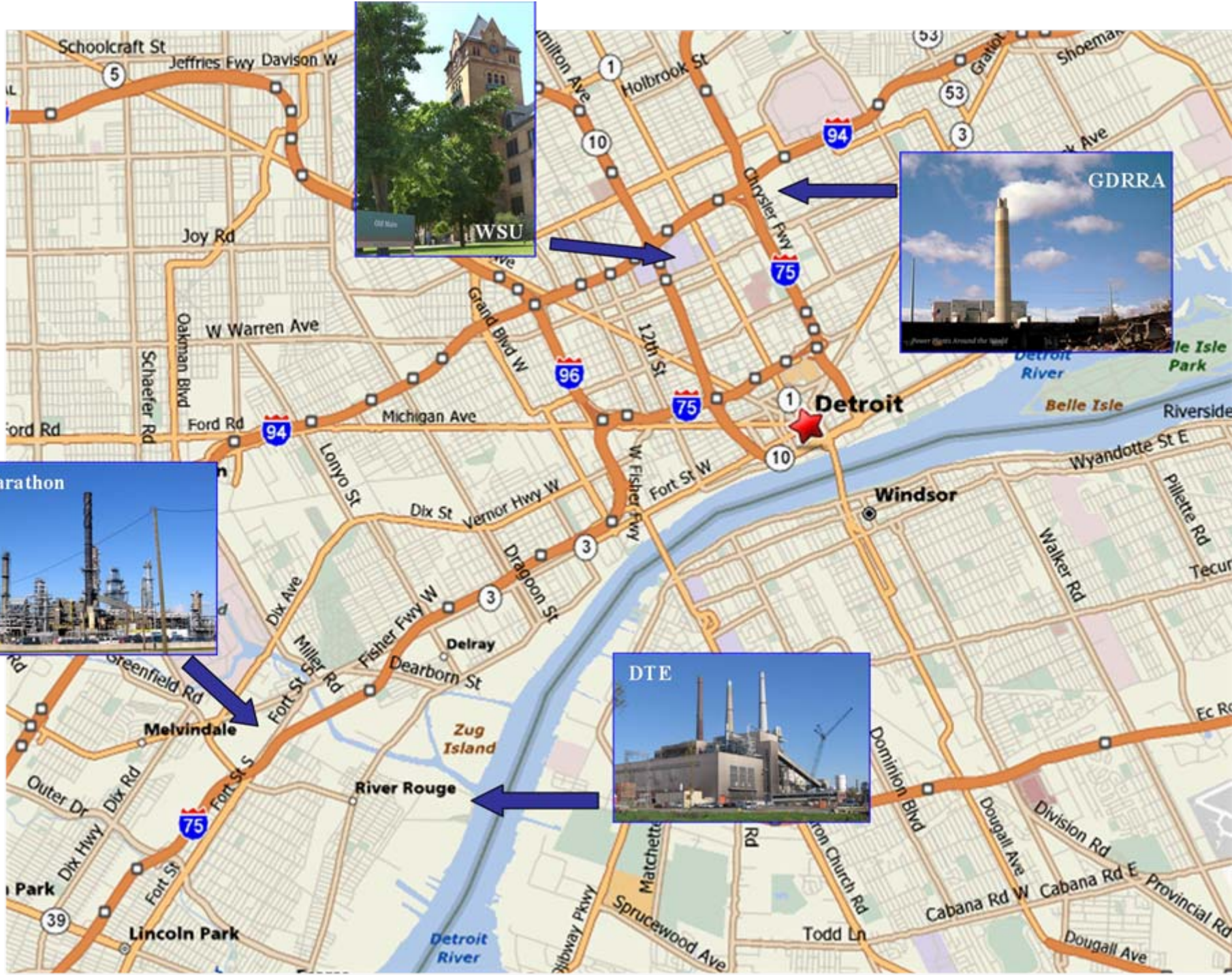
*concise*

## Facilitate Learning with a Guidebook

- one-page summaries
  - pictures
  - questions to 'prime the pump'
  - supplementary info on the back
- include a map









# What the critics are saying...

*I liked the field trip a lot. Its always nice to experience new things and learn in an “on-site” location. Plus, the places we visited are places that many students would otherwise never get to visit.*

*The field trip was beneficial. It helped to put the subjects into perspective and relate it to real life.*

*I really enjoyed the field trip to DTE, Marathon, and Waste Management because it made the lectures come to life. There is nothing better than seeing the practical application of everything we’ve learned in the classroom.*

# Getting out of the classroom...

**Field trips provide opportunities for:**

- all students to learn**
- interpersonal interactions**
- enhanced communication**
- shared experiences**
- fun!**

