

Out of State Field Trip: (Date(s) May 22nd, 2013

Length of Trip: 1 school day (9:00-2:30)

Destination: Indiana Dunes State Park

Number of Students Involved: 80

Number of Chaperones: 10-12

Transportation provided by: School Bus

1. Teacher's name: Seth Baker
Mobile phone number while on trip: (708) 704-0805

Teacher's name: Sharen Pitts, John Turek
Mobile phone number while on trip: (708) 212-5590, (708) 602-5860

2. Team/Subject areas: Science/Math

3. Rationale for trip: The Dunes fieldtrip provides students with the hands on experience related to the concepts we have been studying in science class. Cyd Curtis and Bill Bates, scientists from the EPA, have volunteered their time visiting my classroom 5 times this school year as part of the Oak Park Education Foundation's Science Alliance program. Both Ms Curtis and Mr. Bates have taught concepts in watershed ecology, three forms of pollution (chemical, biological, physical), geology and the movement of ground water, as well as reinforcing the scientific process through labs and activities. At the Dunes, students will work with other scientists from the EPA including entomologist, geochemists, biologists, scientists from the Indiana Department of Natural Resources, and Save the Dunes, a non-for profit organization established to protect the natural landscape of the Indiana Dunes. All of these individuals volunteer their time to work with our students, and because this is an OPEF sponsored fieldtrip, the cost to students is minimal. (Often free). Students will engage in fieldwork, collecting water samples to test for possible pollutants, check stream biology by investigating the flow rate dissolved oxygen levels, and pH of Dunes Creek, collect insect samples to indentify and provide information on the health of the stream, study the formation of the Dunes and discuss the geological timeline for how the dunes formed, and study the restoration of the Daylight project – a nationally funded project designed to restore the Indiana Dunes to their natural state.

4. Educational Objectives: (three to five or six. Longer trips = more objectives) Remember you can also draw on social emotional standards as well as academic. If you have multiple stops on your trip, e.g. the Cleveland trip, please present the objectives for those different activities.

- One – Develop skills in collecting and analyzing data from field data
- Two – Analyze the unique ecosystem of the Indiana Dunes
- Three – Evaluate the impact of the restoration project on the ecosystem of the Dunes
- Four – Predict the future formation of dunes based on observable patterns in existing dunes
- Five – Collect, identify and explain how different insect species demonstrate the health of a water system

5. Curricular activities that were required of students in preparation for the field trip:

- a. Studied the structure of a natural watershed through enviroscape model. Students were introduced to the three basic forms of pollution.
- b. Studied the natural structure of an underground watershed through modeling.
- c. Performed experiments to demonstrate the concept of parts per million and chemical pollution as well as pH tests to identify materials as Acids or Bases.
- d. Studied the effects of flooding and the movement of water through video footage. Students also studied the impact of the Michigan oil spill from 2010. Gained firsthand account of what happened and the impact on the ecology of the area.
- e. Studied the impact of bacteria such as e.coli on the human body. Analyzed water samples gathered from school and Des Plaines River to test for e. coli.
- f. Used dichotomous key to properly identify insects.

6. Curricular activities that will be required of students as a follow-up to the field trip:

- a. Chemical analysis of water samples gathered at the Dunes
- b. Analysis of insects gathered at the Dunes and developing a general report on the health of Dunes Creek

7. General list of the activities/places on itinerary:

- a. Study the restoration of the Daylight project
- b. Collect and identify insects found in Dunes Creek
- c. Collect and analyze water samples from Dunes Creek
- d. Study the formation of Dunes and the natural development of these structures.

8. Curricular goals and objectives that have been shared with parents in the following ways:
(narrative and/or attach to packet)

Students have recorded class work and labs associated with the visits by Ms. Curtis and Mr. Bates in their science journals. These journals are kept by students and parents have been encouraged to view their child's journal. Also, parents will be notified of the fieldtrip and the goals associated with the trip as well as the curricular connections. Finally, any parent available to join us on the fieldtrip is encouraged to do so, so long as we have room on the three buses. Typically 8-10 parents have joined us in previous years.