



Y-CITYSCI: A Youth-Led Citizen Science Network for Community Environmental Assessment

Environmental Assessment Curriculum: Lesson 11

Grade Level: Middle school

Duration: 1 hour

Data Collection

Next Generation Science Standards

Science and Engineering Practices:

3: Planning and Carrying Out Investigations

Crosscutting Concepts:

Cause and Effect

Objectives

1. Students will implement the scientific process.
2. Students will operate environmental tools to collect data for their research project.

Materials

- Tools/sensors needed for each group
- “Data Collection” sheets
- “Research Project Planning” sheets (completed from last session)

Activities

Lecture: Tell students that they will spend the majority of this session collecting data around the school for their research projects. Pass out their planning documents, tools, and data collection sheets. Depending on what type of data they are collecting, students need to plan how they would like organize their data collection. They may need to take notes, record data in a table, etc. Be sure students know to use this time to ask you any questions about proper tool usage or data collection procedures. (10 minutes)

Activity: Once the groups are organized and you know where everyone is collecting their data, let the groups have the majority of the class time to collect data for their research project. Give students clear instructions about where they are allowed to go





and when they should return to class. During this time, check in with each group to see how they are doing and answer questions (40 minutes)

Discussion: Once all groups return, discuss if students were able to collect all of the data that they had planned. What went well and what did not? Collect all tools and sheets. (10 minutes)

Extension

If time allows, devote another class session to data collection. This would allow additional time for students to practice using the tools and organizing their group responsibilities before data collection. This would also provide students with additional time to collect more data samples for their project.

