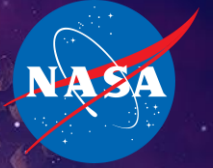National Aeronautics and
Space Administration

EXPLORE
SCIENCE

How do you get students interested in collecting water from a local river?
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How do you get students interested in collecting water from a local river?

The Answer: Design a project-based learning question that appeals to the students' interest! The McKinley STEMM Elementary School grade 8 students asked the driving question *"Is the water in Toledo clean and safe enough for Mohawk (dog) and other dogs to swim in?"* On September 24, students did the nine water quality GLOBE protocols testing the Maumee River along with Clouds and Surface Temperature at Sidecut Metropark in Maumee, Ohio (located outside of Toledo, OH).
At one station, Dr. Czajkowski and Janet Struble from GLOBE Mission EARTH helped students submit their data to the GLOBE website. Back in the classroom, students are looking at their data to answer their question.

Importance of the students' work: International and Local
GLOBE is conducting a campaign called Water Bodies Intensive Observation Period (IOP) the week of September 23. Students from all around the world are encourage to collect water observations from local ponds, rivers, streams or lakes. This IOP will inform and connect the GLOBE community to local issues and provide possible solutions to those issues. https://www.globe.gov/web/water-bodies

The water quality data will be also submitted to the Student Watershed Watch (SWW), a regional effort to monitor the water quality of local streams. Each year the SWW brings hundreds of students together from urban and rural school districts in the Maumee Area of Concern to collect and submit water quality data about the local environment. The program culminates at a Student Summit where student representatives present their findings.

Grade 8 students from McKinley STEMM Elementary receiving directions from Gwen McLaughlin (in green)

Students collecting Surface Temperature data.

Looking at Macroinvertebrates living in the Maumee River

Let's check the level of nitrates in the Maumee River

Elizabeth Buckholtz & student determine the water transparency with turbidity tube.

Dr. Czajkowski (University of Toledo) assists students as they enter the GLOBE data.