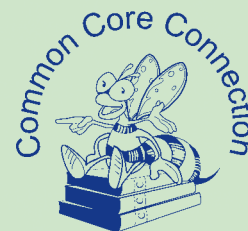## Time Needed
One class period

Materials
(for each student or group of students)

• Device-ive Science Graphic Organizers on page 19

The questions you will answer in this FACTivity are: What are the advantages and disadvantages of having citizen scientists perform data collection and reporting for the community? Would you vote for or against having citizen scientists help with local data collection and reporting in your community?

Methods
You are the manager of your community's water supply. Part of your job is to measure the local reservoir's (re zə **vwärz**) water depth to ensure that enough water is available for your community's needs. A reservoir is a place where water is stored for use (**figure 11**). During the summer when less rain is falling, an employee must measure and record the water level at the same time every day. The employee who performed this work reports to you and provides you with the information.

You have just been told that your budget has been cut and you need to reduce costs. You decide to set up a citizen science project to help you get your job done. You plan to have seven adult citizens measure the water level and record the water depth into an online system. Each of the seven citizens will come once a week, on their assigned day. If the level falls below a certain depth, the citizen scientist must immediately report this information to you.

You want to present this idea to your boss, but you know she will want to know the advantages and disadvantages of having community

Figure 11. A reservoir is an area where water is stored for use. Many reservoirs are large, human-made lakes. Photo courtesy of Babs McDonald.

members serve as citizen scientists. In small groups, complete the following forms. Use correct grammar, spelling, and punctuation when writing in the forms. Following the exercise, each group will give a short presentation to the class.

You will first brainstorm a list of considerations and write these considerations in the following form. These considerations are things that might impact the project's success. Examples include: (1) citizens will be motivated to measure and record accurate levels because they need the water, too; and (2) citizens may not know how to accurately measure and record water depth. Then organize these considerations into advantages and disadvantages.

Device-ive Science Graphic Organizer

Group Members: _____

Considerations

Advantages of Having Citizens Test the Water Level	Disadvantages of Having Citizens Test the Water Level

After listening to the advantages and disadvantages identified by all groups, hold a class vote on whether to invite citizens to test your community's water supply level.

FACTivity Extension

Note: You must have online access to do this FACTivity Extension.

Pick one of the citizen science projects listed in the Citizen Science Resources section on page 89. Go to the listed website and explore the project so that you become familiar with it.

How might the same advantages and disadvantages you identified in the FACTivity apply to this citizen science project? What other considerations might apply to the citizen science project?

Natural Inquirer Connections

You may want to refer to these *Natural Inquirer* resources for additional information and FACTivities related to this article:

- "The Morel of the Story" *Natural Inquirer* monograph. This monograph compares the knowledge of local mushroom gatherers with scientific information.
- For more information about ecosystem services, see the *Natural Inquirer* Ecosystem Services edition.

These resources, along with others, can be found at http://www.naturalinquirer.org/all-issues.html.

What's in a Name?

This article's title is a play on the word, "divisive." Divisive means to cause disagreement among people. In this article, device-ive refers to the use of technological devices to conduct citizen science.

Web Resources

Forest Service Citizen Science
https://www.fs.fed.us/working-with-us/citizen-science

Federal Citizen Science Resources
https://www.citizenscience.gov

Science for Citizens
https://scistarter.com/

Student Conservation Association
http://www.thesca.org

If you are a trained Project Learning Tree educator, you may use "Publicize It!" as an additional resource.