

# Citizen Science

## Cause and Effect Matching Activity

TERM 2013

LOCATION G+L+S

PROGRAM Video Games and Learning

**Overview of Lesson** Within the Games+Learning+Society video game “Citizen Science,” students are introduced to the *lake globe*, an interactive simulation of Lake Mendota’s ecosystem. They are asked to manipulate cause inputs/variables in order to gauge the effects certain actions will have on the environment. To emulate this practice and extend the learning associated with it, students will be asked to explore the links between causes, effects, and resolutions throughout this lesson plan.

**Materials Needed** Notecards  
Writing utensils

**Content of Lesson** Review with students the idea of cause and effect relationships. A cause is why an event happens and an effect is an event that happens because of the cause. Create a Cause/Effect T-chart on the board and brainstorm with students possible examples. It may be helpful to provide students with an effect and have them think of a cause and vice-versa.

Students will then be able to practice further with a short matching activity. Disperse cause and effect notecards so that each student has one notecard. Depending on your group of learners, it may be helpful to color code all of the cause notecards one color and all of the effect notecards another. Explain to students that they will need to match their card to another student’s card in the class according to the appropriate cause or effect. Examples of notecards may look as follows:

\*For an additional challenge, also include an appropriate resolution card for each cause and effect relationship.

Cause	Effect	Resolution*
Hurricane	Flooding	Home repair
Snow	Slippery Roads	Salt and sand
Don't Study	Poor grade on test	Extra credit
Too much time in the sun	Sunburn	Apply aloe lotion
Hunger	Make Mac & Cheese	Full
Long drive	Low on fuel	Stop at gas station
Stay up late	Falling asleep during class	Drink a cup of coffee

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Have them walk about the classroom sharing their cards. After they have found their match have them sit down next to one another. Continue the activity until everyone is seated. Since life is unpredictable and there can be various outcomes of one event, it is possible for there to be one or more effects for each cause or the reverse. Have students share their pairs and discuss them as a class.

Next, hand each group of 2 or 3 (if a resolution card was included as well) blank notecards. Have the students create their own cause and effect relationships, and a potential solution, based on the ecological interactions of Lake Mendota in Citizen Science. For example: Overfishing, Increase in Algae Blooms, Fishing Regulations. Utilize the Globe Feature of Citizens Science if students feel stuck. After students finish their cards collect, shuffle and redistribute them to the class. Again, have students find appropriate matches and share them with the class.

**Learning Objectives** Students will be able to participate in effective arguments - utilizing their given cause/effect/resolution phrase - as to why they've grouped and ordered themselves in the way that they have.

Students will be able to sort a set causes/effects/responses.

Students will be able to work cooperatively as a class, in small groups, and individually to solve a problem.

### Educational Standards

- CCSS.ELA-Literacy.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- CCSS.ELA-Literacy.SL.6.4** Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact,

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adequate volume, and clear pronunciation.