



# EVERY ACTION MATTERS

## CLASSROOMS TAKE CHARGE

## Service-Learning Lesson Plan

**Project:** Carbon Awareness Day

**Author:** John Stegmaier at Timberline High School in Boise, Idaho

**Project Overview:** The primary goal was to promote carbon awareness and Classrooms Take Charge to the general public on Earth Day in a public setting.

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### Learning Objectives

Public awareness, carbon cycle, ecology and interrelated systems.

#### How were the learning objectives evaluated?

Pre and post tests. Student involvement in Classrooms Take Charge and Carbon Awareness Day

### Service Objectives

To promote carbon awareness and actions that can be taken by public

#### How were the service objectives evaluated?

Students reflected on the project verbally and in written assignments.

### Human Energy Systems Units Used (For lesson plans visit: [carbontime.bsccs.org](http://carbontime.bsccs.org))

**Activity 4.1** Finding the Carbon

**Activity 4.3** The Seasonal Cycle

**Activity 4.4** Zooming Into Fossil Fuels

**Activity 4.5** Follow the Carbon

**Subject Areas:** Biology

**Grade Levels:** 10th

#### Materials Needed:

- Computer, poster supplies, Classrooms take charge website QR code

#### Key Partners:

- City of Boise government: we contacted them for support and they let us use the park for free and allowed us to advertise
- KBOI (local TV station): We created a public service message to advertise the Carbon Awareness Day. They played them for free.
- Boise School District: Allowed us to use school equipment, supplies to record and edit PSA, create posters, and fliers

#### Time Required to Complete Project:

- Two months of planning and preparation

## Lessons & Activities (See below.)

For lesson plans visit: [carbontime.bsccs.org](http://carbontime.bsccs.org)

- Carbon Awareness Lesson

## Celebrating Student Accomplishments

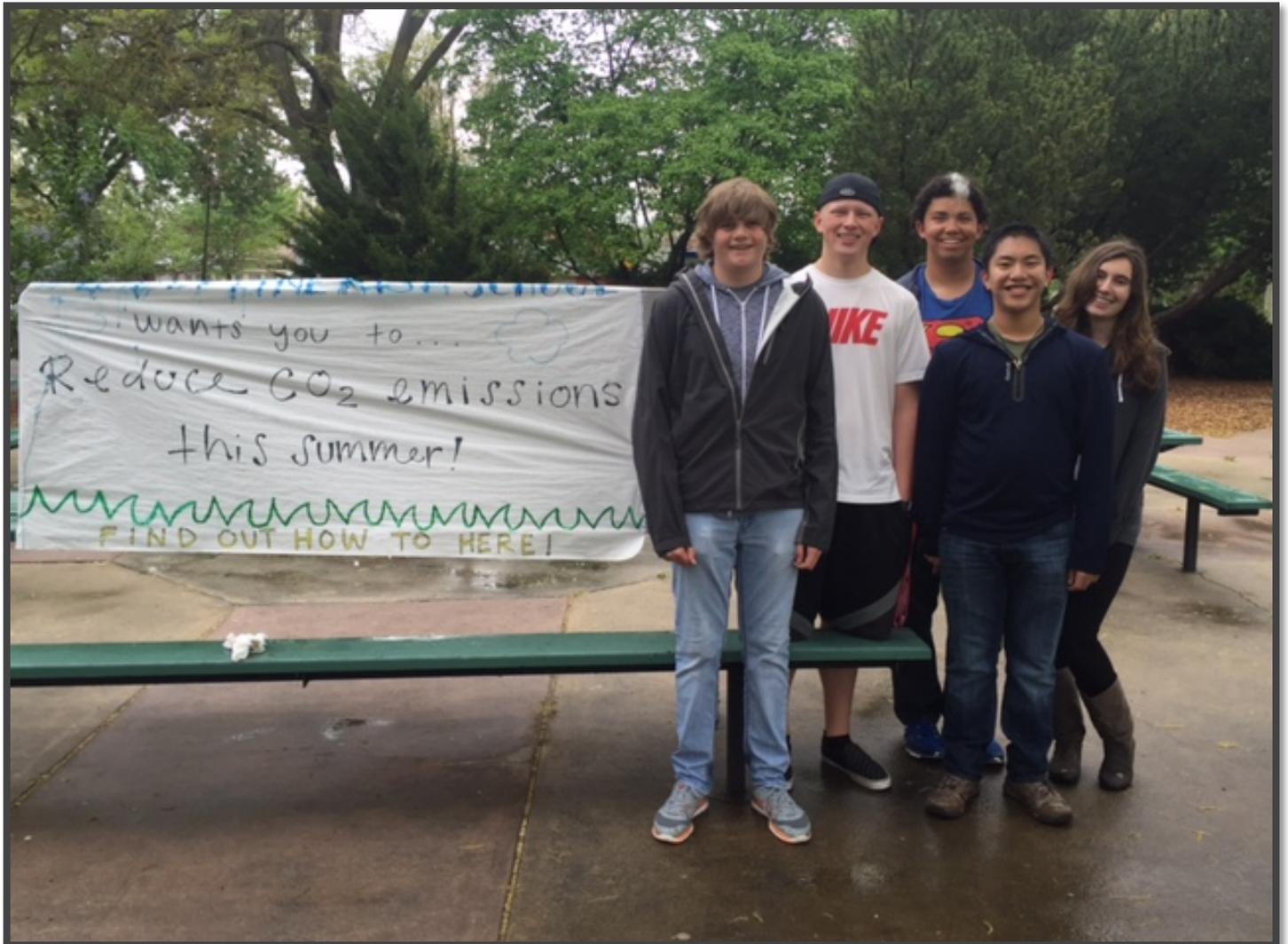
Pizza party!

## Media Coverage

KBOI2 Promos: <https://youtu.be/E0-r8LUcONY>

## Project Milestones

- Teach Human Energy Systems (Nov)
- Biology students participated in Classrooms Take Charge (Nov)
- Planned awareness day (Mar-Apr)
- Teach ecology (Apr)
- Carbon Awareness Day (Apr)



**Photo:** Timberline High School students at Camelback Park with the banner that they made. The students had just finished handing out over 100 flyers to people about carbon awareness and what they can do to help.

# Carbon Awareness Lesson

## High School Biology 2015-2016

**Next Generation Science Standards (as adopted by Boise school district):** BioChemistry, History of life on Earth, Plants, and Ecology

**Anticipatory set:** Human energy system unit [pretest](#) 1.1

**ACTIVITIES** (The activities and culminating Carbon Awareness Day will go all year (November to April):

- 1) Carbon awareness
  - a) [Which light has the greatest effect on photosynthesis activity](#): Mandatory
  - b) [Follow the Carbon](#): Mandatory
  - c) [Carbon TIME](#): Take notes as a group from the following presentations and answer the questions presented in each
    1. Why do we care about the [Keeling curve](#)
    2. Zooming in on [Fossil fuels](#)
    3. [Secrets revealed](#): Do discussion questions at the end only
    4. Oceans: [The other Carbon Pool](#) (Answer the 4 “Trace the Carbon” questions in your group. Be prepared to read them out to class. Be sure that you get **good** notes from this one.)
- 2) Students research:
  - a) Boise Inversion
  - b) Carbon Footprints
  - c) Algae and biofuel including growing and processing the algae for fuel
  - d) Solar energy
  - e) Wind energy
- 3) Students participate in Classrooms take charge: Participation noted, Be sure to have students fill out IRBs
- 4) Students take Human Energy System [Post test](#)
- 5) Students put together:
  - a) PSA explaining Carbon Awareness day
  - b) Document research on topics mentioned above
  - c) Submit PSA to local radio station
  - d) Design and put together informative [flyer](#) about carbon awareness
  - e) Design and create large poster for carbon awareness
  - f) Participate in carbon awareness day by attending at local park and handing out flyers

Assessments:

1. Pre and post tests on human activity
2. Classrooms Take Charge participation
3. Carbon Awareness participation levels (individual activities and hours of participation)
4. Test questions in summative assessments on respiration and photosynthesis
5. Class presentations (powerpoint or Prezi, scored with [rubric](#) in groups applying carbon to various biological objectives).