

Buoys and Weather

A Regional Science Consortium

Education Initiative



Subject: Science

Grades: 3-12

Number of Participants:

No limit

Regional Science Consortium

Buoys and Weather

This lesson incorporates an informative PowerPoint lecture and hands-on activity to introduce students to the important role of weather stations and water quality buoys in our local environment and their many uses.

Supply List

In this lesson:

- Digital copies of materials available at www.RegSciConsort.com
 - Buoys and Weather lesson (ppt)
 - Buoys and Weather lesson (mp4)
 - Educational video
 - Paperwork
 - Introduction (pdf)
 - Activity instructions (pdf)
 - Lesson student worksheet (pdf)
 - Activity student worksheet (pdf)
 - Teacher guide (pdf)
 - Skype with a Scientist discussion points (pdf)

| Component | Length |
|--------------------------------|-----------|
| Lesson | 11:35 |
| Video | |
| Activity | 20-30 min |
| Activity Worksheet | |
| Lesson Worksheet | 5 min |
| Skype with a Scientist session | 15 min |

Goal

After completing this lesson, students will have gained a detailed understanding of how buoy and weather data is collected, why it is important, and how it can be used. Students will learn about the Erie, PA environment by analyzing buoy and weather data obtained from the Regional Science Consortium's Walnut Creek buoy and TREC Tower weather station.

Additional Resources

Related RSC Lessons:

- Bacteria in Aquatic Environments
- Erosion
- Harmful Algal Blooms
- Stormwater Runoff

Citizen Science Programs:

- Community Collaborative Rain, Hail, and Snow Network
 - <https://www.cocorahs.org/>

- mPING Crowdsourcing Weather Reports
 - <https://www.citizenscience.gov/mping-weather-reports/#>

Pennsylvania Academic Standards

| Grade 4 | Grade 7 | Grade 10 | Grade 12 |
|----------|-------------|-----------|--------------|
| 3.1.4. C | 3.1.7. B, E | 3.1.10. C | 3.1.12 E |
| 3.2.4. C | 3.2.7. B, C | 3.2.10. C | 3.2.12. B, C |
| 4.6.4. C | 4.6.7. C | | |
| 4.8.4. A | 4.8.7. B, D | | |