Citizen Science Using JellyWatch.org

Summary

Students will use the **Jellywatch.org** app to download and analyze raw data of sightings recorded through this citizen science initiative. Students will use a modified data set from **Jellywatch.org** to investigate the geographic distribution of the jellyfish sightings recorded. Students will also use real-time data from **Jellywatch.org** to search for recent sightings of jellies in their own region, where applicable. Students will communicate their findings for a formative assessment using an Infographic platform. Multiple extensions allow the flexibility for students to collect their own data and to demonstrate the importance of programs that collect such data.

[TAGS: real-time data, jellies, jellyfish, app]

Key Concepts

- NGSS Practices: Analyzing and Interpreting Data, Obtaining, evaluating and communicating information
- NGSS Disciplinary Core Ideas: LS1.B Growth and Developments of Organisms; LS4.D Biodiversity and Humans

Objectives

Include clear, measurable statements of what students will be able to do, such as:

- Students will learn to *Observe* and *identify* various species of jellyfish found throughout the world using the JellyWatch app on their smartphone, tablet, or computer.
- Students will *Record* visual sightings of jellyfish into the JellyWatch app.
- Students will *Demonstrate* their computer skills by manipulating JellyWatch data suing spreadsheet software and generating tables and graphs that illustrate the number of JellyWatch sightings for various jellyfish species.
- Students will also *Demonstrate* the scientific processing skills by comparing the data recorded during their research of the various jellyfish species with recorded sightings in the JellyWatch app.
- Students will *Communicate* their findings using an Infographic, or similar platform, that displays the various pieces of information confirmed in their research.

Materials

Teacher Materials:

- Computers with Internet access and spreadsheet software
- JellyWatch App (www.jellywatch.org)
- Cnidarians Geologic History and Information (Handout)
- Teacher Overview of Citizen Science and Jellywatch.org (Data Instruction Sheet)
- Adding a Sighting to Jellywatch.org App (Data Instruction Sheet)
- Adding a Sighting to Jellywatch,org Webpage (Data Instruction Sheet)
- Modifying Jellywatch.org (Data Instruction Sheet)
- Teacher Jelly Tutorial – Key (Power Point Presentation)
- Teacher Sample: Example Infographic for Velella (an example of an Infographic)
- Teacher Sample: Jelly Infographic Rubric

Students Materials:

- Computers with Internet access and spreadsheet software
- JellyWatch App (www.jellywatch.org)
- Student Reflection and Procedures Sheet
- Adding a Sighting to Jellywatch.org App (Data Instruction Sheet)
- Adding a Sighting to Jellywatch,org Webpage (Data Instruction Sheet)
- Jelly Infographic Rubric

Procedure

1. See **Teacher Overview of Citizen Scientist and Jellywatch.org Directions** (Document)

2. See **Citizen Science and Jellywatch.org** (PowerPoint Presentation)

3. See **Teacher Jelly Tutorial – Key** (PowerPoint Presentation)

Assessment

- **Performance—**Students will demonstrate their knowledge by creating an infographic on their assigned species of jellyfish. Student will use JellyWatch.org (Website and Smartphone App) and reputable websites to create their infographic.
- **Product—**Student will include the following information in their infographic: Name of jellyfish (common name and *Genus species*), home range, what it looks likes, feeding habits, life cycle. In a separate document, like MS Word, students must site any sources used to create their infographic.
- Rubric: http://rubistar.4teachers.org/index.php?screen=ShowRubric&module=Rubistar&rubric_id=2454194&

Extensions

- Students will go out and collect data for Jellywatch.org.
- Students will evaluate the usefulness of the Jellywatch.org app and website. The Survey Monkey link can be found at https://www.surveymonkey.com/s/2WH53DL

Additional Resources

Infographic "making" websites

- Easy-To-Use Infographic Creator—www.piktochart.com
- Create and share visual ideas—www.easel.ly

Essentials of Infographics

- Creating an infographic – the essentials—http://www.wiliam.com.au/wiliam-blog/creating-an-infographic-the-essentials
- Seven Essentials of Good Infographic Design—http://www.freetech4teachers.com/2013/12/seven-essentials-of-good-infographic.html#.VbEc3xNViko

Jellyfish Content Background

- Trends in Animal Evolution (Cnidarian Timeline)—http://www.bio.utexas.edu/faculty/sjasper/Bio301M/animals.html
- Encyclopaedia of Life (Cnidarians)—http://eol.org/pages/1745/overview
- Shape of Life: The Story of the Animal Kingdom—http://shapeoflife.org/jellyfish-0