Introduction to GLOBE Weather

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December 7, 2019

Global
Learning and
Observations to
Benefit the
Environment

Overview

- 3 units build from local to global perspectives in a storyline approach

Extreme rainfall events impact a community

From Cloud to Storm

Short-lived, isolated storm

A Front Headed Your Way

Stormy weather over a large region for many days

Worldwide Weather

How and why storms move around the Earth

Snow Day?

Applying our learning to other types of storms

BSCS 5E Learning Cycle

Guided Inquiry

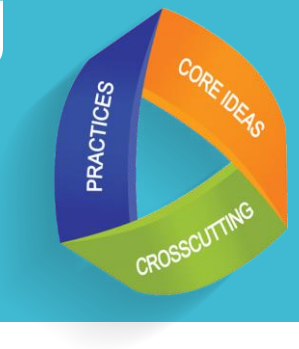
- **ENGAGE**
- Motivation– stimulate interest, create curiosity, and link what students already know (i.e. prior knowledge) to the new concepts.
- **EXPLORE**
- Question(s) and work provided for students to make predictions and discover answers. Students collect data (the more authentic, the better) in order to answer the question(s).
- **EXPLAIN**
- Data processing– checking information and interpreting results; addressing misconceptions; linking to scientific terms and theories.
- **ELABORATE**
- Students apply the new knowledge to investigate further and practice the new knowledge.
- **EVALUATE**
- Closure- summarize, review, relate new information to link with previous knowledge. Students apply their new knowledge and skills in performance-based assessments.

Scope & Sequence

- 5-week research-based curriculum that covers short-lived to long-term and global scales of weather with assessments, videos, and student activity sheets

- Anchor: **An Unexpected Storm:** 1 lesson, 4 pages
- Learning Sequence 1: **From Cloud to Storm**: 6 lessons, 25 pages
- Learning Sequence 2: **A Front Headed Your Way**: 5 lessons, 19 page
- Learning Sequence 3: **Worldwide Weather**: 4 lessons, 16 pages
- Culminating Task: **Snow Day?** 3 Challenges, 11 pages

Next Generation Science Standards (NGSS) 3 Dimensional Learning



- 3 Performance Expectations (**Practices**)

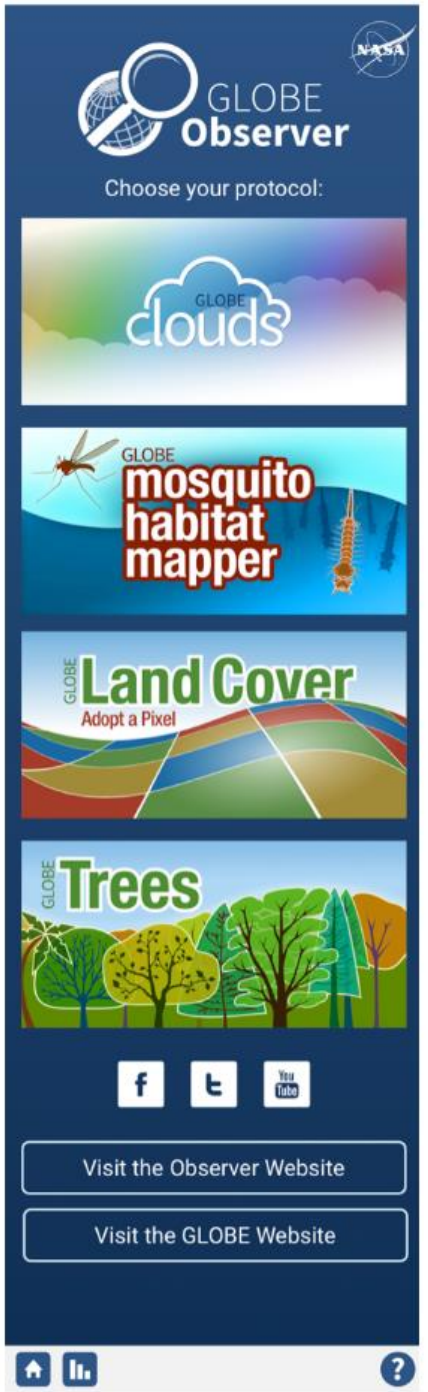
- 4 Science and Engineering **Practices**
- 5 Disciplinary **Core Ideas**
- 3 **Crosscutting Concepts**

Protocols

- Atmosphere
- Hydrosphere
- Soils/Pedosphere
- Biosphere

E-Trainings:
https://www.globe.gov/get-trained/protocol-etraining
Face-to-face Trainings

GLOBE Observer App



https://www.globe.gov/science-symposium

U.S. Regional Student Research Symposia

https://www.globe.gov/web/united-states-of-america/home/student-research-symposia

Visit the GLOBE Weather's website to:

- Download the teacher guides, student activity sheets, and assessments.
- View and download powerpoint slides for each lesson.
- Access links to videos.
- Join the GLOBE Weather teacher network.
- Get tips on navigating the GLOBE Weather curriculum.

THE GLOBE PROGRAM

BSCS SCIENCE LEARNING

NASA

UCAR CENTER FOR SCIENCE EDUCATION

GLOBEWEATHERCURRICULUM.ORG

GLOBE Weather was developed with support from NASA and utilizing data and science protocols from the GLOBE Program.

"I really liked this phenomena-based approach...The students enjoyed the time-lapse videos and then LOVED building their own thunderstorm simulation."

—2018 Pilot Teacher