

Weather/CLimate Unit Plan

GRADE LEVEL EXPECTATION:

Weather is a complex interaction within Earth's atmosphere, land and water (driven by the Sun) and can be predicted and described through complex models.

Earth has a variety of climates defined by temperature, humidity, air pressure and wind that have changed over time in a particular location.

BIG IDEAS:

Change, measurement, systems, models.

IF NOT, THEN WHAT?

Mixed Grouping by ability. Put lots of responsibility on group members. Revisit/Review concepts individually and have students create final product based on their own level/strengths. Review each lab by coll. Group at start of new lab.

IF SO, THEN WHAT?

- ✓ Challenge each individual to test a hypothesis for how weather/climate could change people's lives as it changes in different locations.
- ✓ Earth Science meteorologist interview via Skype.
- ✓ Possible Walking Fieldtrip to "Weather School" at KREXTV.

STUDENTS WILL (KNOW):

- Basic vs. Severe Weather
- Weather safety plan
- Weather trends over time: prediction/forecasting
- Climate vs weather
- Climates change over time

STUDENTS WILL (DO):

- Determine basic vs. severe weather and create an action plan.
- Observe and gather data for various weather conditions and
- Compare this to historical data for date/location
- Use models to develop and communicate weather prediction
- Evaluate accuracy of various tools of weather forecasting
- Use the historical impact of early weather research and consider potential implications for current weather studies
- Develop an evidence-based idea for Earth's different climates.
- Research and evaluate how climates vary from one location to another.
- Use inquiry based approach to find an answer about earth's climate.

Unit Comments:

- ✓ Use Ocean of Air as a text reference for the unit. Galileo's story tie in with astronomy unit link.
- ✓ Start with "OCEAN OF AIR/OCEAN OF WATER" idea.
- ✓ Wrap up with Wetlands talk and biomes to link to Ecosystems Unit! ☺

ACTIVITIES FOR LEARNING :

LAUNCH: Title Page-Vocab. Poem or Comic, picture examples, non-examples.

1. Weather in my life-songs involving the Weather!
2. ABC's of Weather/Climate (background knowledge)
3. Why I love this Unit!

EXPLORE (Inquiry):

1. Mini-Lesson: What is the Ocean of Air/Ocean of Water
2. Mini Labs: Atmosphere Structure and Tools of Weather – Atmosphere Poster and ?'s
3. Foldables: Ocean of Air, Atmosphere, Ordinary Weather vs. Severe Weather.
4. Weather Tools: Stations(make and use to measure and comp. models.)
 - a. Review lab stations. (Student Teachers) 6 stations. Question sheet.
5. [Weather Web Animations](#) – Models/Forecasting/Prediction/Historical/Case studies
6. Severe Weather: [Hurricane on the Bayou](#) tracking Katrina to New Orleans.
 - a. Wetlands Area. GOOGLE EARTH simulation.
7. PBL: Weather Video Research
 - a. Forecast for a specific location/climate
 - b. Severe Weather Event with Disaster Plan
 - c. Use of tools
 - d. Presentation via technology.
8. Homework: Weather Recording via the [news](#). Comparing to historical data.
9. Mindjogger: (Small Groups) Weather Climate

SUMMARY:

[Weather PROJECT:](#)

VIDEO/BROCHURE/DICTIONARY.

Research weather patterns.

Build a weather station

Google Earth/Radar-in lab.

WACT: Safety Plan- News script.

Forecast and severe weather event disaster plan.
(Neighborhood Safety Plan)

Present to class – group-demonstrate understanding.

Benchmark Assessment and Review BA.