Science Planning

**Unit 3: Earth’s Weather Patterns and Climate (8-9 weeks)**

**Week 1 Big Idea: Water is cycled through Earth’s systems.**

Week 1 –1/6- 1/10

1/7 - Episodes 1 and 2

YWBAT obtain, evaluate, and communicate information

Success is: identify locations where different states of matter can be found, such as glaciers, oceans, lakes, rivers, underground, clouds, and air

YWBAT use models to construct explanations

Success is: explain reasoning for classifying components as reservoir or transfer

Phenomena: water is transferred and stored in reservoirs as it moves through Earth’s systems

Phenomena: Water is found in all of Earth’s systems

* Students are shown a water bottle and discuss the origin of the water inside
* Students list all places water is found
  + look for patterns and classify bottom line: places where water is stored and places where water moves
* Students draw models to represent where and how (states of matter) and where water is found
* Students will observe printed model of water cycle discuss/take notes:
  + different parts; what do the arrows mean?
* Students will see that water movement is called transfer and water held is called reservoir; provide/discuss examples
  + write vocabulary in notes
* Reservoir/transfer sort
* Exit ticket: choose two transfer components and two reservoir components and justify their classification
* If time: students quiz each other
  + one student states a source of water and the other will identify it as a reservoir or transfer (with justification)

1/8 - Episode 3

YWBAT develop a model

Success is: clearly identify the source of the transfer as energy from the sun, density, and gravitational forces

Phenomena: there are energy and forces that cause water to be transferred from reservoir to reservoir

* Discuss/frontload forces that drive the water cycle (solar energy density, gravity)
* Close reading of p 76 in text; guided notes
  + Students draw models of how energy from the sun, density, and gravitational forces cause the transfer of water from reservoir to reservoir

1/10 - Episode 4

YWBAT obtain, evaluate, and communicate information

Success is: correctly explain how living organisms transfer water

Phenomena: living organisms play a role in the transfer of water

* Students watch video 3 times: <https://utah.pbslearningmedia.org/resource/ess05.sci.ess.watcyc.watercycle/water-cycle-animation/#.Wk_wKVWnHIU>
  + students just watch
  + students take note of transfers
  + teacher pauses to discuss transfers
* Students read article to answer the following questions:
  + Why is steam coming off of the plant?
  + Is this a transfer?
  + How do living organisms play a role in the transfer of water?
* Exit ticket\*: write and draw an explanation of how living organisms transfer water
  + \*frontload to emphasize "living organisms"
  + \*animals and humans give off water vapor through respiration