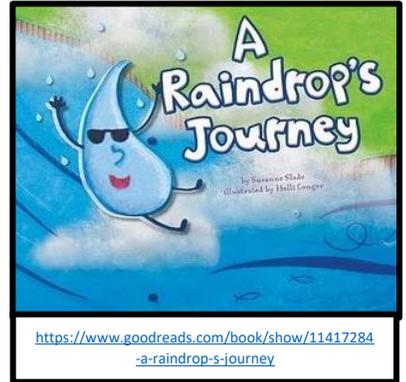


Classroom Aquaponics

Date:		Subject(s):	Science
Grade Level:	Prek-2		
Lesson Title:	Why water leaves aquaponics system/ water cycle evaporation		
Standard(s):	RI.2.3 Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-ESS2-1)		
NGSS:	K-ESS2-1 Earth's Systems Use and share observations of local weather conditions to describe patterns over time. Patterns in the natural world can be observed. (2-ESS2-2),(2-ESS2-3)		
Objective (cognitive):	After examining the change in the aquaponics system, and dramatic decrease in water, students will think of at least one reason as to why this occurred.		
Objective (affective):	After reading <i>A Raindrop's Journey</i> , students will conclude the raindrop's feelings throughout the book by answering at least one comprehension question.		
Objective (psychomotor):	After listening to a water cycle song, students will act out actions that represents the movement in order to exit class (exit ticket).		

Book(s) or Supported Reading(s):

A Raindrop's Journey by Suzanne Slade.



Materials & Supplies LISTED:

- Enough bags for each student
- Blue Dye
- Water Cycle Color Worksheet (at bottom)
- Watch Bag (shows cup) Worksheet (bottom)
- *A Raindrop's Journey* by Suzanne Slade.
- Aquaponics system set up previously (levels of water marked with sharpie over previous days)

Anticipatory Set/ **Enticement** (Pre-reading & Prerequisite Skills):

We can review the previous day of my measurements of the aquaponics system's water levels each day before this lesson (slowly decreasing).

I can ask:

- "Where did this water go?"
- "Did someone drink it?"
- "What do you think happened to my water"
- "Today we will be learning where this water went with an investigation through books and videos! We will then conduct our own experiment to see if this really happens or someone is just drinking our water every day."

Modeling/ **Explanation** (I can):

I can have mini bulletin board made:

- Move the cut out 'raindrop as you review the vocabulary.

Review words: (act out each)



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- Precipitation: water falls from clouds (act like a full cloud/ rub stomach and say “yummy rain”)
- Evaporation: water turns into gas (act like gas/ invisible/ act like looking for invisible gas)
- Condensation: gas pulled down and forms with water (make fingers act like rain is falling down)

Read book: *A Raindrop's Journey* by Suzanne Slade. Pause at each change in water cycle. Have students act out action as to what the water is doing (above).

Comprehension questions:

- “What happened to the raindrop?”
- “Why did he not want to stay on the leaf?”
- “Where did he belong?” “What did he go through” (Each student can list one step/ all act out step once it is listed)

Guided Practice/ **Engagement & Exploration** (We can):

We can listen to song and sing:

<https://www.youtube.com/watch?v=TWb4KIM2vts> (start to 2:24)

- “How is this water cycle like our aquaponics system?”
- “What happened to our water?”
- “Did someone drink it?”



We can review our next activity: coloring water cycle worksheet then set up bag of water. We can draw illustrations from video on bag. Example:

<https://i.pinimg.com/736x/ee/d3/64/eed3641f592d927d6e65b7e73868ab5b--water-cycle-activities-space-activities.jpg>

(I will show example on promethean board/ if not available draw picture on white board & hand out my own design)

Independent Practice/ **Elaboration** (You can):

- You can color water cycle worksheet
- You can fill bag with water (with teacher’s help). You can come to teacher so they can add blue dye.

Closure:

- Re-listen to song; singing and acting out each part. Review each vocab with action.

Assessment/ **Evaluation**

- Exit ticket: act out water cycle process using coloring.
- Checklist as to who gave a reason for the water being gone.
- Completion of coloring

Enrichment/ **Extension**

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Extension:

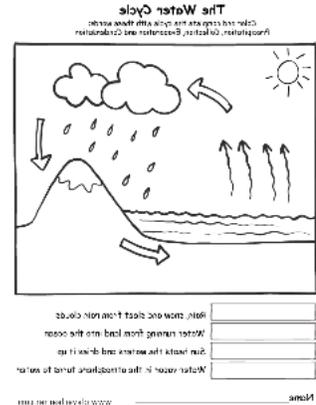
Students will be continuously filling out the rates of water worksheet (although it may be cups instead of bags). Levels of water will be marked each day with a sharpie and colored in on worksheet.

Modification:

For students who do not understand the process each, they will take home this worksheet with more pieces to reviews.

Differentiation:

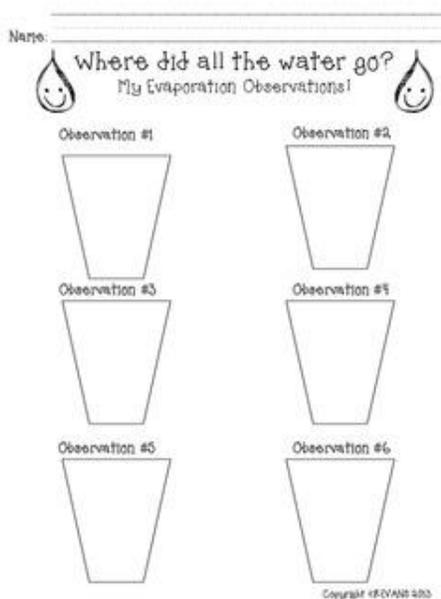
For students advanced and know lots about the water cycle, they can draw a picture showing how mountains help contribute to the water cycle.



Checklist:

Student name:	Gave a reason:

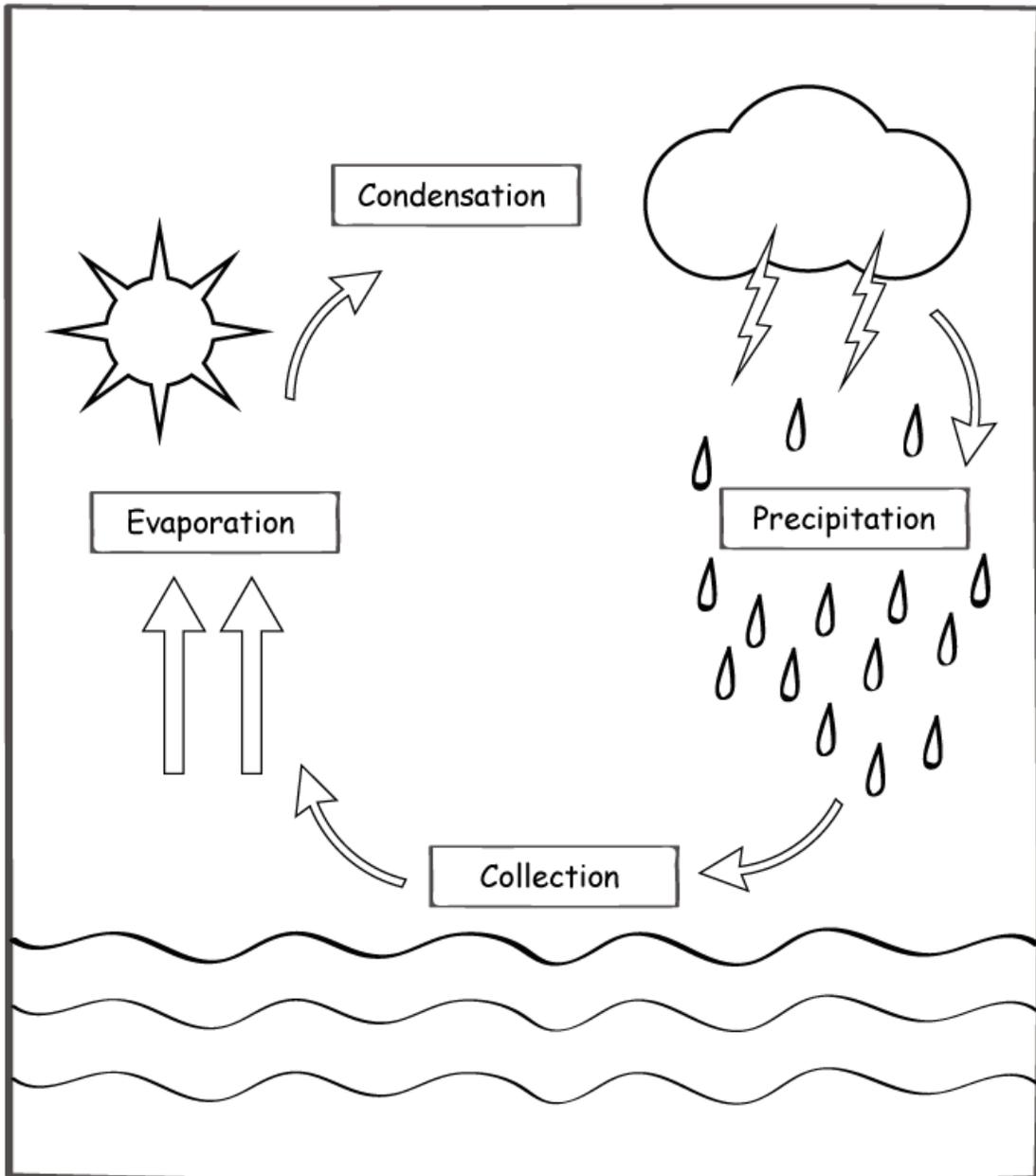
<https://ecdn.teacherspayteachers.com/thumbitem/Kindergarten-Science-Evaporation-Freebie-066896100-1380681686-1397409706/original-907132-2.jpg>



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The Water Cycle

Color the picture. Talk about the picture



Name _____

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