Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***EQ: What are the unique properties of water molecules that make it essential to your life?***

 **ENGAGE**

**DRAWING**

1. What do you notice about the cup at the front of the room? What will happen if I add something to the cup?
2. *Prediction*: How many paper clips do you think will fit in the cup before it spills over? Why?
3. *Results*: Were you correct? In your own words, explain what you think is happening in this demonstration.

**EXPLORE:** *After working with the molecule kits, you and your partner should come up with the drawings and three observations in the space below*

|  |  |
| --- | --- |
| **Drawing****KEY****Red/White**Water Molecules H2O red-oxygen white-hydrogen**Grey/White**Ethane (C2H6) Grey –carbon White – hydrogenBlue - SodiumGreen - Chlorine | **Summary of Observation** |
|  |  |
|  |  |
|  |  |

**EXPLAIN**

|  |  |  |
| --- | --- | --- |
| **Class Observations** | **Example that I saw** | **Vocabulary** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**ELABORATE:**

**My Role in this activity is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Fill in this column after you do the properties of water reading.**

*Property A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*Summary:*

*Property B: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*Summary:*

**DRAWING OF DEMO:**

*Property C: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*Summary:*

**OBSERVATIONS:**

**EVALUATE:** *Fill in the table as a group, and then each member of the group will present their section to the class*.

|  |  |  |
| --- | --- | --- |
| *Activity Director* | Overview of the demonstration and what you noticed |  |
| *Materials Manager* | Connection to the water molecule kits |  |
| *Timekeeper/Reader* | A question your group has and would like to investigate |  |
| *Summarizer* | Importance to biology and your life |  |

**ACTIVITY DIRECTOR**

* Keep everyone on task
* Ask for time updates
1. Properties of Water Reading
	1. Tell the **timekeeper** to start the timer.
	2. Listen to the **reader** as they read the Properties of Water reading out loud.
	3. Stop the **reader** after each major chunk.
	4. Start the group discussion of the property in that section of text.
	5. Direct the **summarizer** to come up with a group summary.
	6. Once everyone is done writing the group summary, tell the **reader** to begin reading again.
	7. Continue until you finish the reading.
2. Properties of Water Demonstration
	1. Tell the **reader** to read all of the instructions for the demonstration aloud for the group.
	2. Based on the instructions, tell the **material manager** to set up and perform the demonstration according to instructions.
	3. Direct the **materials manager** to clean the station and return materials.
	4. Begin discussion of observations.
	5. **Summarizer** will come up with a group list of observations based on the discussion.
3. Evaluate
	1. Start the discussion of each component of the demonstration. **Summarizer** will come up with the group concensus for each part.
	2. Make sure each person practices their part of the presentation.

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**Materials Manager**

1. Properties of Water Reading
* Set up Demo
* Do the Demo
* Clean the Demo
	1. Listen to the **reader** as they read the Properties of Water reading out loud.
	2. Contribute to the group discussion of the property in that section of text.
	3. Write down the group summary from the **summarizer.**
	4. Continue until you finish the reading.
1. Properties of Water Demonstration
	1. Listen to the instructions for the demonstration aloud for the group.
	2. Based on the instructions, set up and perform the demonstration according to instructions.
	3. Clean the station and return materials.
	4. Contribute to discussion of observations.
	5. Write down the group observations from the **summarizer** and complete your drawing.
2. Evaluate
	1. Participate in the discussion of each component of the demonstration. **Summarizer** will come up with the group consensus for each part.
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	1. Participate in the discussion of each component of the demonstration. **Summarizer** will come up with the group consensus for each part.
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**TIMEKEEPER/ READER**

1. Properties of Water Reading
* Keep a timer running
* Give time updates
* Read loud and proud for the group.
	1. Set a timer and give frequent time updates.
	2. Read the Properties of Water reading out loud.
	3. Contribute to the group discussion of the property in that section of text.
	4. Write down the group summary from the **summarizer.**
	5. Continue until you finish the reading.
1. Properties of Water Demonstration
	1. Read the instructions for the demonstration aloud for the group.
	2. Watch the demonstration and help in any way you are told.
	3. Help clean the station and return materials.
	4. Contribute to discussion of observations.
	5. Write down the group observations from the **summarizer** and complete your drawing.
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**SUMMARIZER**

1. Properties of Water Reading
* Summarize each section of the activity for the group.
	1. Listen to the Properties of Water reading.
	2. Contribute to the group discussion of the property in that section of text.
	3. Come up with the group summary that everyone will write down.
	4. Continue until you finish the reading.
1. Properties of Water Demonstration
	1. Listen to the instructions for the demonstration.
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	5. Come up with the group observation summary.
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