Color Vocabulary[1]

Examples		English Definition
Salt Alum Vinegar iron, copper, tin pots	**mordant**	It helps break down the fibers in the fabric so the fibers will more readily absorb the dye.
Observation		In my language I would say:
Synonym corrosive acidic		_____ _____ _____ _____ _____ _____

Sentence: I am going to use a mordant called salt to help my fabric absorb the color in the dye bath.

Examples		English Definition
chlorophyll gives leaves their green pigment.	**pigment**	A compound that gives a color to plants or animals.
Synonym Synonym(s) coloring dye stain		_____ _____ _____ _____ In my language I would say: _____ _____ _____
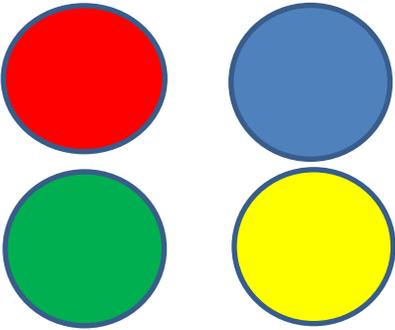
Sentence: The pigment from the yellow sweet broom flower turned my fabric a light brown.

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Examples		English Definition
colander sieve	# strainer	An object that has holes punched in it and used to separate solid material from liquids. _____ _____ _____
Observation		
Synonym(s) filter		In my language I would say: _____ _____ _____ _____
Sentence: Use a strainer to remove the blackberries from the liquid. _____		

Examples:		English Definition
cotton swatches wool nylon	# fiber	A material made from natural or synthetic sources. Natural sources can come from plants like cotton or animals like wool from sheep. _____ _____ _____
Observation		
Synonym(s) thread		In my language I would say: _____ _____ _____ _____
Sentence: Did you know that animal-based fibers dye more easily than plant-based fibers? Many fibers woven together make fabric. _____		

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Examples flowers trees animal fur	natural materials	English Definition Resources that come from nature. They are not man made. _____
My Observation 		In my language I would say: _____ _____ _____ _____ _____ _____
Synonym(s) organic matter natural resources		
Sentence: You can choose a variety of natural materials to use as a dye for your investigation.		
Examples 		English Definition _____ _____ _____ _____
Observation 		In my language I would say: _____ _____ _____ _____ _____ _____
Synonym(s) 		
Sentence:_____ _____		

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Science Log[2]

Focus Question :   Date :

_____

_____

_____

Observations : _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Plant

_____

_____

_____

[2] Developed and prepared by: Fran Gollmer ©2020

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Authentic Science Talk in Action
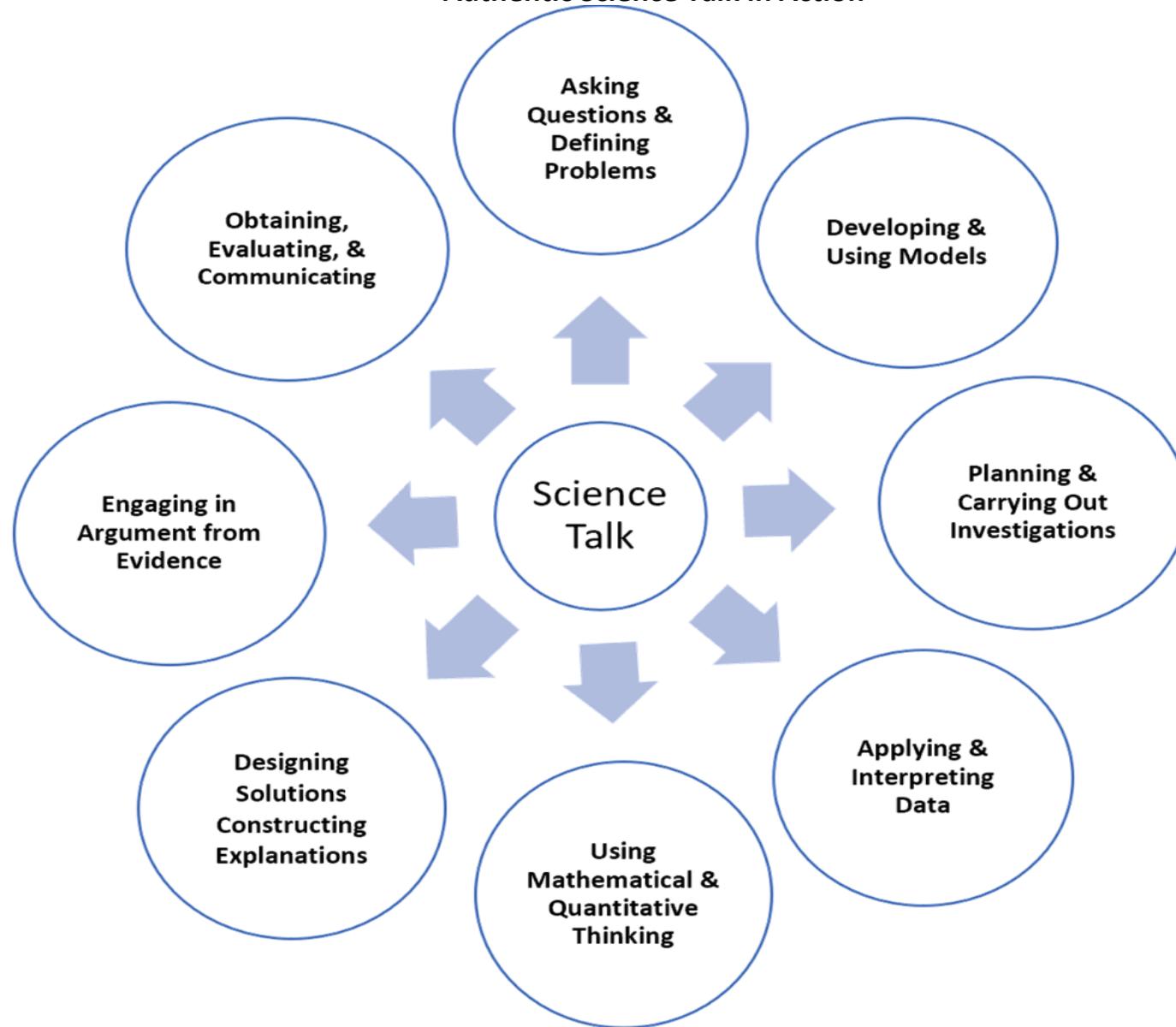
Digital Escape Room:

- **Purpose -** some type of mystery to solve or goal to reach

- **Clues -** a series of puzzles or quesitons to solve, one puzzle at a time, eventually leading to the goal

  o **Multiple Choice Questions For example,** your first clue can consist of five multiple choice quesitons. The correct answers may be A-C-D-A-B. The key code that opens the lock would be ACDAB

  o **Series of True/False Questions – TFTFF**

  o **Fill in the Blank or Quesitons** that have a very specific single word/phrase answer are also to use.

  o **Math Calculations**

  o **Diagrams-** ask students to label it. The key code can be the first letter of each label int he order the labels are numbers.

- **Something to Unlock -**a combination lock or access code. The answers are provided by the clues that studnets solve along the way

- **A Time Limit (Optional)** – students must complete the puzzles, open the locks, and reach the goal in a set amount of time. The choice to use a timer depends on your group of students. A time limit can drive motivation and focus, or it can add to much stress.
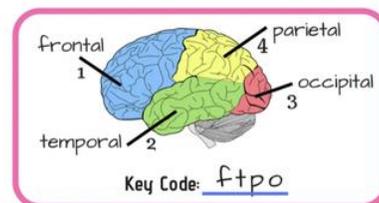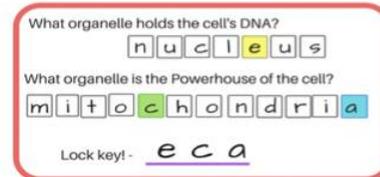
Example of Digital Escape Room

- Google Site: Digital Escape Room - Penguin's Food Adventure
  https://bit.ly/2Xu7lx6
- Tutorial on how to create Digital Locks using a Google Form
  https://bit.ly/2xrBtij

ThingLink:

- Visual learning platform- easy to embed images, videos, audio files, links, and virtual tours

- All text descriptions in image or video hotspots can be read with Immersive Reader in over 60 languages

- Can be used for presentations or lesson plan

  Teacher Lesson Plan Sample
  https://bit.ly/2xol4K5

  Student Created Sample
  https://bit.ly/34vMqLu

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CAL Webinar: Kitchen Chemistry & Backyard Biology: Language and Science in the Home

Brochure Double Journal Entry

Name:_____**Topic:**_____

As you read the brochure, select a term that you find meaningful or interesting. Write the page number in the first column. In the second column, write an interesting phrase from the text. In the third column write your reaction (a comment, question, connection made, or analysis).

Page number	From the Text	My Thoughts

CAL Webinar: Kitchen Chemistry & Backyard Biology: Language and Science in the Home

Infographic Journal Entry

Name:_____**Topic:**_____

As you read the infographic, select a term that you find meaningful or interesting. Write the vocabulary term in the first column below. In the second column, write an interesting phrase from the text. In the third column write your reaction (a comment, question, connection made, or analysis).

Vocabulary Term	From the Text	My Thoughts

CAL Webinar: Kitchen Chemistry & Backyard Biology: Language and Science in the Home

Quiz Reflection

Name:_____**Quiz:**_____

Reflect on the questions you got wrong. Explain why you think you got it wrong. Use the choices below.
a. I didn't understand what the question was asking
b. Understood what the question was asking but wasn't sure about the content
c. Careless mistake
d. I didn't know the material because I didn't study this or I'm not sure we ever talked about this
e. Other, maybe there is another reason you can think of

Question I got wrong	Reason I got it wrong (use choices above and elaborate)	Where the material can be found (readings, PowerPoints, notes, etc.)

Backyard Botany

- Activity to get learners outside and exploring plants at a deeper level
- Adaptable for different grade levels and language proficiency
- Could be done on a walk, in a park, in the backyard, or any grassy area with plants.
- Learners create field notes for 10 different plants
- Then could use an app to learn more
- Preview vocabulary before starting
- Afterward, learners could compare specimens with sentence frames
- Write about plants in their area with paragraph frames

Types	Parts	Texture	Physical Attributes	Habitat Attributes
plant	leaf	smooth	narrow	dry
tree	stem	jagged	wide	wet
grass	trunk	waxy	hard	field
blossom	roots	rough	soft	forest
shrub	petals	bumpy	flexible	marshy
bush	veins	thin	rigid	rocky
flower	stamen	thick	shallow	

Backyard Botany Journal

Specimen	Rubbing/ sample	Description	Habitat	Notes
Plant 1				
Plant 2				
Plant 3				
Plant 4				
Plant 5				
Plant 6				
Plant 7				
Plant 8				
Plant 9				
Plant 10				

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Garden or Park Plot

Choose a section of a nearby park, backyard, or grassy space. Plot the plants you found on this map by writing their numbers from the table above. Observe the park or garden at different times throughout the day. Below the plot, create a legend with your own colors to show how much sun or shade the plants get during the day. Based on your findings, are the plants in the right location based on their needs?

Legend

☐ = Shaded most of day ☐ = Partially shaded most of day

☐ = Sunny most of day

Fun Home Demonstrations - Make a tornado or whirlpool

- **Materials**
  - 2 – 2 liter plastic bottles
  - 1 roll of packaging tape or duct tape.
  - Dish soap – clear is preferable, but not required.
  - Blue glitter

- **Directions**
  - Fill one of the bottles 2/3rd full with water.
  - Add 2 squirts of liquid soap.
  - Add about 1 teaspoon of glitter.
  - Place the other bottle on top and seal tightly using tape. Packaging tape works well because it is see through.

- **Creating the Tornado**
  - Flip the bottles upside-down. Turn the bottle upside down and give the water the chance to flow from the top to the bottom.
  - Think of it like the motion of flipping an hourglass. The bottom bottle should now be filling with water, and the top bottle should be emptying of water. Hold the bottles for support.
  - Do this 2 or 3 times. This is distributing the air pressure. There should be less air pressure in the top than the bottom.
  - Now shake up the water in the bottle in a circular motion. It might take a few tries.
  - When you stop, the water should empty in a circular cone-like format that mimics a tornado or whirlpool.
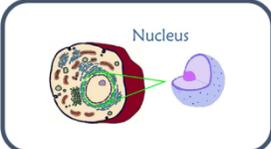 - The glitter attaches itself to the soap for a clearer view.

- **Discussion:** Why does this happen?

Vocabulary Sort/Memory

Instructions:

1. This is an activity where the students use their memory skills to review vocabulary or content concepts.

2. Students lay out cards on a table and turn them to match the word/concept and their definition. As a challenge you may add a visual representation (i.e. picture, formula, symbol, etc.).

3. As students make their matches, they must restate the definition in their own words or they may not collect their cards. Students may work in teams.

4. At the end, they must draw two to three conclusions about the information.

Example:

Vocabulary Sort/Memory

Words	Definitions
1.	
2.	
3.	
4.	
5.	
6.	
What conclusions can you draw based on the words and definitions?	

Window Weather Forecast: Compare and Contrast

My location: _____   **Forecast date:** _____

Times when checking weather forecast: _____   **Source:** _____

Time	Weather Forecast	Actual Weather	Actual Temperature
9am	_____ °F		
10am	_____ °F		
11am	_____ °F		
12pm	_____ °F		
1pm	_____ °F		
2pm	_____ °F		
3pm	_____ °F		
4pm			

	_____ °F		
5pm	_____ °F		
6pm	_____ °F		
7pm	_____ °F		
8pm	_____ °F		

Sentence stems

Write a letter to the weather forecaster. You might use some of the sentence stems below:

- *Compared to the weather forecast…*
- *The actual weather…*
- *Throughout the day…*
- *As forecasted….*
- *The data shows that…*