

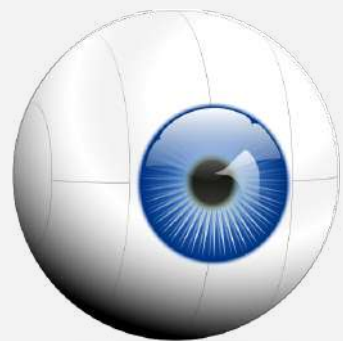
The Cell Cycle & Cancer Stations

Self Directed Activity

Directions - Proceed through each of the following stations. Following the directions as written. If a question arises, talk amongst your group members first, then if a consensus is not reached, please seek assistance from your instructor

Station 1

Watch It



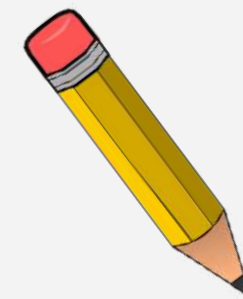
Station 2

Video It



Station 3

Write It



Station 4

Examine It



The Cell Cycle & Cancer Stations

Self Directed Activity

Directions - Proceed through each of the following stations. Following the directions as written. If a question arises, talk amongst your group members first, then if a consensus is not reached, please seek assistance from your instructor

Station 5

Answer It



Station 6

Perform It



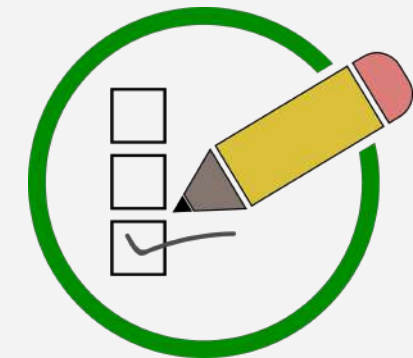
Station 7

Read It



Station 8

Evaluate it





Watch It – Station 1

Where do new cells come from?

Question 1

What are the levels of organization?

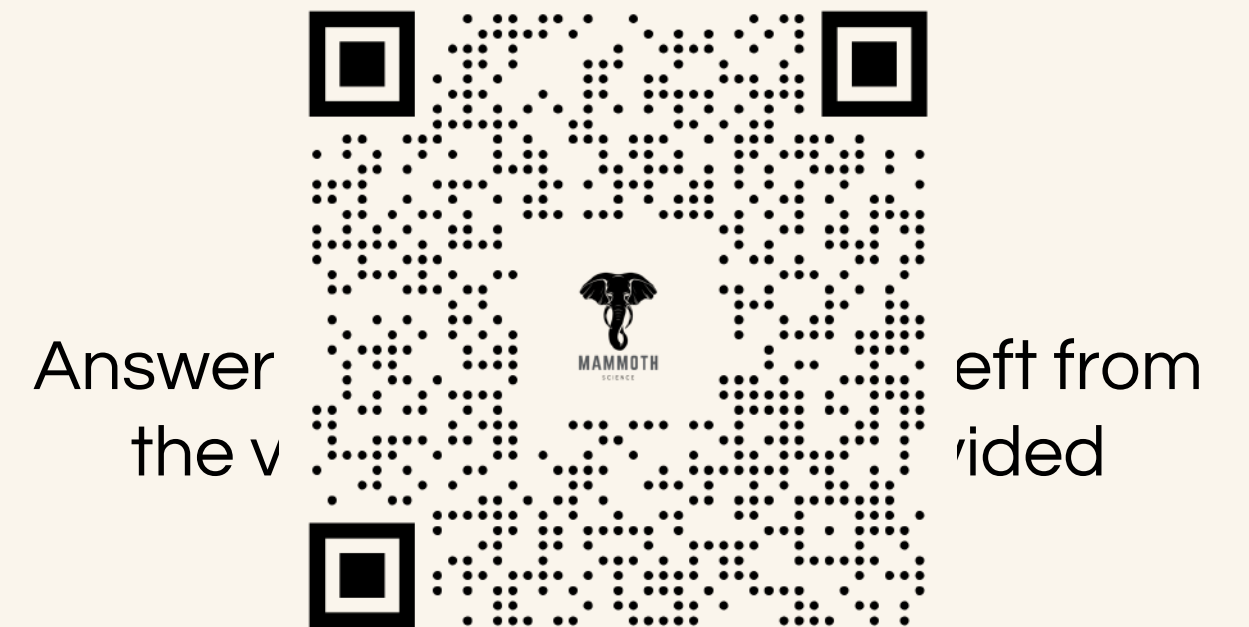
Question 2

How is reproduction of cells regulated?

Question 3

Directions

Watch the following video



Stations 1-4



Station 1 – Continued



TH

What stages make up Interphase?

Question 4

Is interphase part of Mitosis? Why or why not?

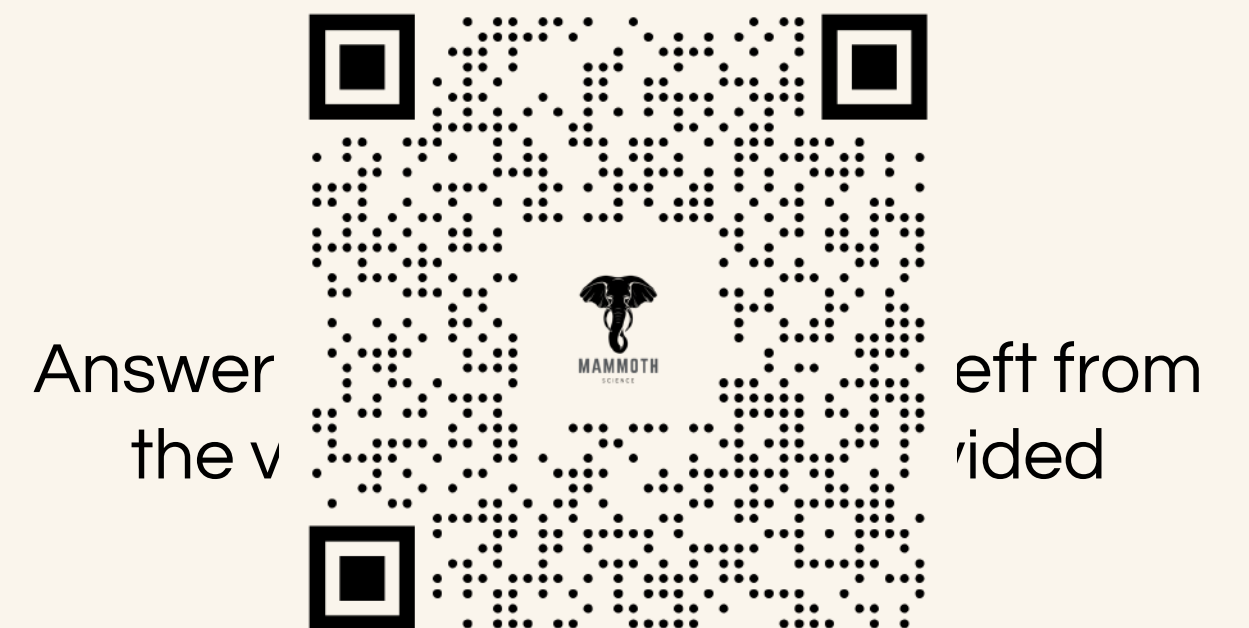
Question 5

What are problems with cancer cells?

Question 6

Directions

Watch the following video



Stations 1-4



Station 1 – Continued

Define Benign vs Malignant tumors

Question 7

Is cancer genetic? Why or why not.

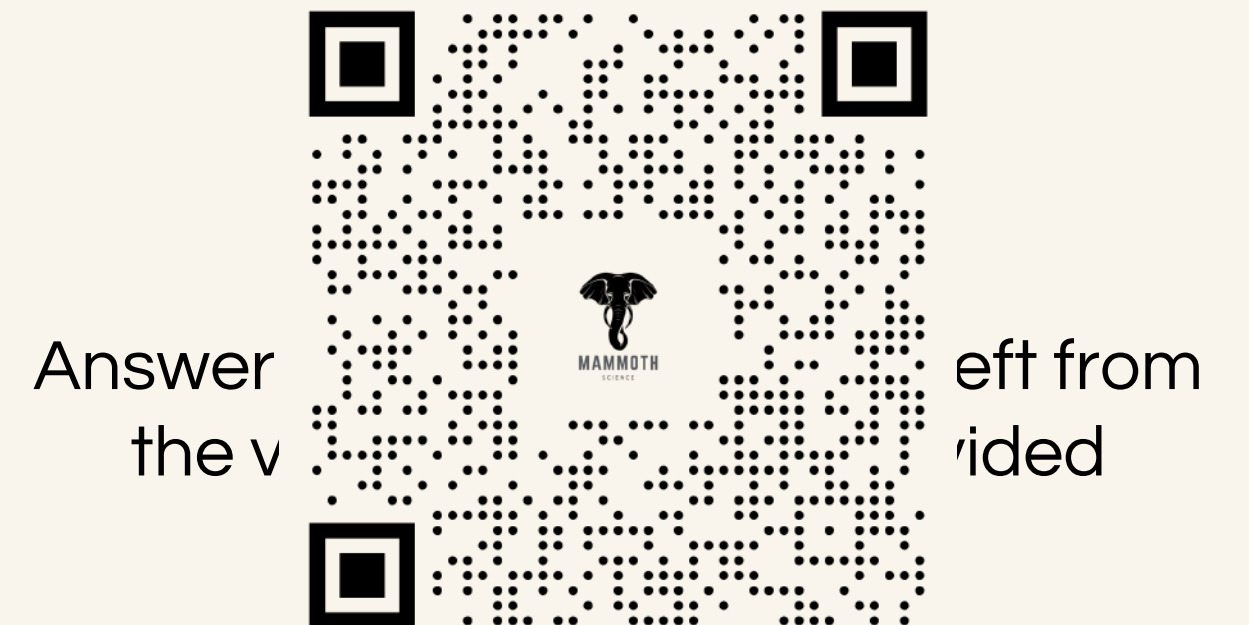
Question 8

In what phase does DNA Replication occur? Be specific...

Question 9

Directions

Watch the following video



Stations 1-4

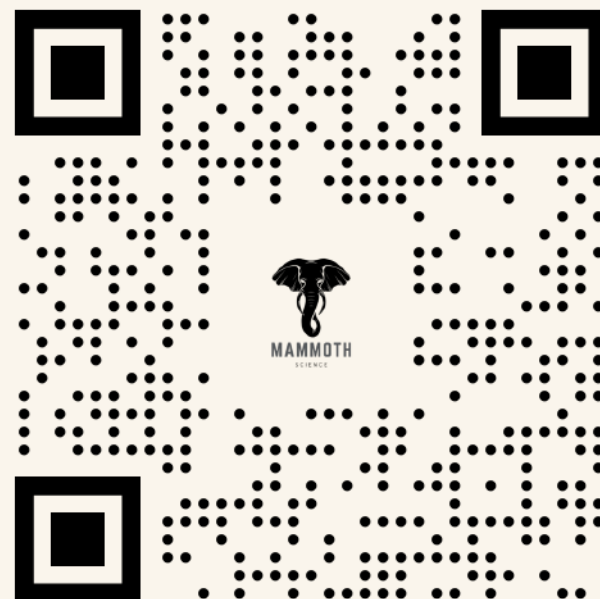
Station 2 – Video It



Directions

Make a flipgrid video of about 3 minutes. Your video should include the following information, using the sentence stems right. Use the link or QR Code Below to access...

- The **what, when, why, how, and outcomes** of the cell cycle
- **Include:** What happens when a cell does not undergo apoptosis but continues to divide unregulated.



"The cell cycle consists of several phases..."

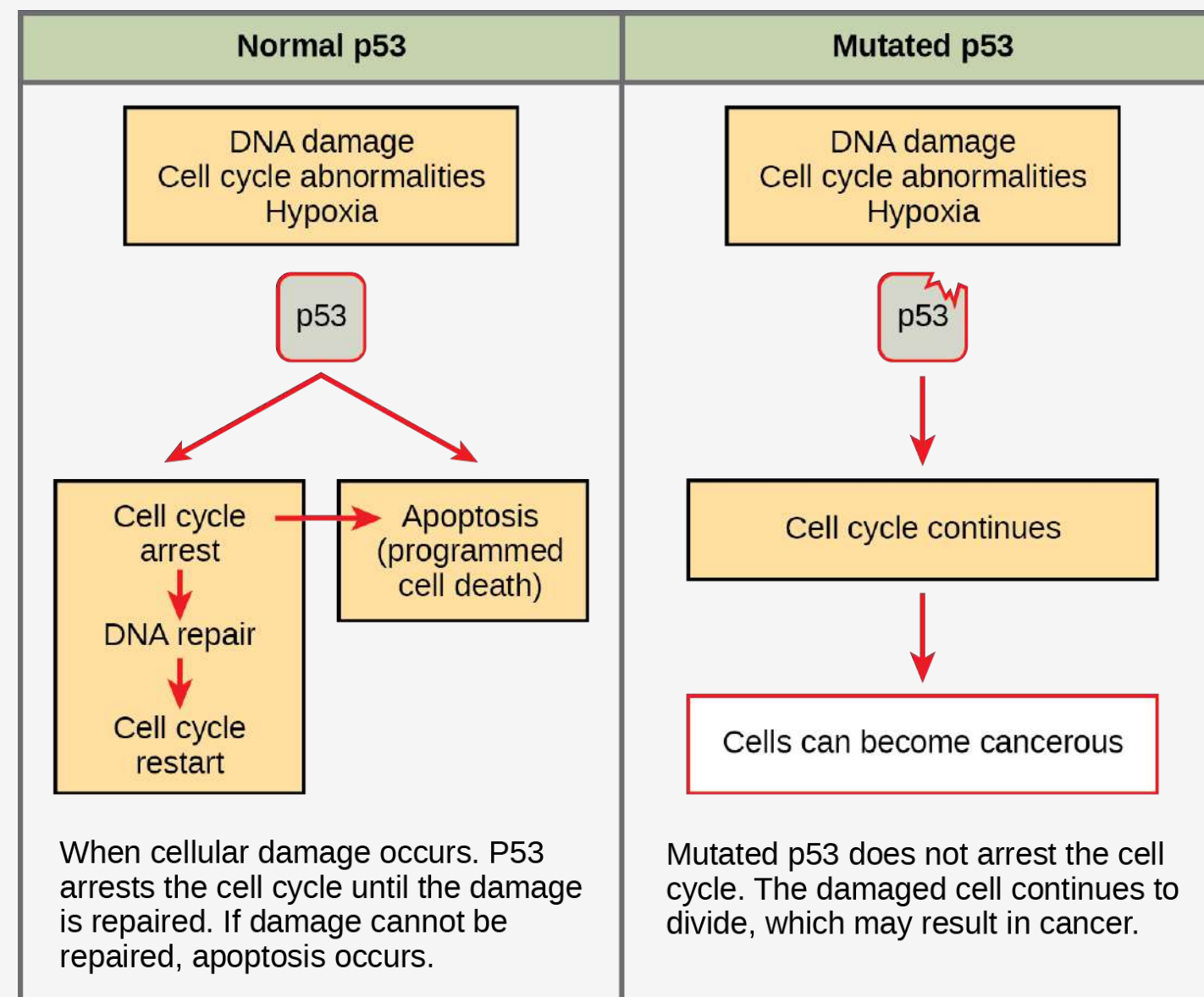
"The what, when, why, how, and outcomes of the cell cycle is..."

"The acronym for the phases of the cell cycle is...."

"Unregulated, uncontrolled cell division results in..."

Write It

In a quickwrite (3-5 Sentences) - Using the image below...



Human papillomavirus can cause cervical cancer. The virus encodes E6, a protein that binds p53. Based on this fact and what you know about p53, what effect do you think E6 binding has on p53 activity?



TH

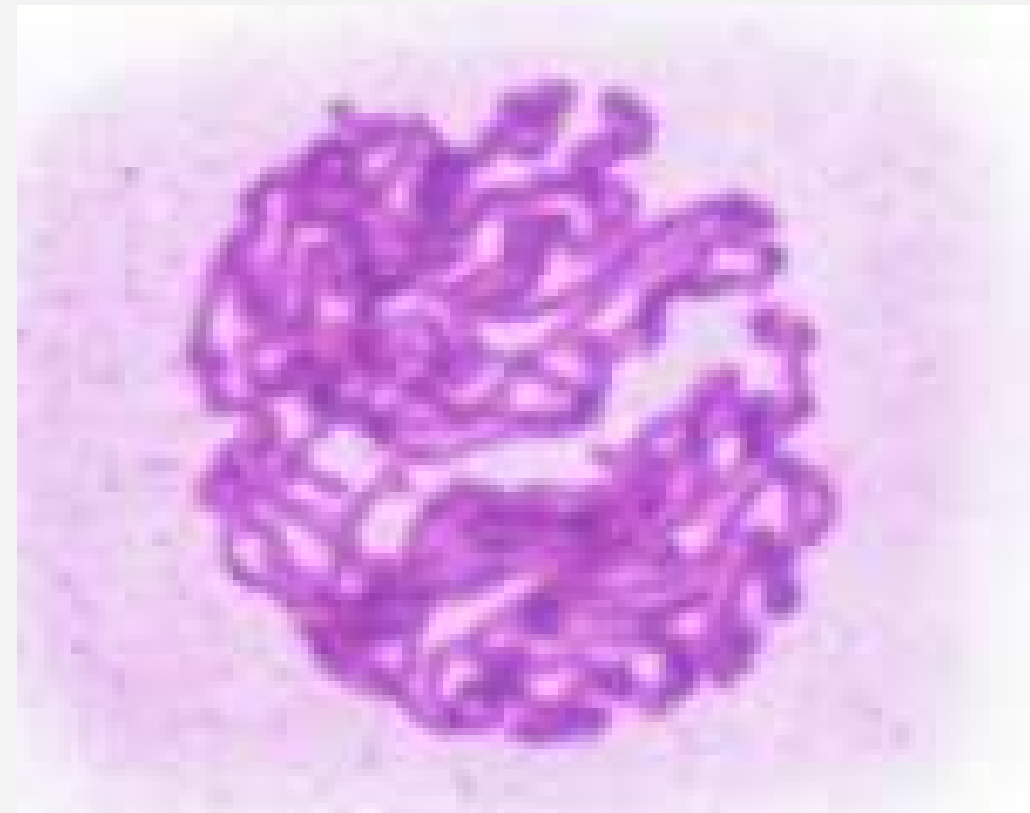
Examine It

Determine the sequence of stages that comes right before and right after each cell below

Cell A



Cell B



Stations 1-4



Answer It

1. *List two problems that growth causes for cells.*
2. *Which type of reproduction, sexual or asexual, is best suited for organisms that live in a place where environmental conditions are stable? Explain.*
3. *How does packaging genetic information into chromosomes help the process of cell division?*
4. *Explain the difference between chromatids and chromatin.*
5. *How are metaphase and anaphase different?*
6. *Explain the difference between cytokinesis in plant cells and animal cells.*
7. *The level of cyclins in a cell increases during the M phase of the cell cycle. What might happen to a cell if no cyclins were present during the M phase?*
8. *How do cancer cells differ from normal cells?*
9. *Normal cells grown in a petri dish tend to divide until they form a thin layer covering the bottom of the dish. How would you expect cancer cells to behave in this situation?*



Perform It – Station 6

Use the QR code right or follow the LINK here.

Directions

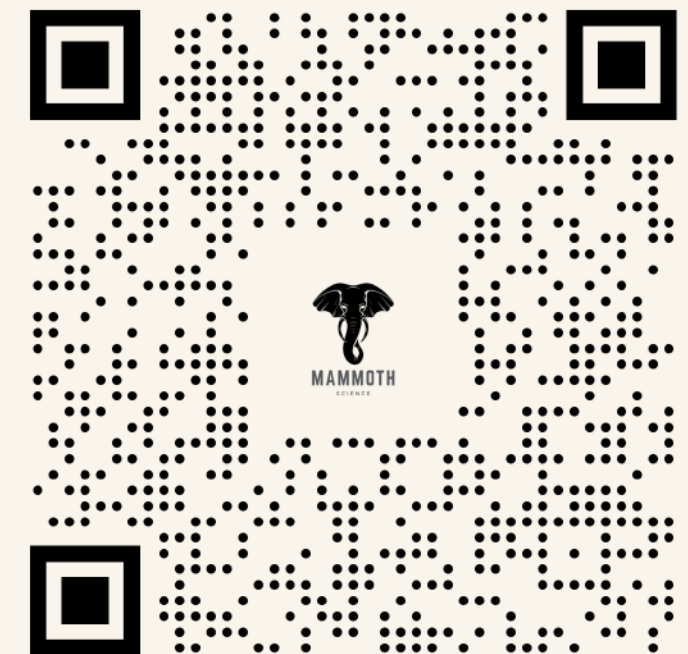
Cell division is the only way single-celled organisms can reproduce. Multicellular organisms need cell division to grow and to replace dead or damaged cells. In humans, many types of cells divide. For example, repeated divisions allow a single fertilized egg cell to develop into an adult with more than 37 trillion cells. After growth, division remains important in normal cell turnover, such as in our skin and gut, where cells are continuously renewed. Other cells have to divide to heal wounds like skin cuts or broken bones.

Why are checkpoints important to the normal cell cycle process?

Question 1

Directions

Watch the following lab simulation



Answer
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Station 7 – Read It

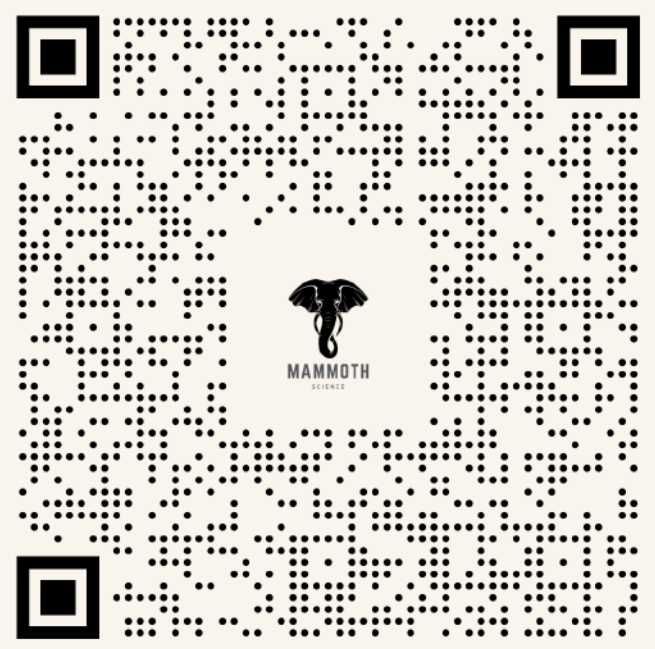
Main Idea

summary

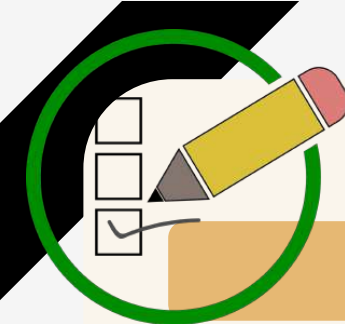
Article

Inferences

How is it connected to learning



Stations 5-8



Station 8 – Evaluate It

TH

what do I know?

List at least 5 items:

what do I wonder?

List at least 4 items:

what have I learned?

List at least 5 Items:

Stations 5-8