Developing Successful Inquirers

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3 Prompts to Frame Your Thinking

One action I will take…

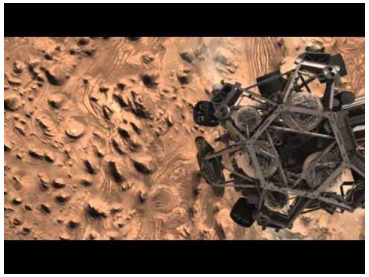
One question I will ask…

Evidence of implementation
I will see in my library...

What do you do with an Idea?

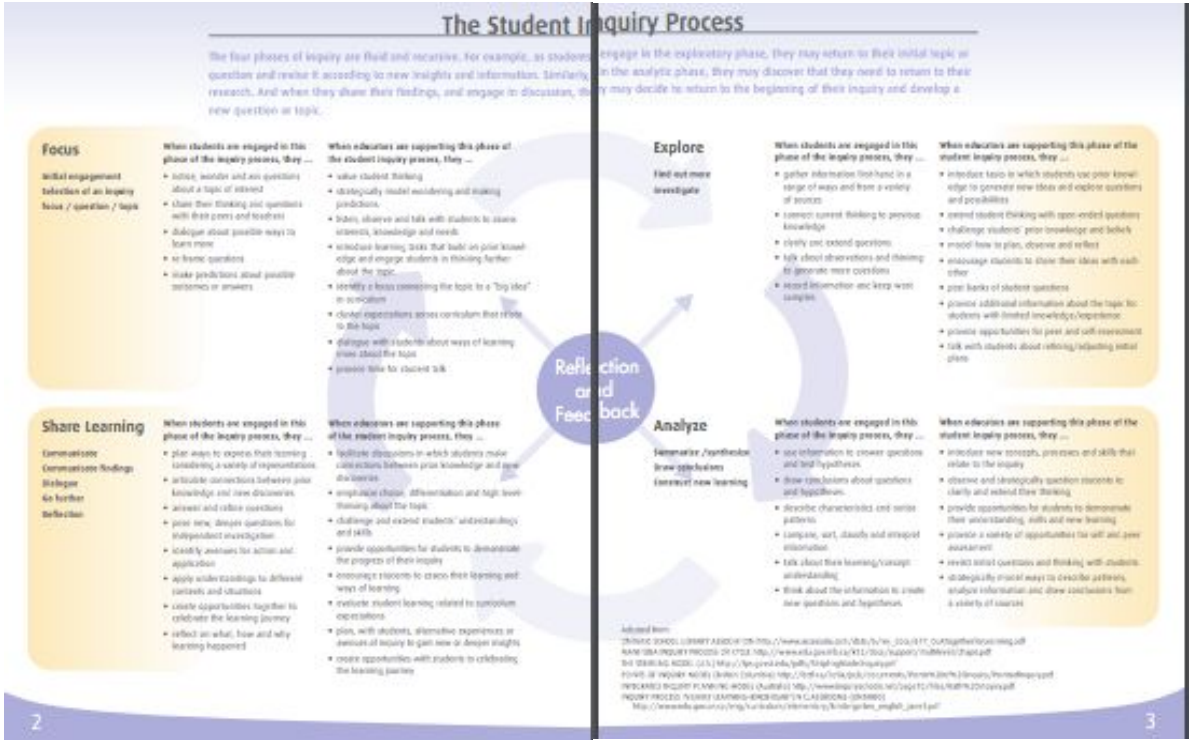
What is Inquiry?

“Inquiry is an approach to learning whereby students find and use a variety of sources of information and ideas to increase their understanding of a problem, topic or issue of importance. It requires more than simply answering questions or getting a right answer. It espouses investigation, exploration, search, quest, research, pursuit and study. It is enhanced by involvement with a community of learners, each learning from the other in social interaction.”



Getting Started with Student Inquiry. (2011, October 1). *Capacity Building Series*.

Getting Started with Student Inquiry



What happens at each stage?

Inquiry Sort

- Think of what the stage name means
  - What synonyms might students come up with?
  - Which of the given verbs fit with each stage?

When you see in the upper right corner of a slide, click it to take you to the page of the HDSB Inquiry Process website that features the activity we explored on that slide.

Inquiry Sort - continued

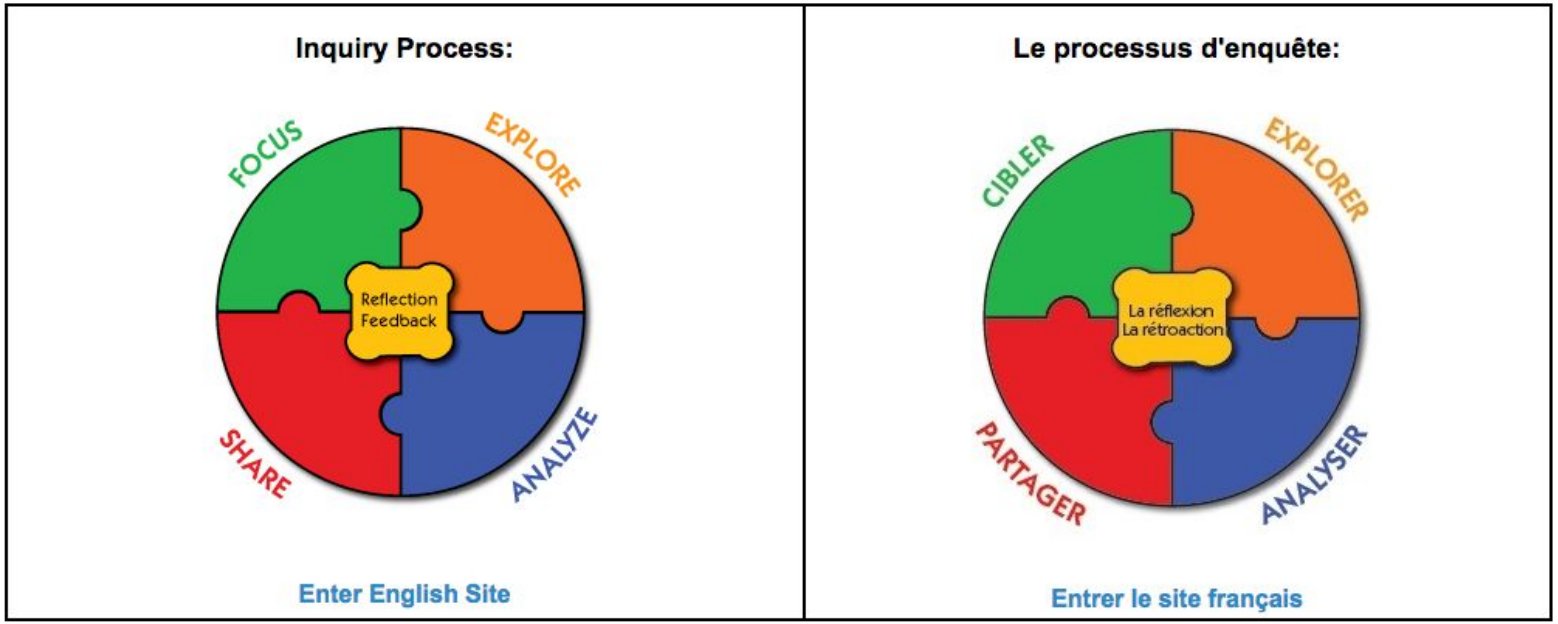
- Classify and sort the statements according to the stage it occurs in
  - Why are some statements repeated?

Inquiry Web Site Exploration

inquiry.hdsb.ca

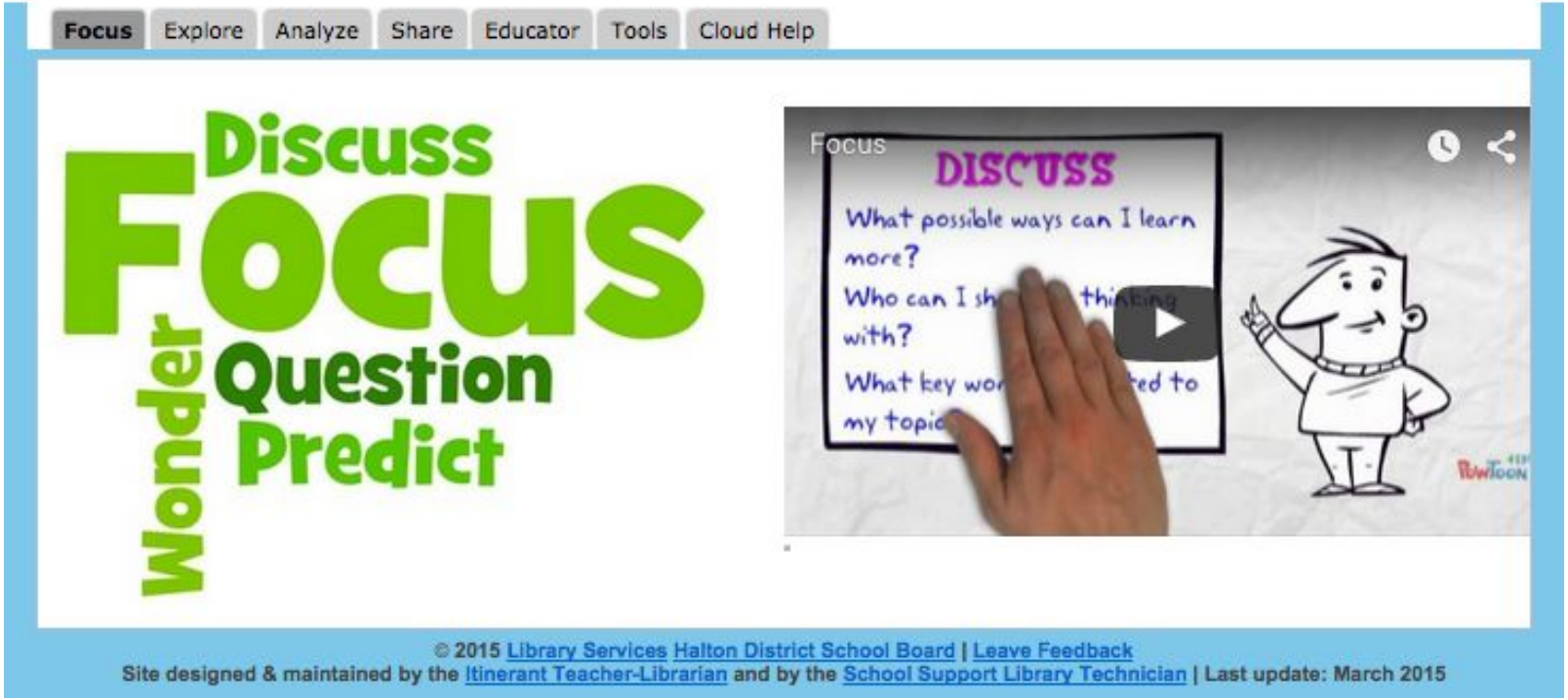
- videos
- templates
- teacher tools
- reflection questions

Inquiry Web Site



English and French

Stage Layout



Reflection Questions

Links to Google Doc templates

Videos

Screenshots of templates

Focus >

Question

Reflections:

- What questions do I have about my topic?
- What question do I want to explore?
- Have I developed a good inquiry question?
- Have I used questioning strategies to help me develop my question?
  - thick vs. thin questions
  - Bloom's taxonomy
  - question creation chart (Q-chart)

Actions...

- Question Creation Chart to develop questions
- Bloom's Question Starters to re-frame questions

Thick Vs. Thin Questions for Research

Source: Library Centers (https://www.youtube.com/watch?feature=player_embedded&v=GpDRj5TgSh8)

Question Creation Chart (Q-Chart)

Directions: Create questions by using one word from the left hand column and one word from the top row. The farther down and to the right you go, the more complex and high-level the questions.

	Is	Did	Can	Would	Will	Might
What						
Where						
When						
Who						
Why						
How						

FACTUAL

PREDICTION

ANALYTICAL

SYNTHESIS & APPLICATION

Bloom's Question Starters

Adapted from the work of Lisa Carter

REMEMBERING	UNDERSTANDING
What is...? Where is...? When did...? Name two things...? How is...? Which is...? List three things that...?	What was the main idea...? Describe what is meant by...? Explain what the author means by...? Describe what happened...? What is meant by...? How would you characterize...? Summarize
APPLYING	**ANALYZING**
What examples can you find to support...? What would result if...? Using what you know, how would you solve...? What questions would you ask if...? Using what you know, construct... How is ___ similar to ___? How would you classify...?	How would you compare...? Distinguish between ___ and ___ How would you contrast...? What motive is there...? What is the relationship between ___ and ___? What evidence can you find...? What ideas justify...?
EVALUATING	**CREATING**
Do you agree with ___? Why or why not? What is your opinion of ___ and why do you feel that way Would you recommend ___? Why or why not? What choice would you have made...? Would it be better if...? Why was it better that...? What did you like best...?	How would you rewrite the selection from ___'s point of view? What do you predict will happen? How could you improve...? What changes would you make to...? Role play the event. Invent a new scenario. What inference can you make about...?

STUDENT

Educator's Role

Focus

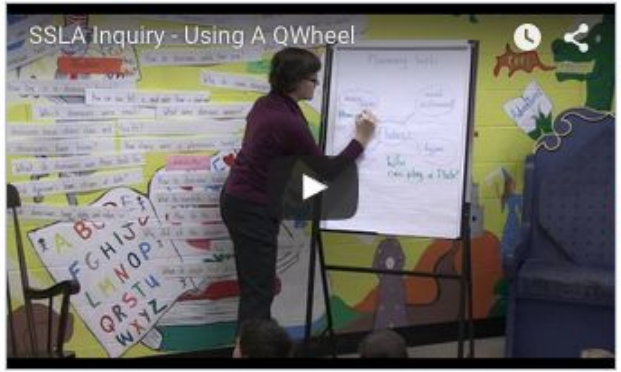
In this stage, students identify the purpose of their inquiry and develop essential questions and keywords about their inquiry.

As an educator you should...

- model wondering and making predictions
- discuss the difference between question types and how to create a good inquiry question
- introduce learning tasks that build on prior knowledge and engage students in thinking further about the topic
- identify a focus connecting the topic to a "big idea" in the curriculum while looking for cross-curricular connections
- dialogue with students and provide time for student talk

Instructional Strategy Videos

Using a Q-Wheel



Tools

Question Creation Chart
Key Word Organizer
K-W-H-L Chart
Bloom's Question Starters
See, Think, Wonder Chart
Brainstorming Predictions
Brainstorming Possible Outcomes

Google Doc templates students have available to them

Apps

Drop Mind Lite (Free) iPad
Idea Sketch (Free) iPad
MindMeister GoogleAdd-On
Simple Mind (Free) Android

Suggested Apps

Lessons and Activities

Bloom's Sort
Bloom's Sort Answers
Thick and Thin Characteristics Sort
Thick and Thin Tester Sort

Google Doc Blackline masters

Anchor Charts

Courtesy of Amanda Dennis, Halton Teacher

Possible Anchor Charts

TEACHER

Co-Plan
Co-Teach

Co-Plan/Co-Teach - Collaboration

Teacher-Librarian Role	Halton Inquiry Model Process	Classroom Teacher Role
Focus (e.g., thin vs. thick questions, brainstorming, create inquiry questio	**FOCUS**	**Focus** (e.g., front loading, explicit teaching, brainstorming, identify focus topic)
	-wonder -question -predict -discuss	
Explore (e.g., dot jot skills, evaluate sources, fo on reading/research strategies - skimming & scanning, citations)	**EXPLORE**	**Explore** (e.g., examine primary vs. secondary sourc generate key vocabulary, provide time to explore inquiry, conference with students
	-investigate -gather -record -connect	

FOCUS

Wonder Walls

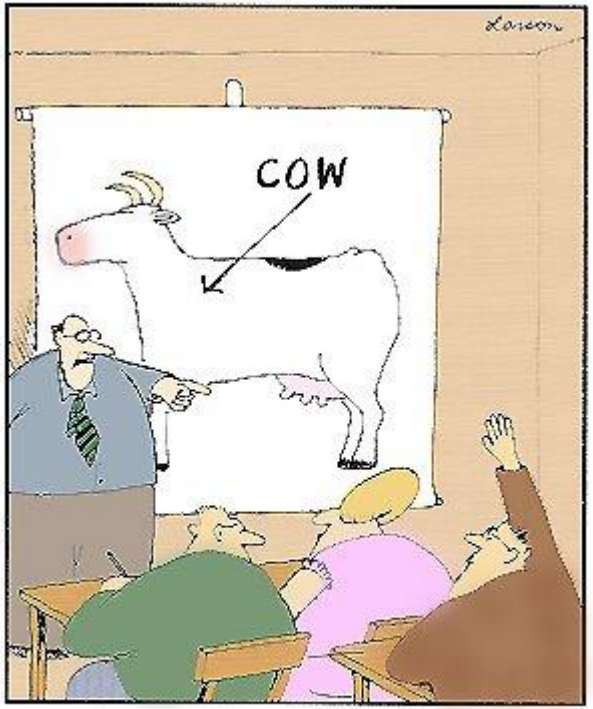
A ‘Wonder Wall’ is a place where groups of questions can be modeled, recorded, shared, and encouraged. As students discover answers to their questions they can be marked with a check and more can be added. Another option is to have students write their questions on sticky notes that can be placed on the wall and then removed off the wall when answered.

I wonder...

Using a photo or picture to teach questioning…

- I wonder where the truck is going
- I wonder what the truck is carrying
- I wonder why the truck is painted that way
- Tell a partner, I wonder…

Questioning



"Yes … I believe there's a question there in the back."

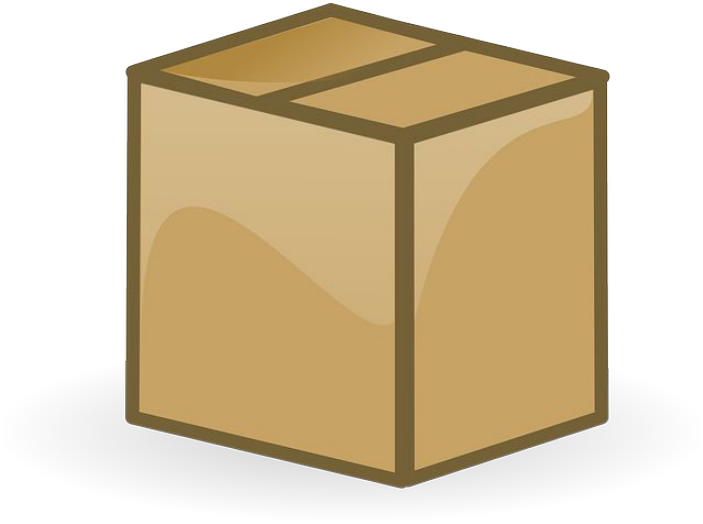
What could his question be?

Questioning

- What makes a good research question?
- Thick vs. Thin Questions Sort

Focus - Q- Tasks Box Activity

Learning about “Open/Thick” and “Closed/Thin” questions.



Q-Task Activity

Focus - Questioning

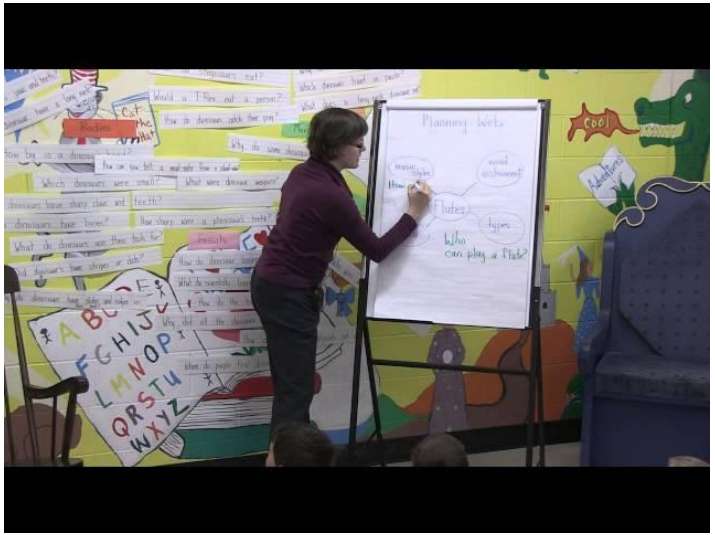
Dissecting Thick Questions

Brainstorm all the thin questions you would need to answer before being able to answer the thick question.

How have the Government's actions affected the First Nations culture and identity?

Focus - Questioning

Help students generate inquiry questions



Focus - Using a Q-wheel

- use the Q-wheel and brainstorm as many questions as you can
- categorize the questions as “open/thick” or “closed/thin”
- which questions would further your inquiry and which questions are less useful

Focus - Other uses for the Q-wheel

Build Imagination and Prediction Skills with Picture Books - Provide each small group of students with a picture book. Ask them to read the title, author, and illustrator and study the visual cover. Ask students to think about the possible story within the covers and spin the Q Wheel to build questions they are curious about, based on their examination of the cover. The activity could be used just as a pre-reading catalyst with several picture books or students could continue questioning during the story and even after reading to review the storyline or to create ideas for a storybook sequel.

Prepare for Literature and Inquiry Circles - Provide the 'questioner' with a Q-Wheel to spin to help with developing questions for a novel study or inquiry topic. The student will need to record the best questions in preparation for the discussion circle.

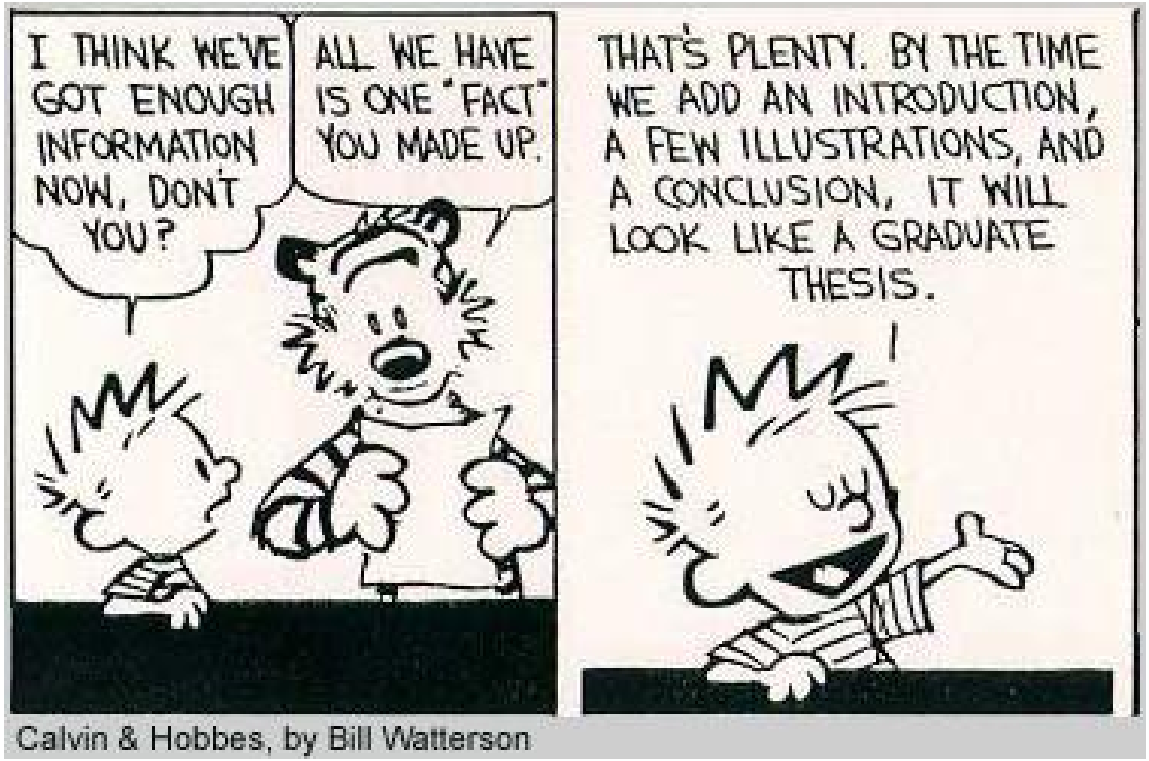
Study Buddies - Working with a partner, or in a small group have students review content and quiz each other by building questions with the Q-Wheel.

Deconstruct and Analyze Visual Media - The Q-Wheel is a handy prompt when working with any kind of visual media – photographs, graphs, charts, infographics, advertisements, political cartoons and video etc.. Formally give students lots of experience building questions to help them deconstruct and analyze media. Again working in groups adds to the success. Teach students to consider the type of media, the intended audience, how it was created, special techniques used etc.

https://sites.google.com/site/infosmarts4learning/q-smarts/questioning-to-learn

EXPLORE

Explore - Note Taking Strategies

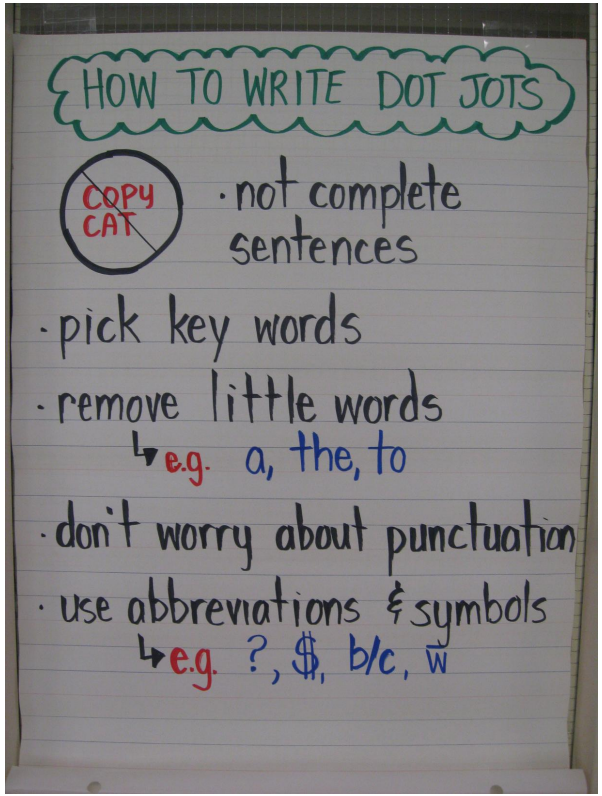


Calvin & Hobbes, by Bill Watterson

Explore - Note Taking Strategies

- Put together the sentences
- What words are necessary for understanding?
- Make dot jots for the sentences
- What do you notice about the words that you did not use in your dot jots?
- Are there other ways to make your dot jots shorter?
- Use Money Mat to demonstrate the value of word choice

Explore - Note Taking Strategies



- develop an anchor chart from your class discussion

Explore - Note Taking Strategies

Strikethrough/Highlight - Moose Example

~~In order to~~ stay cool in ~~the~~ Summer, ~~moose~~ swim ~~in~~ lakes ~~and~~ rivers. ~~Moose~~ antlers ~~are~~ b/w 120 - 150 cm ~~in length. The~~ fur ~~on a Moose can be~~ black, reddish ~~or~~ greyish brown. ~~Moose have~~ developed ~~senses of~~ smell ~~and~~ hearing.

- stay cool in Summer, swim lakes, rivers
- antlers b/w 120 - 150 cm
- fur black, reddish, greyish brown
- developed smell, hearing

ANALYZE

Analyze - Determining Importance

Comprehension Connections – Bridges to Strategic Reading – Tanny McGregor

Picture this:

The text is like a pot of noodles being cooked. You know that the noodles are the most important part, but you couldn't cook them without the water. Your brain is like a pasta strainer. It helps you to separate what's really important from what's simply interesting:

Before:

noodles in water

the text

a strainer

your brain

When you separate what's really important (the noodles) from what's simply interesting (the water) in a text, you have **DETERMINED IMPORTANCE!**

After:

just water

interesting details

just noodles

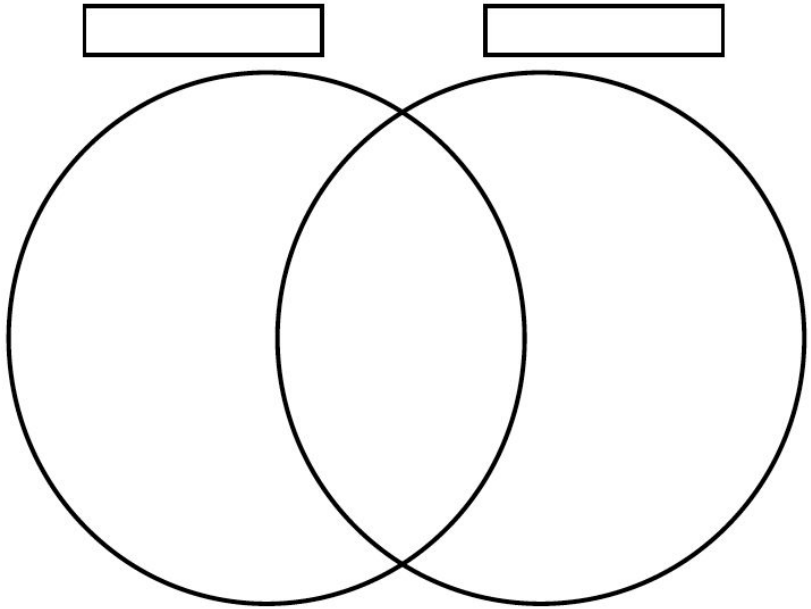
important, key details that lead to main ideas

Analyze - Determining Importance

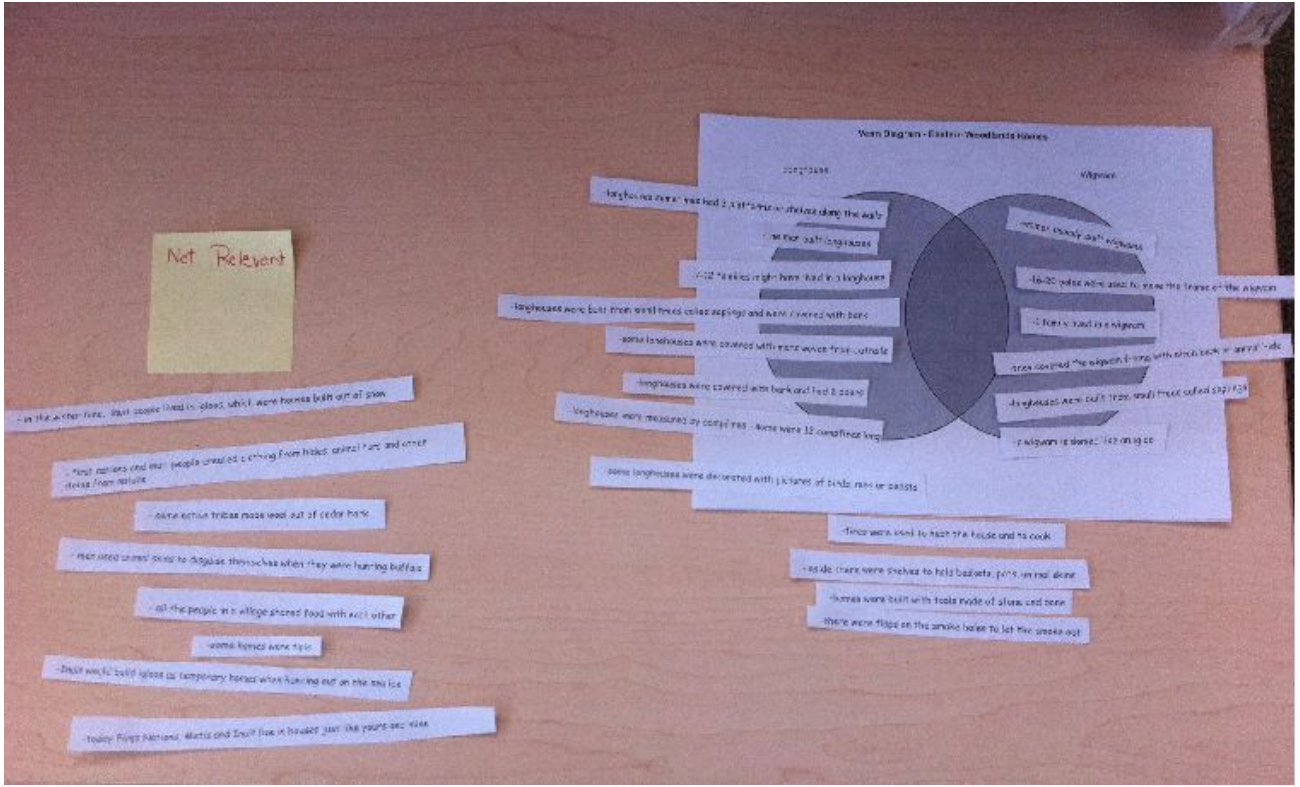
You are going for a run and will not be able to take your purse, and therefore you will need to determine which items are important enough to take.

Analyze - Venn Diagram

- use Venn Diagram to compare your information



Analyze - Venn Diagram



Analyze - Venn Diagram

I. Both dogs and cats make great pets.

- Both animals can be very entertaining
- Each is loving in its own way
- Each can live inside or outside the house

II. Both have drawbacks, as well

- They shed
- They can damage property
- Both can be costly
- Both require time and attention

III. Cats can be easier to care for

- Cat box
- Leaving for a day

Analyze - Louis Riel

- Sort the information to help determine your position
- Is there information that is no longer relevant to your position?

Analyze - So What?

- How does my information relate to my question?
- What conclusions and inferences can I make?
- What information am I missing?

FINAL THOUGHTS

Resources

Have a look at some of the resources we use

Last thoughts...

3 Prompts to Frame Your Thinking

One action I will take…

One question I will ask…

Evidence of implementation
I will see in my library...