Inquiry Projects

What is an **Inquiry Project**, and how does it differ from a Research Project?

Research Project

- ✓ Project at the end of a unit
- ✓ Teacher driven to show understanding of content
- ✓ Teacher gives you the question
- ✓ Limited choice
- ✓ Poster? Essay? Powerpoint?
- ✓ Take notes, create a product
- ✓ Emphasis on the product
- ✓ Viewed by teacher, maybe classmates

Inquiry Project

- ✓ Content knowledge leading to deeper investigation
- ✓ Personal desire to know more
- ✓ Driving question created by you
- ✓ Student voice and choice
- ✓ 21st Century skills
- ✓ Innovative/personal approach to learning
- ✓ Emphasis on the process – feedback & revision
- ✓ Publically shared

The Process

- ✓ The important process of **Building Knowledge and Exploring Ideas**
- ✓ How to **Identify Resources & Choose a Topic**
- ✓ Information Literacy skills including **Collecting Information, Taking Notes, Summarizing, Paraphrasing** and more
- ✓ **Plagiarism and Research Ethics** instruction
- ✓ Advice on **Analyzing, Synthesizing & Creating** a project
- ✓ Tips on **Presenting & Sharing**
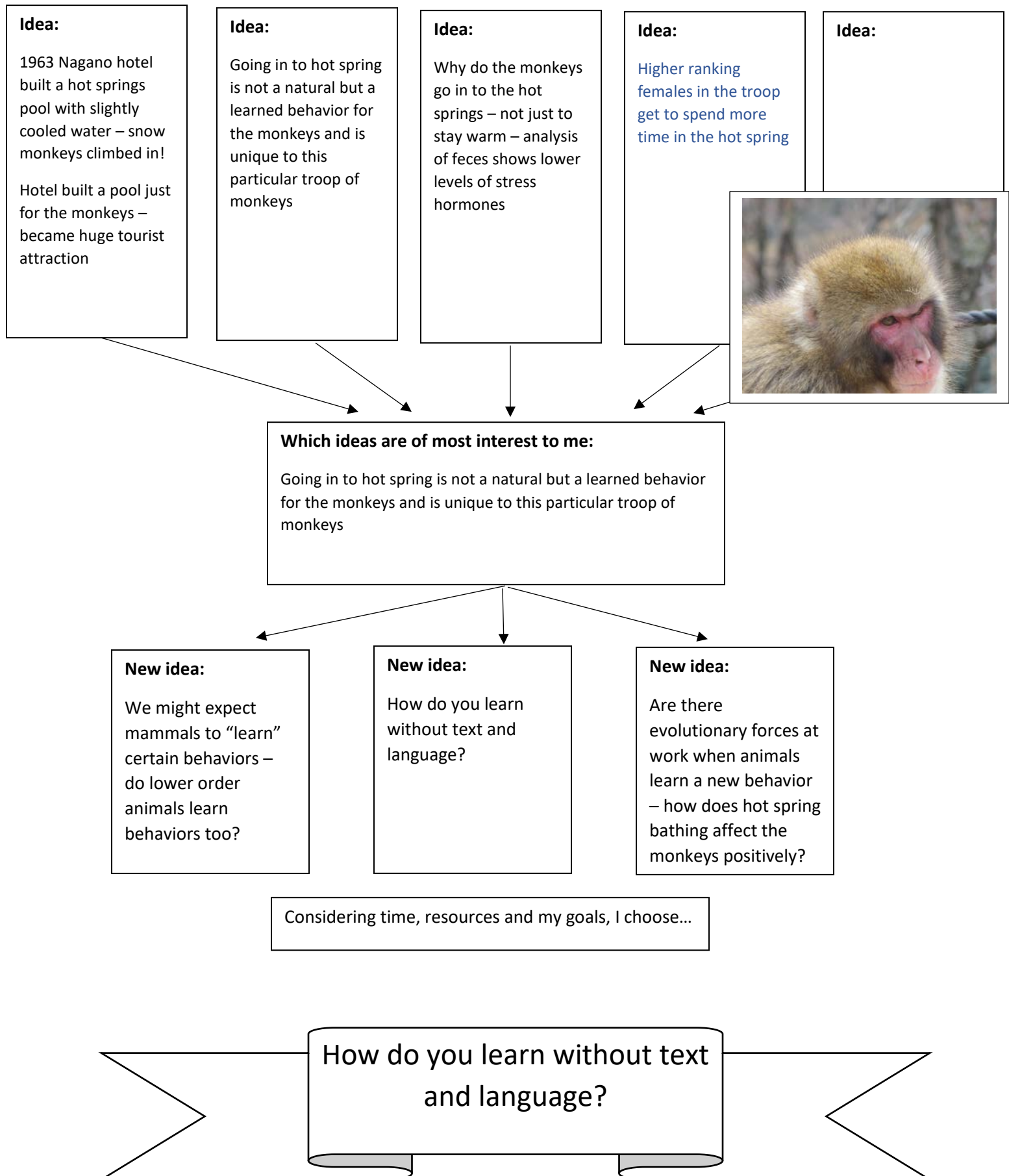- ✓ Questions for **Reflection** and a comprehensive **Evaluation** rubric

Library Supported Inquiry – Portfolio

1. Reflection: My understanding of Inquiry.	
2. My choice for study and why.	
3. Goals for the project.	
4. Reflection – Building Background Knowledge: What have I learned and how is my new knowledge affecting project decisions?	
5. Annotated Bibliography preliminary	Attached
6. Research Question	

7. Research Notes preliminary	Attached
8. Reflection: Am I ready to proceed? Do I need to do more research? Are there gaps in my research? Have I articulated a unique approach?	
9. Outline	Attached
10. Wow factor What new meaning and insight have I created? What new questions have I created?	
11. Draft Have all sources been recorded accurately? Is the project form reflective of and relevant to the topic?	Attached
12. Project	Attached
13. Preparations for presentation What do I need for my presentation (technology?)	
14. Final reflection What did I learn? What did I do well? What would I do differently next time?	

Creating a Research Proposal – Graphic Organizer – Snow Monkey Sample

https://www.nytimes.com/2018/04/03/science/japan-monkeys-hot-springs-stress.html?smid=fb-nytscience&smtyp=cur

Idea:

1963 Nagano hotel built a hot springs pool with slightly cooled water – snow monkeys climbed in!

Hotel built a pool just for the monkeys – became huge tourist attraction

Idea:

Going in to hot spring is not a natural but a learned behavior for the monkeys and is unique to this particular troop of monkeys

Idea:

Why do the monkeys go in to the hot springs – not just to stay warm – analysis of feces shows lower levels of stress hormones

Idea:

Higher ranking females in the troop get to spend more time in the hot spring

Idea:

Which ideas are of most interest to me:

Going in to hot spring is not a natural but a learned behavior for the monkeys and is unique to this particular troop of monkeys

New idea:

We might expect mammals to "learn" certain behaviors – do lower order animals learn behaviors too?

New idea:

How do you learn without text and language?

New idea:

Are there evolutionary forces at work when animals learn a new behavior – how does hot spring bathing affect the monkeys positively?

Considering time, resources and my goals, I choose…

How do you learn without text and language?

Animal Learning

Nicholas John Mackintosh

Mackintosh, Nicholas John. "Animal Learning | Zoology". *Encyclopedia Britannica*, 2018,
https://www.britannica.com/science/animal-learning. Accessed 27 Sept 2018.

What do we mean by "learning"	- Clearly animals can "learn" – but what is meant by the term learning - Many animals live out their lives following fixed and apparently unvarying routine - circumstances may change, and the same response is not always appropriate to the same stimuli. Knowing what behaviour is appropriate may depend, therefore, on keeping track of past events - if a behavior "changes", when do you attribute the change to learning, and when to other causes - role of motivation in behavior - role of maturation in behavior - what are the circumstances that brought about the "learning" – apparently practice is not always necessary - opportunity to observe seems to be more influential than opportunity to practice
Types of learning	- types of learning – Habituation, Sensitization, Classical conditioning, Operant conditioning, Observational learning, Play, Insight learning. - Habituation - Sensitization - Classical conditioning - Operant conditioning - Observational learning - Play - Insight learning

In the rugged Rocky Mountain foothills of southern Alberta and the remote interior of central B.C., a once hardy and abundant band of wild horses now faces an uncertain future. Their ancient ancestors once roamed the Canadian plains, sharing the terrain with the giant woolly mammoth. But the North American horse was eventually driven to extinction. Eleven thousand years later, Spanish conquistadors returned the horses to the West, where they re-settled into their original range. By the end of the 19th century, 50,000 grazed Alberta and B.C.'s grasslands, but now, only a few hundred wander the forested foothills. With their territory being scarred by clear-cuts and crisscrossed by pipelines, and their very existence being challenged by some who see them as rogue trespassers, many are worried the wild mustangs may once again become extinct.

"The Last Wild Mustangs : Canadian Geographic Presents Episode Description." *The Last Wild Mustangs : Canadian Geographic Presents Episode Description*. Canadian Geographic, n.d. Web. 04 Mar. 2015.

Paraphrase – recording the main ideas, with supporting details, into your own words

1. **Read and understand** original passage
2. Write a **keywords or phrases** from the source
   Rocky Mountain foothills, wild horses, uncertain future, ancient ancestors, wolly mammoth, Spanish conquistadors, resettled, trespassers, extinct
3. **Reproduce** what you have learned **in your own words –** main ideas and supporting detail
4. **Check** that your version accurately represents the original passage
5. Use **quotation marks** if you are using unique terms or phrases as part of your paraphrase
6. **Record your source** including page number

In ancient times, wild horses roamed the Canadian Plains with the wooly mammoth. These horses became extinct, however they were reintroduced by the Spanish conquistadors eleven thousand later. They settled back into their original territory, and by the 19th century there were 50,000 wild horses in B.C. and Alberta. Now, because of clear-cuts, pipelines and other human activity, these wild horses are dwindling and may again become extinct.

Summarize – record the main ideas, succinctly and briefly

1. **Read and understand** the original passage
2. Identify the **main point(s)** of the source
   wild horses, became extinct, reintroduced, at peril again
3. In a few sentences, **recount** the gist of the material – main ideas only, no detail
4. **Check** that your version accurately represents the original
5. **Record your source** including page number

In ancient times wild horses roamed B.C. and Alberta. They became extinct but were reintroduced and thrived. Now, they are threatened again.

Cameron, Granbois, Peelo 2015

Paraphrase and Summarize Practice

Caribou herds are shrinking across the North, and that's especially worrying for Indigenous communities where they're a historically important source of food. One caribou population, called the Bathurst herd, which ranges across the southern Northwest Territories, western Nunavut and northern Saskatchewan, has dropped 96 per cent in 30 years — from 450,000 animals down to about 20,000. Determined to see the herd recover, Indigenous communities in the area have stopped hunting the animals, and have been working with governments and scientists on a plan to protect their habitat.

"The Plan To Save The N.W.T.'S Dwindling Bathurst Caribou Herd". *Canadian Geographic*, 2018, https://www.canadiangeographic.ca/article/plan-save-nwts-dwindling-bathurst-caribou-herd. Accessed 2 Oct 2018.

Paraphrase **– recording the main ideas, with supporting details, into your own words**

1. **Read and understand** original passage
2. Write a **keywords or phrases** from the source

3. *Reproduce* what you have learned **in your own words –** *main ideas & supporting detail*
4. **Check** that your version accurately represents the original passage
5. Use **quotation marks** if you are using unique terms or phrases as part of your paraphrase
6. **Record your source** including page number

Summarize **– record the main ideas, succinctly and briefly**

1. **Read and understand** the original passage
2. Identify the **main ideas** of the source

3. In a few sentences, **recount** the gist of the material – *main ideas, no detail*
4. **Check** that your version accurately represents the original
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Research Notes

Book

Author	Title	Publisher
City of publication	Date	

Article

Author	Title of Article	Title of Journal
Vol/Issue	Date	pages

Website

Title of website	Article title	URL

		pg

		pg
		pg

Creating a Research Proposal – Graphic Organizer

Idea:

Idea:

Idea:

Idea:

Idea:

Which ideas are of most interest to me:

New idea:

New idea:

New idea:

Considering time, resources and my goals, I choose…

Inquiry Project Outline
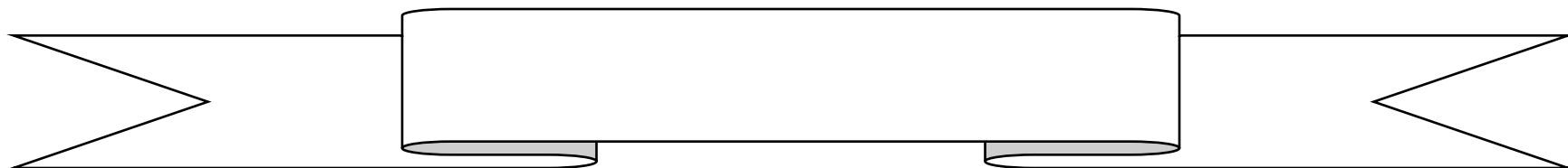
I plan to address this question in the following ways:
(continue on to the back of this page if you have more sub-topics).

Details:	Details:	Details:	Details:
1.	1.	1.	1.
2.	2.	2.	2.
3.	3.	3.	3.
4.	4.	4.	4.
5.	5.	5.	5.
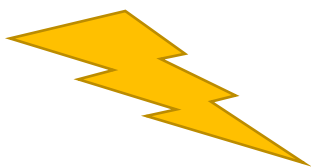
WOW factor – New Meaning & Insight
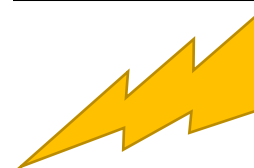
Conclusion:

	Approaching	Meeting	Exceeding
Questioning Used the graphic organizer to record ideas and develop a quality inquiry question		• Understanding of the qualities of an effective inquiry question by frequently asking and refining inquiry questions. • Sometimes requires guidance.	
Thinking Considered the issue/topic thoroughly to create a quality inquiry question Unique & creative research approach		• Successfully transfers critical, creative, and discipline based thinking skills when proposing an answer to the inquiry question. • Evaluates evidence to draw conclusions & connections	
Process Outline complete & corresponds to project Portfolio complete		• Demonstrates a good understanding of themselves as a learner. • Applies strategies to widen and deepen their learning through the inquiry process.	
Information Literacy Careful consideration of sources, sources cited correctly		• Successfully applies information literacy concepts & skills to accomplish learning. • Gathers and analyzes multiple sources critically. • Engages ethically with information and demonstrates intellectual integrity in their final product.	
Communication Information is presented clearly, at a good pace, accessible to audience		• Clearly communicates with the audience. • Makes good use of the terminology & vocabulary relevant to the inquiry. • Shows an emerging understanding of self as a learner.	
Demonstration of Knowledge Thorough understanding of the topic evident In-depth review of the issue/topic		• Demonstrates a clear understanding of the content important to the inquiry. • Beginning to extend concepts and ideas and to transfer those concepts into other areas of study, disciplines or topics.	