

Improving Student Questioning and using Inquiry Based Learning

Here is a summary of the ideas that we discussed at our laptop meeting in January. The information is laid out in a suggested order. Obviously some steps can be combined or skipped, depending upon the needs of your students.

If you have any questions, please contact me at julie_hearn@sd42.ca

For more information on Inquiry, see the following resources:

- Introduction to Inquiry Based Learning – advantages, disadvantages, questioning
<http://www.youthlearn.org/learning/general-info/our-approach/intro-inquiry-learning/intro-inquiry-learning>
- How to Guide for Inquiry – how to set up inquiry in your classroom
<http://www.youthlearn.org/learning/planning/lesson-planning/how-inquiry/how-inquiry>
- A Questioning Toolkit – great list of different types of questions
<http://www.fromnowon.org/nov97/toolkit.html>
- Queen’s University Centre for Teaching and Learning – simple ideas about the philosophy on inquiry based learning
<http://www.queensu.ca/ctl/goodpractice/inquiry/strategies.html>

Questions, Questions, Questions Part I (aka “The Meatloaf Activity!”)

- Students examine a sample set of questions about meatloaf (see meatloaf questions document for a sample)
- Students directed to select a topic they are very familiar with
- Then students create their own list of 50+ questions
- Going to 50 is really important because it pushes the students outside their typical comfort zone...the last 20 questions usually has them working much harder than normal!

Questions, Questions, Questions, Part II

- Students take their list of 50+ questions and sort them as follows:
 - Questions that can be answered with a YES or NO...
 - Questions that can be answered in about 10 words or less... (e.g. What colour is the Canucks logo?)
 - Questions that take much more to provide an answer....

Questioning Journal (or reflection!)

- 1) When would you use a yes/no question? Does this type of question generate much knowledge or information?
- 2) When would you use a question that would generate a response of 10 or fewer words? How is this type of question limiting?
- 3) When would you use a question that requires a large explanation? What are some strengths and limitations to these types of question?

(Improving Student Questioning and using Inquiry Based Learning – continued)

Twenty Powerful Questions

With their new understanding of powerful questions, assign the task of creating 20 powerful questions to your students. Emphasize that these questions should fall into the third category of questions that require “much more” to answer. They should not be yes/no questions and they should not be answerable in just 10 words.

Engage in a Mini-Inquiry (see attached Mini Inquiry Outline document)

- A Mini-Inquiry is designed to introduce students to research in a non-threatening way. It is essentially the ‘beginning’ of the research process.
- Students should select a powerful question for their mini-inquiry (If you have completed the activity where students generate 20 powerful questions, have them select one of these questions)
- Research the question (obviously through valid and reliable sources – but that’s another lesson!)
- Find 15-20 facts that help to answer the question and include these in point form
- Create a bibliography for their resources
- Present in paper or poster form (no larger than 11 x 17)
- REPEAT this step to get students comfortable investigating ideas before engaging in a full inquiry

Pursue an Inquiry based on a Powerful Question

- Now students take one of the questions that they created and do further research on the topic
- Students might want to select one that was more comfortable or successful in the mini-inquiry process

That’s it – hope this helps you! If you get some ideas about how to help students improve their skills at developing questions, I would love to hear from you.

Questions, Questions, Questions – Part I

Alright, here are the instructions on this week's questioning activity....

Your job is to make a list of questions – a very **long** list of questions.

You are trying to generate a list of 50+ questions.

It might be easiest to think about a subject or topic that you know a lot about. That way, since you already know a lot about it, the questions might be easier to think about.

In the beginning, you will probably think of simple questions. Then, as you have to think of more and more questions, it will be more difficult to think of questions. BUT, then the questions you think of will end up being the best questions that you can create!

The purpose: Consider that after completing this activity you could hand your questions to somebody who didn't know anything about your topic. Then, by finding the answers to your questions, they would end up knowing a LOT about the topic.

Here are some sample questions about Meatloaf to give you an idea.

Meatloaf Sample Questions

What is meatloaf?

How is it made? (e.g. bake, cook on the stove, mixed and chilled, etc.?)

What are the important ingredients?

What do you serve with it?

Who can make it?

What else do you need to make meatloaf?

What does it taste like?

Where does it originate?

Who invented meatloaf?

How was it invented?

Are there variations on meatloaf using different ingredients or flavours?

What types of meatloaf are most common where I live?

What meatloaf types have I eaten in my life?

In my opinion, what is the best meatloaf recipe?

What are some unique ways to serve and eat meatloaf?

Is meatloaf eaten in all parts of the world?

Where is meatloaf most popular?

Are there some places where they don't eat meatloaf?

Why was meatloaf invented?



Criteria for Mini Inquiry

Question

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- Question must end with a question mark. This forms the basis for the inquiry so it should be a “big” question
- Question must be a powerful question (i.e. Question cannot be answered completely with either a “yes”, “no”, or a one sentence answer.)
- Title (the question) must stand out.

Notes

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- Notes should be in point form, 15-20 notes
- Notes should be organized on a common topic and put into your own words (i.e., not copied and pasted)
- Must include a bibliography done in the proper format as shown in class

Presentation

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- Includes supporting information: pictures, diagrams, graphs, etc.
- All supporting information must be labeled.
- Neatly organized, proofread, and spell-checked.

General knowledge

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- Has the question been answered?

Thanks to Mario Beaulieu and Caleb Chiu for this criteria!