

**BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NY**

Author: Meg Johnston
Title of Project: *Teaching Inquiry in an Enrichment Class*
Year: 2019
School/Grade: Wampus Elementary / Grades 3 - 5

SUMMARY OF *INVESTIGATORS OF PRACTICE* ACTION RESEARCH PROJECT

Context:

I am teaching enrichment for grades 3 through 5 this year. The purpose of our enrichment program is to meet the learning needs of all students, with particular focus on expanding opportunities for students to explore challenging topics of interest.

I was met with the challenge to align the enrichment program to the content areas and learning standards while creating high interest for students. Therefore, I chose to use an inquiry design process from [C3 Teachers](#) (College, Career and Civic Life) network, which was used in Byram Hills for our problem-based learning initiative. Through inquiry, I want students to be able to ask questions that deepen their learning while focusing on areas of interest.

Will students be interested and engaged? Will they learn the inquiry process while doing so?

Action Plan:

I will be implementing new units of study for the grades 3 - 5 enrichment class at Wampus Elementary School. These units will set the outline for the students to begin their own inquiry-based learning. My wondering as the students begin their independent study will include: What type of inquiry will my students be looking for? Specifically, how do they ask “good” questions that help them make connections to real life, provoke meaningful research, and stimulate their personal interests?

To explore these questions, I did the following:

1. Implemented three units of study from the C3 Teachers resources
2. Designed activities to teach students how to ask questions
3. Provided opportunity for students to research the questions they developed
4. Provided exit tickets to collect feedback on student learning

**BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NY**

The Units of Study

The structure of each inquiry unit addressed a compelling question. For example, one unit's question was: *What is the real cost of bananas?* Students worked through a series of supporting questions, formative performance tasks, and featured sources in order to construct an argument using evidence. In the process, they became aware of competing perspectives as they explored the arguments. Students further explored this question by asking: *Where do bananas come from? What do corporations in the banana industry contribute to society? What are fair-trade bananas? What are the working conditions like for children in the banana industry?*

Two additional units of study included:

- Global Trade: *Why Do Countries Need Each Other?*
- Industrialization: *Did it Make Life Better for Everyone in New York?*

How to Ask Questions

To help students learn to ask questions, I created activities where students generated lots of questions. For example, I provided students with a “featured source,” and then asked students to think: *What do you understand from this source? What do you not understand from this source? What more do you want to know about? How will you go about learning more?*

I utilized techniques, such as: asking students to circle words they are unfamiliar with, and then using context clues to suggest the meaning of the word; using Socratic techniques; utilizing wait time; and exploring areas of interest that arise from the discussion.

Researching the Topics

Using the techniques above, students generated their own compelling questions and supporting questions. For example, what is a GMO? Supporting questions were: *Why are some foods labeled GMO? What is Monsanto? Why do people not like GMOs?* Then students engaged in their research by answering their subquestions. I monitored students' progress on a shared Google Document. Furthermore, I created a Google Classroom where I provided students with resources and other students posted resources as well.

As a culminating activity to the unit, students had to create a final presentation, and the classmates asked questions from the presentation.

**BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NY**

What Students Learned

I used exit tickets to determine the extent of their learning and understanding of the compelling question. In the unit “What is the Real Cost of Bananas?” Student answers included:

“The real cost of bananas is, child labor (kids not being able to go to school), unfair work hours, unfair benefits, unfair wages, a lot of land, being exposed to dangerous work conditions, and being unprotected from pesticides. All of this harm is to make one pound of bananas that retail for around \$0.50.”

“The real cost of bananas is land and pesticides. Dole (the leading brand in bananas) takes up 37,065 acres of land and Chiquita has 71,166 acres. Kids who work in the banana industry work near dangerous pesticides. Fair trade bananas are when the banana company pays, treats the workers and environment right. The price for organic bananas is higher than conventional bananas.”

In the unit Industrialization: Did it make life better for everyone in New York?” Student answers included:

“Industrialization did and did not make life better for people in New York. Industrialization did make life better because lots of new inventions were made and lots of new jobs for people. Industrialization did not make life better for everyone in New York because there was a lot of pollution from the factories”

“Yes and No. Yes, because the transportation system grew and machines helped make work easier. No, because all the fossil fuels being burnt caused people to get diseases. Also, working in factories was sometimes not safe.”

“Industrialization didn't make life better for everyone because some of the people were the company managers and were rich but most of the people had to work in factories that had poor working conditions and low pay.”

In the unit Global Trade: Why Do Countries Need Each Other? Some responses included:

“Countries need each other so they can help one another. Sometimes smaller countries need help. Another reason is that countries can work on projects together which can benefit everyone.”

“Countries need each other because they give each other what they need.”

**BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NY**

“Countries need each other because some countries don't have what other countries do have. Like, North America wants roses but we don't have them in our country so we get them from Columbia.”

For the final reflection, I used a Google Form to help students share how they felt about the inquiry learning process. The final enrichment reflection questions included:

1. Did you like this unit?
2. What did you learn about the inquiry process in this unit?
3. What did you like about this unit?
4. What did you find challenging in this unit? How did you overcome this challenge?

Results of Reflection

Overall the students responded unanimously to liking these units. Sample responses to the questions include the following:

What did you learn about the inquiry process?

“I learned that the inquiry process is a good way to learn because you think of a question and then your research helps you answers it. I think that is a good way to teach because you know that you will be learning everything that you want to say.”

“The inquiry process is really useful. I'm also going to use the inquiry process outside of school. I also learned that the inquiry process is used by looking at different resources and then answering a question.”

“I learned that in order to create a question, you need to have background information on the topic. An example is the effects on the environment in the banana industry. You would need to know background info about what affects the environment so you can go deeper into the topic.”

“I learned that to succeed you need to ask a lot of questions. The more questions you ask the more you research and learn.”

“Something I learned is that inquiry is more than just asking questions, it's asking the right questions to get you to the answer that you are looking for. When trying to find the answer to a question about chocolate, I would look on multiple chocolate websites to find my answers.”

**BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NY**

What did you like about the unit?

“Something I really liked about this unit is that it made me go farther in learning about a topic, chocolate. When I started off, I was looking at general things, but towards the end, I realized that I need to push myself harder and think about more specific things that I wanted on my poster.”

“I liked that we get to learn the inquiry process in this unit and then used it and did it. I also like how it started off where we asked a bunch of questions about the foam dice to figure out that's what it was because that got our brains starting to think that we should be asking questions.

“I liked how we got to go deeper into a topic that we like instead of just researching on a topic given to us.”

“I liked how we got to learn about all the different topics in industrialization each day in the beginning, and then we got to pick our own topic and present it in our own way after we researched it.”

What did you find challenging in this unit? How did you overcome this challenge?

For this question, the majority of students found it challenging to find reliable resources and they overcame it by spending a lot of time researching. Other responses included:

“Some of the words were hard to understand, but I used details in the text to find the definition. I also had trouble picking a topic, but I liked what I chose in the end.”

“I found getting information on our topics challenging because things other than my topic came up and I had to find the good websites. I overcome this by whenever I found a good website towards the bottom it would say websites relating to this and then I could find good information.”

“Something I found challenging is that it was hard starting off and figuring out how to get the answers to the banana questions. I overcame this challenge by doing it over and over, I did more and more questions until I understood more about everything and I was on the same page as everybody else.”

**BYRAM HILLS CENTRAL SCHOOL DISTRICT
ARMONK, NY**

“I found it challenging to find answers by just looking it upon one website. I overcame this challenge by using search engines like kiddle to find what I want on many different websites, the possibilities were endless.”

“I found it challenging to find sites that had what I needed to learn. I overcame this challenge by looking up exactly what I needed to know or going on to a database and finding little facts in an article about a certain food commodity.”

Implications:

I learned that the students were engaged in the rigor of the featured sources and were motivated to explore their independent inquiry projects. While examining the structure of the C3 units, I realized the students could use the C3 model for their own inquiry projects that would include a compelling question followed by supporting questions. The students would conduct their research based on finding the answers to these questions and presenting this information as their final project.

The challenge for me is to teach students how to ask meaningful questions and develop strong research skills. I found myself learning alongside my students to narrow in on finding relevant research, and questioning some of the information we would find. For example, one student found that Brazil exported the most coffee and another student disagreed based on his research. I marveled at how the students kept questioning each other’s research. I felt excited to see this inquiry process leading to lifelong questioning and learning.

For next year, I am considering the following:

- Explicitly teach how to ask questions.
- Create a bank of good resources for student use. The students created bibliographies for this year’s project and I will save those to share with next year’s class.
- Reading all of the units from C3, to see which may be the most interesting and have the biggest impact for our Wampus students.
- Continue to create targeted lessons to directly teach students how to effectively use inquiry for high level learning.