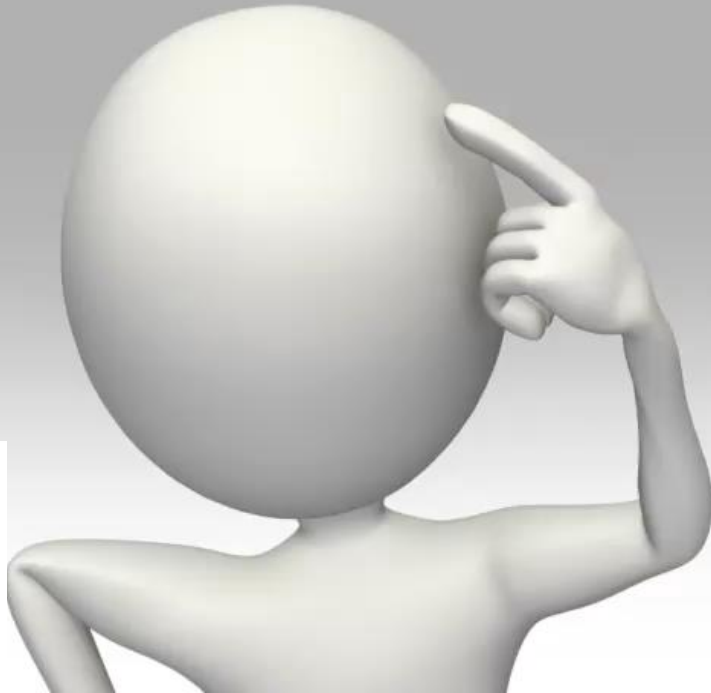


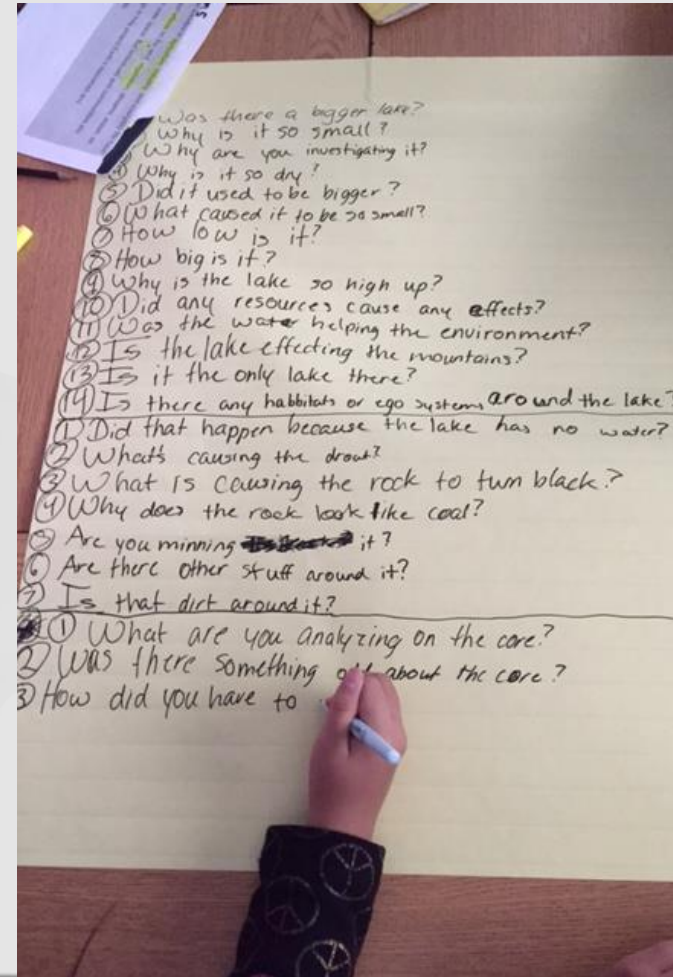
Teaching Students to Ask Effective Questions Using the QFT



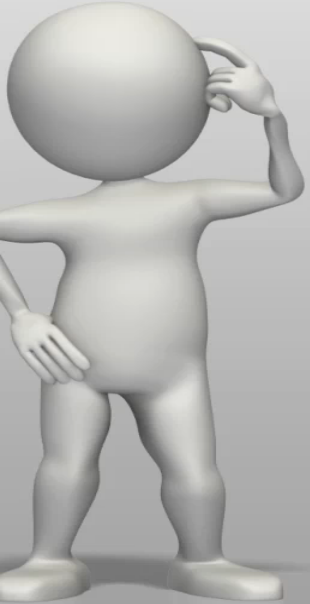
Kelly Barber
WCSD STEM Coordinator
kbarber@washoeschools.net

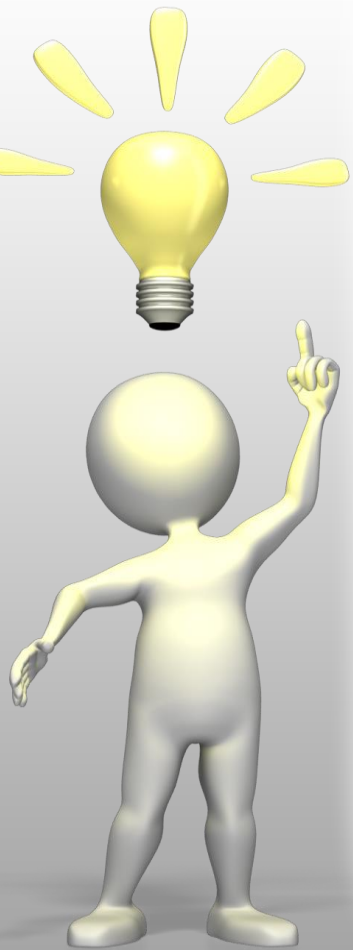
Essential Question

How do we build student capacity to ask their own questions?



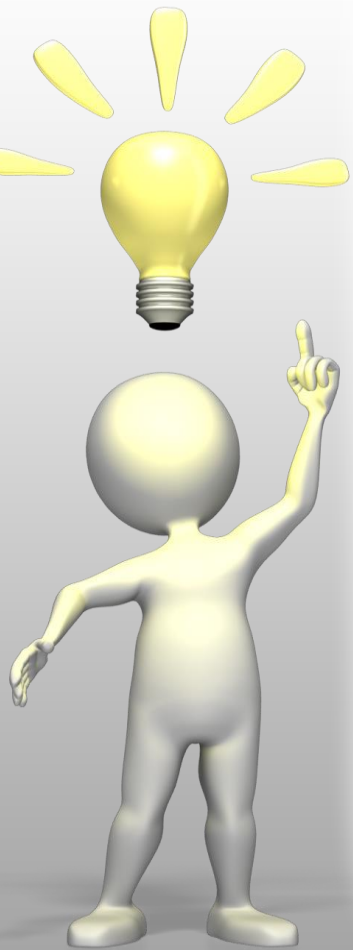
A question can take you
anywhere





"There is no learning without
having to pose a question."

-Richard Feynman
Nobel-Prizewinning physicist



Research on the Importance of Student Questioning

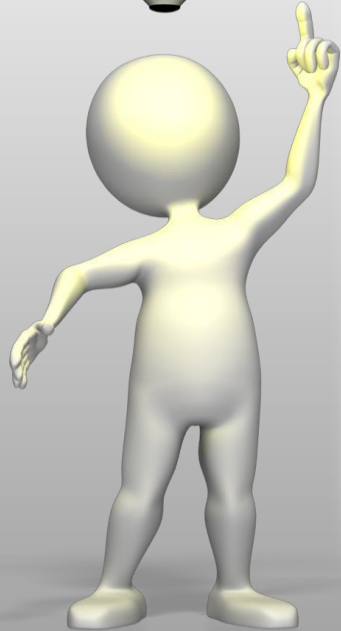
Self-questioning (metacognitive strategy):

- Student formulation of their own questions is one of the most effective metacognitive strategies
- Engaging in pre-lesson self-questioning improved students rate of learning by nearly 50% (Hattie, p.193)

John Hattie

Visible Learning: A Synthesis of Over 800 meta-Analyses Relating to Achievement, 2008

NVACS for Social Studies



...students need the intellectual power to recognize societal problems; **ask good questions** and develop robust investigations into them; **consider possible solutions and consequences**; separate evidence-based claims from parochial opinions; and communicate and **act upon what they learn**.

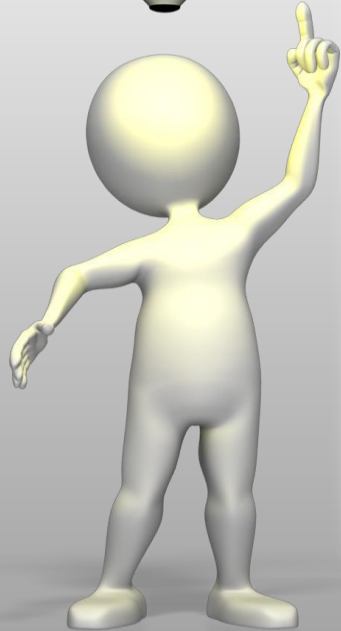


The standards help educators create a **student-centered approach** to social studies in which critical skills and inquiry are the focus, rather than rote memorization of facts.



The aim is to create lifelong learners who are **equipped with the skills** and knowledge to shape our nation's democratic institutions and respond to any challenge they may meet in the future.

NVACS for Social Studies



SS.K.1

With prompting and support, generate compelling questions to explore how learning and working together builds a classroom community.



SS.1.1

With prompting and support, generate compelling questions to explore the places people live and work



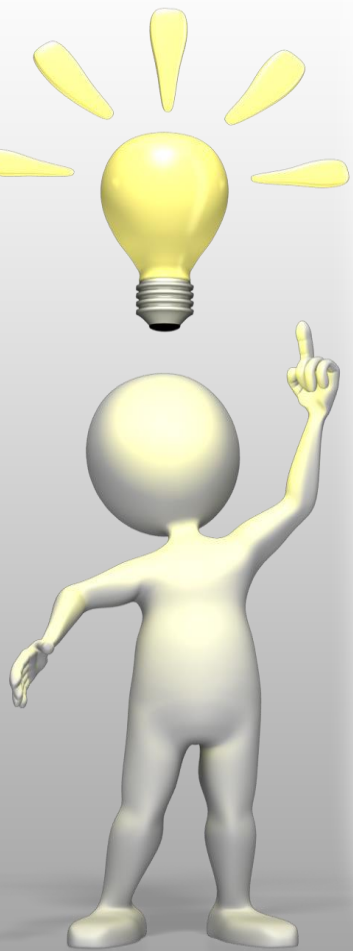
SS.5.1

Generate compelling questions to explore the creation of the United States.

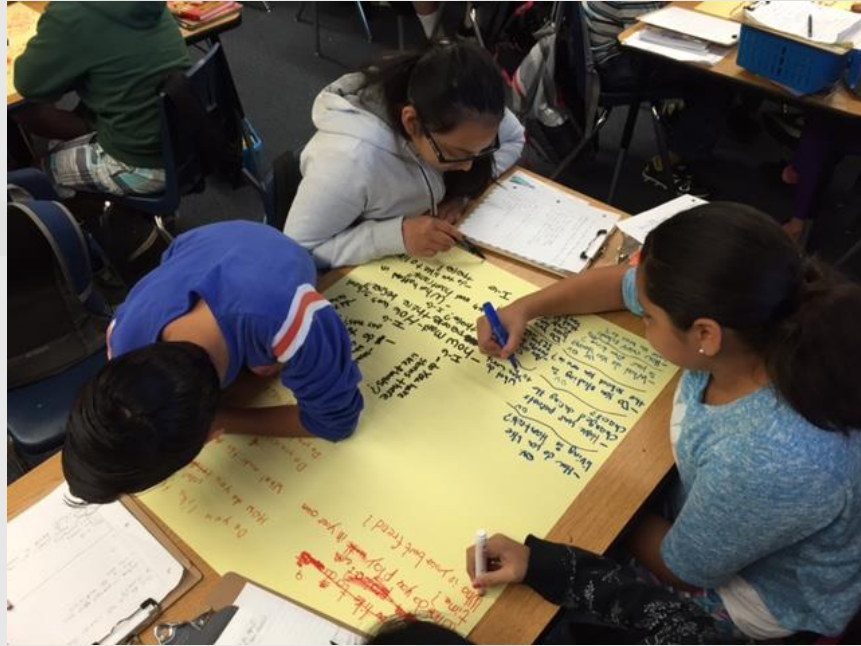


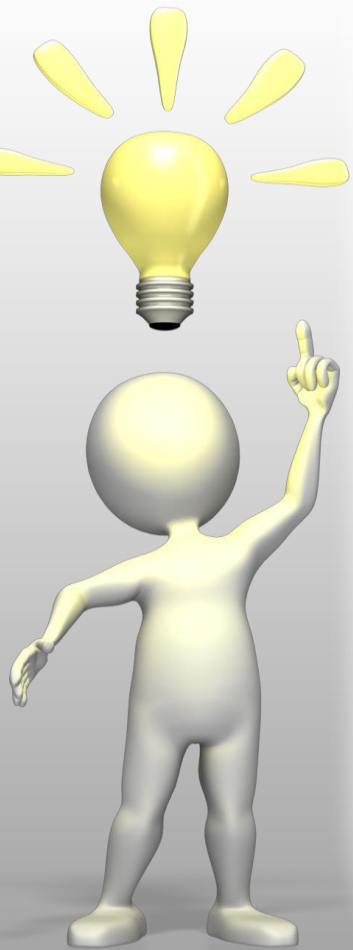
SS.9-12.WH.5

Generate and answer supporting questions while explaining how they contribute to an inquiry and how new compelling and supporting questions emerge through the inquiry process.



How do we teach our students to ask the questions?





Introducing the Question Formulation Technique Into Your Classroom

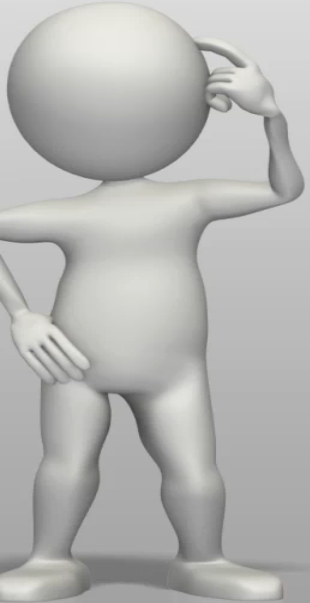


www.rightquestion.org

WHAT IS THE QUESTION FORMULATION TECHNIQUE™?

The Question Formulation Technique (QFT) is a simple, but rigorous, step-by-step process designed to help students produce, improve and strategize on how to use their questions.

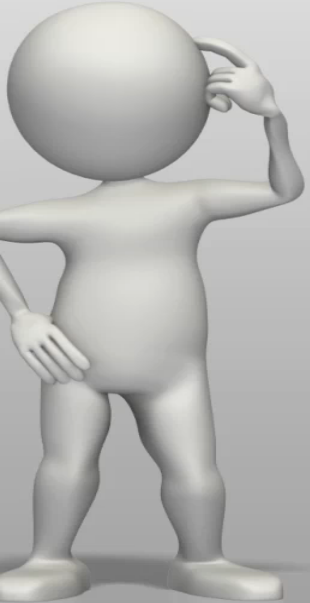
The **QFT** allows students to practice three thinking abilities in one process: divergent, convergent and metacognitive thinking.

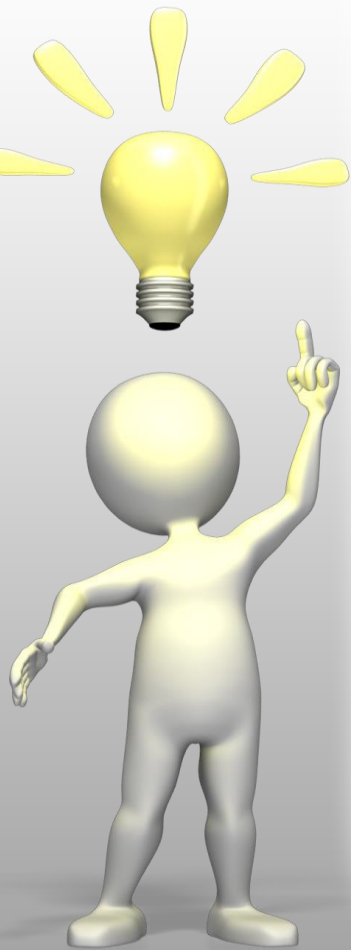


Choosing a Q Focus

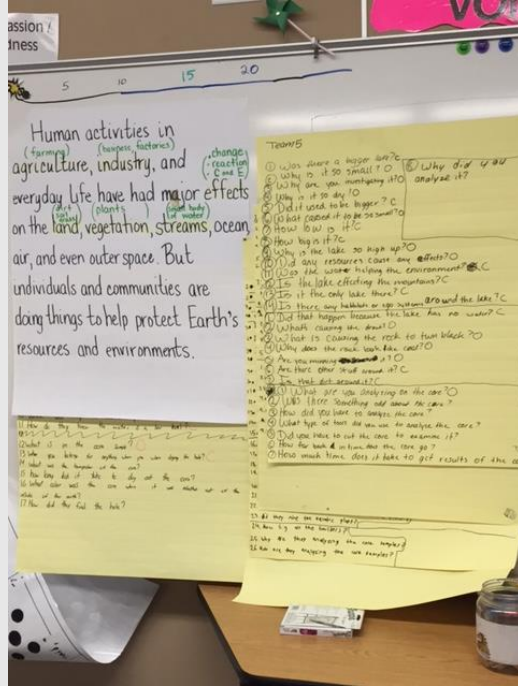
The QFocus should be designed to accomplish one or more of the following:

- **Generate Interest**
- **Stimulate New Thinking**
- **Introduce a Topic**
- **Set a Learning Agenda**
- **Deepen Comprehension**
- **Formative Assessment**





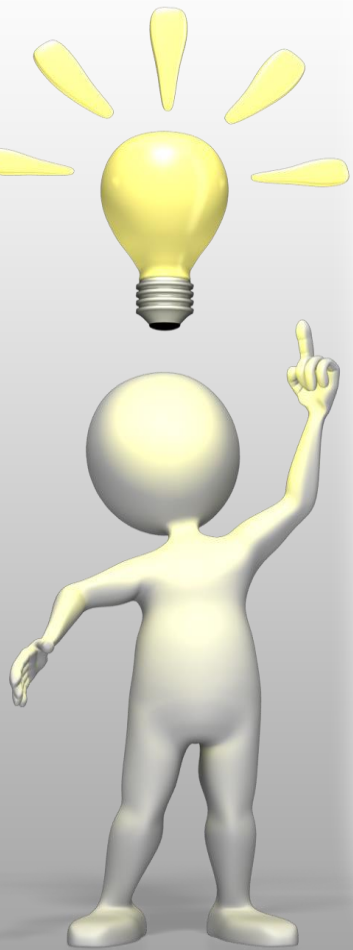
The QFT in a 5th grade classroom was used to develop questions to ask a guest speaker



Your Turn



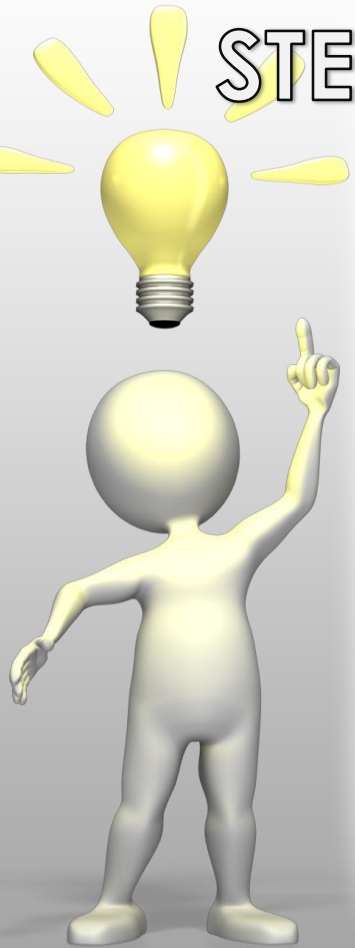
- Engage in the QFT as a student to experience the process
- If you have “teacher” questions write them on a sticky note



RULES FOR PRODUCING QUESTIONS

- Ask as many questions as you can
- Do not stop to discuss, judge or answer the question
- Write down every question exactly as it is stated
- Change any statement into a question

STEP #1: PRODUCING THE QUESTIONS



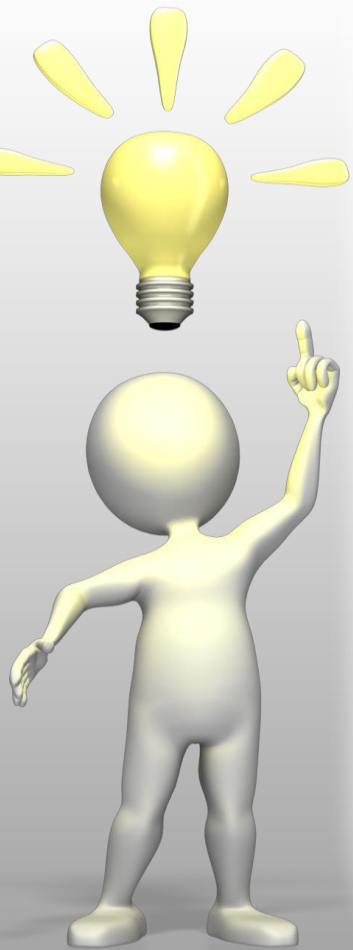
QFocus:

**Some
students are
not asking
questions.**

1. Follow the Rules for Producing Questions

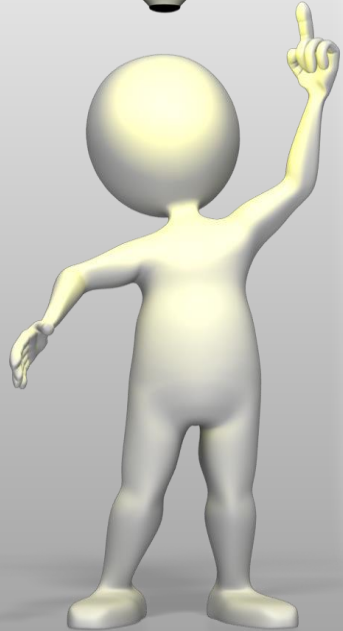
- Ask as many questions as you can
- Do not stop to discuss, judge or answer the questions
- Write down every question exactly as it is stated
- Change any statement into a question

2. Number your questions



STEP #2: CATEGORIZE THE QUESTIONS

- **Closed-ended questions** – they can be answered with “yes” or “no” or with one word.
- **Open-ended questions** – they require an explanation and cannot be answered with yes” or “no” or with one word.



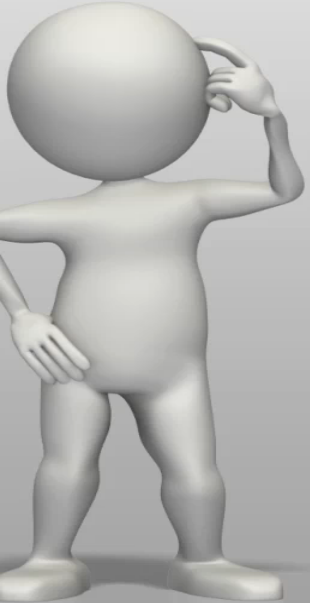
STEP #2: CATEGORIZE YOUR QUESTIONS

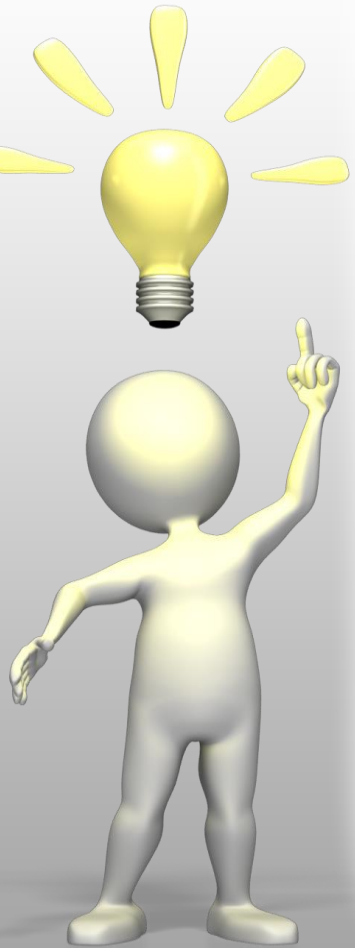
Identify closed- and open-ended questions.

- Mark the closed-ended questions with a **C** and the open-ended questions with an **O**.

STEP #2 CATEGORIZING THE QUESTIONS

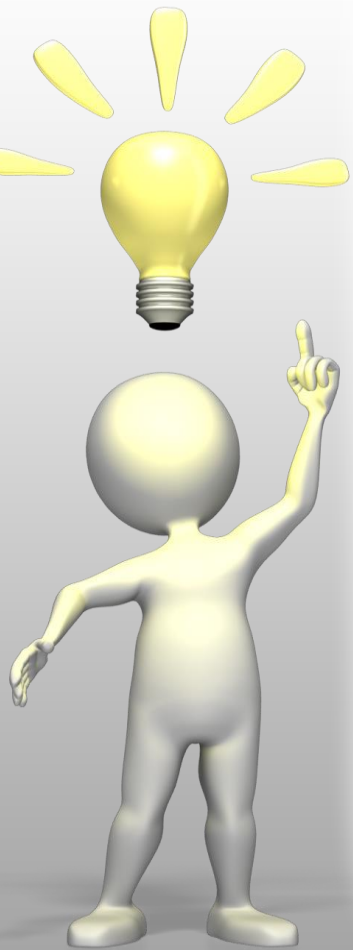
1. What are the advantages of open ended questions?
2. What are the disadvantages to open ended questions?
3. What are the advantages of close ended questions?
4. What are the disadvantages to close ended questions?





STEP #2: CATEGORIZE YOUR QUESTIONS

- Review your list of questions and change one **closed-ended** question **into an open-ended**.
- Then, change one **open-ended** question **into a closed-ended** one.

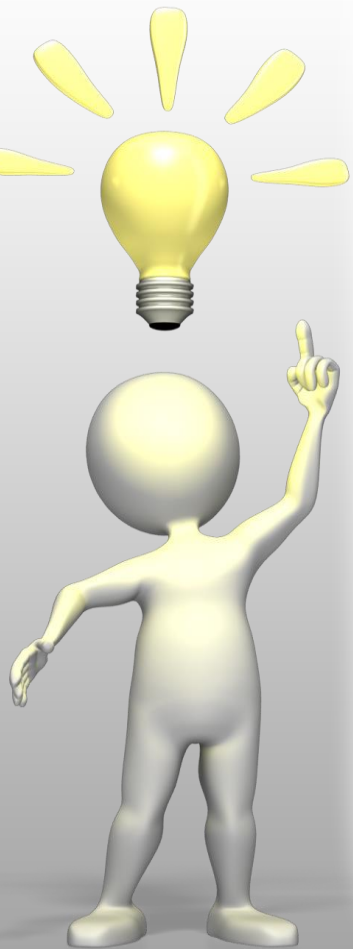


STEP #3: PRIORITIZE YOUR QUESTIONS

Choose the three most important questions from your list.

Keep in mind the QFocus.

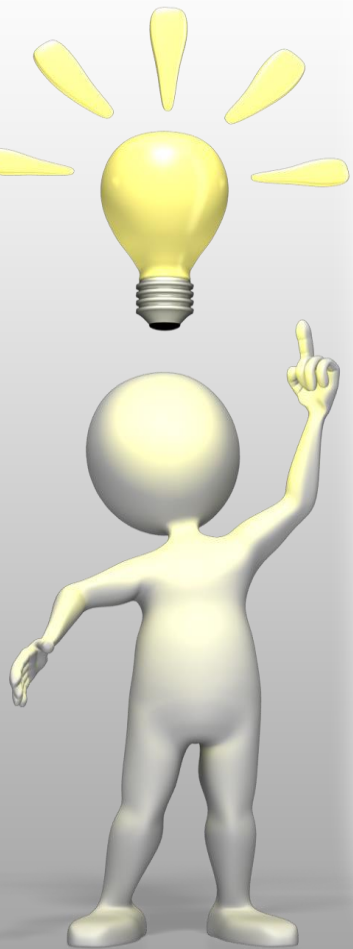
Mark each priority question with an “X”



STEP #3: SHARE YOUR QUESTIONS

Share with the group:

- your three priority questions
- your rationale for selecting those three
- the numbers of your priority questions



STEP #4: NEXT STEPS

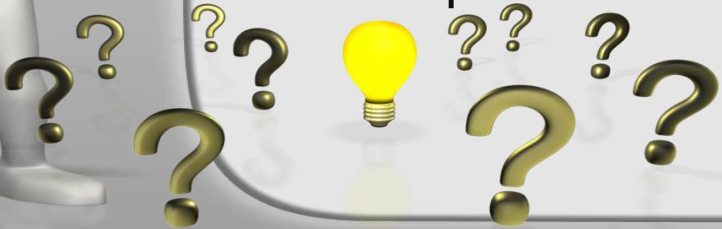
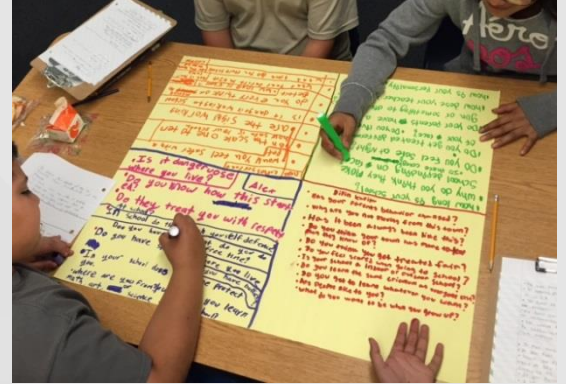
Discuss at your table:

What would you have your students do with their three priority questions?

USING STUDENT QUESTIONS

Students can use their questions for many purposes, including the following:

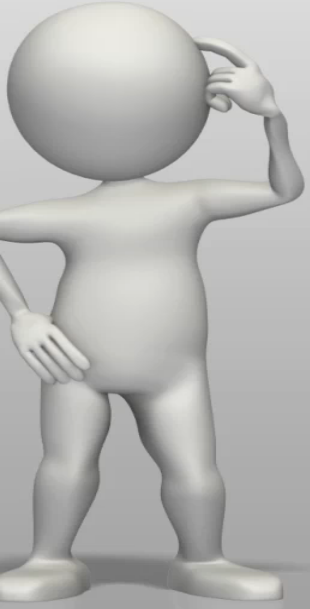
- Conduct Research
- Reports
- Conduct Experiments
- Independent Projects
- Write Papers/Essays
- Group and Individual Projects
- Socratic Seminars/Debates
- Prepare for Presentations/Interviews



Classroom Example Using a Quote

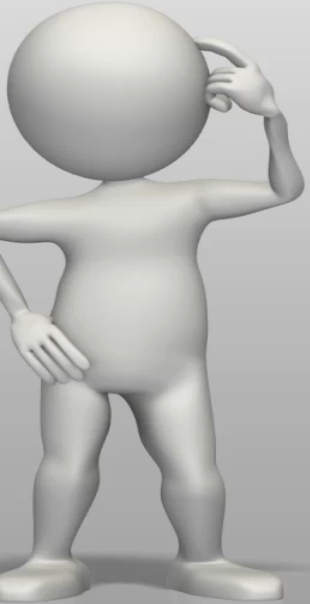
Question Focus

“The disciplinary policies of our society perpetuate injustice.”



Classroom Example Using a Photograph

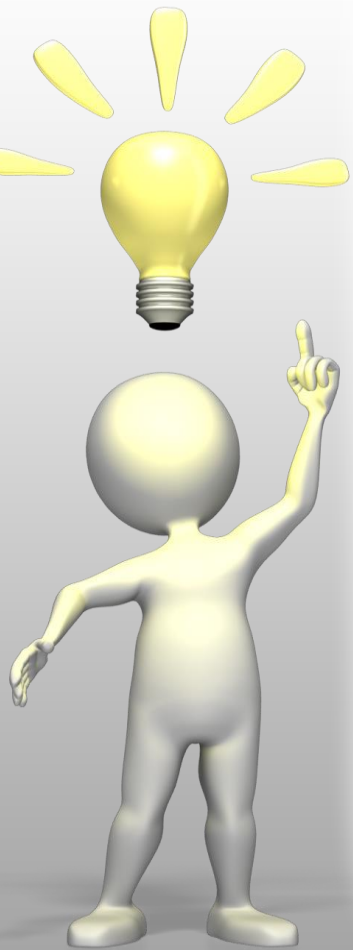
Question Focus



Classroom Example Using a Political Cartoon

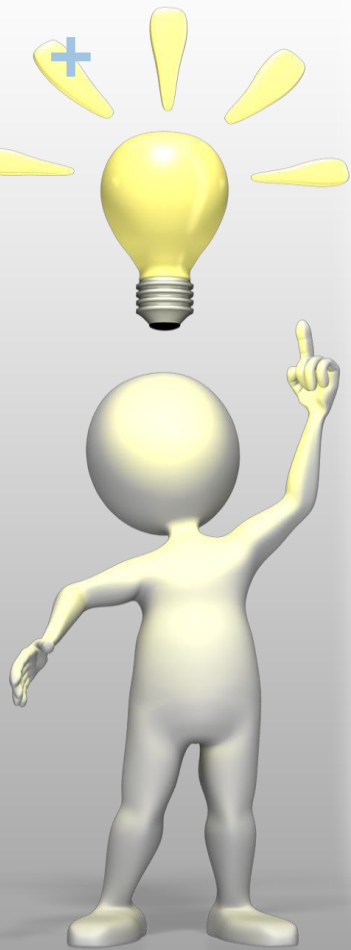
Question Focus





Next Steps

How will you use the **QFT** in your classroom to build the capacity of your students in asking their own questions?



The QFT, on one slide...

1) Question Focus

2) Produce Your Questions

✓ Follow the rules

✓ Number your questions

3) Improve Your Questions

✓ Categorize questions as Closed or Open-ended

✓ Change questions from one type to another

4) Prioritize Your Questions

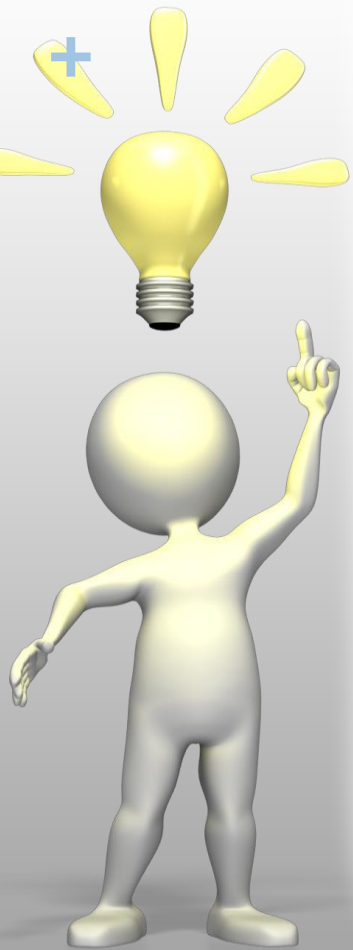
5) Share & Discuss Next Steps

6) Reflect

1. Ask as many questions as you can
2. Do not stop to discuss, judge or answer
3. Record *exactly* as stated
4. Change statements into questions

Closed-Ended:
Answered with “yes,”
“no” or one word

Open-Ended: Require
longer explanation

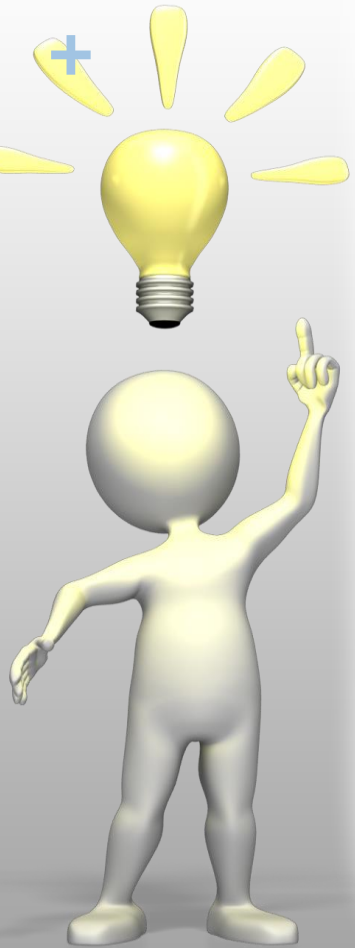


The Skill of Asking Questions

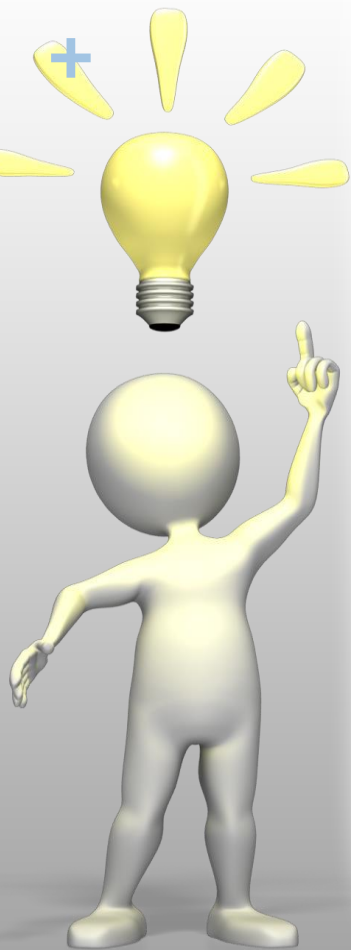
- Moving from ignorance as weakness to ignorance as opportunity
- Arriving at better answers (and more questions)
- Increasing engagement and ownership
- Demonstrating inquiry in the classroom

And...

Democracy



“We need to be taught to study rather than to believe, to **inquire** rather than to affirm.” - Septima Clark



Resources

Information about the QFT can also be found here:
Make just one change: Teach Students to Ask
Their Own Question

By Dan Rothstein and Luz Santana

www.therightquestion.org

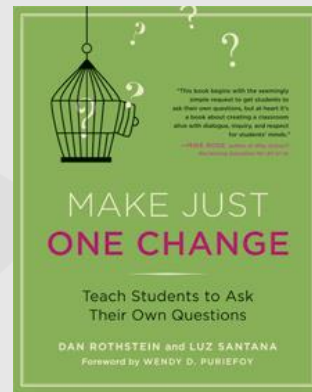
Videos of the QFT in action

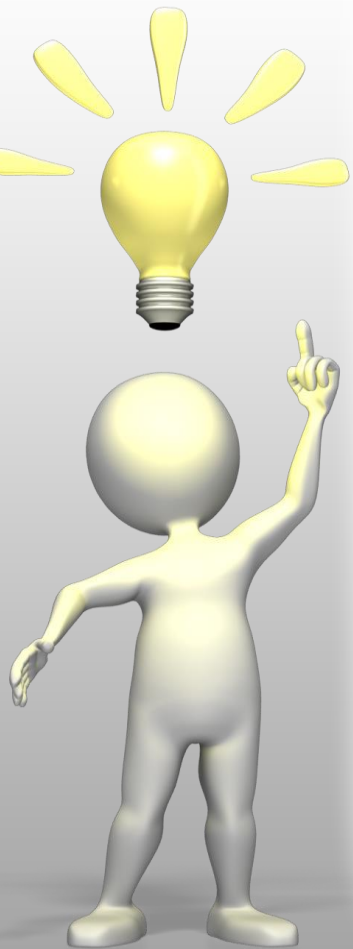
Template for facilitating the QFT with your students

Student handouts

Blog

TED X Talk : [https://www.youtube.com/watch?v= JdczdsYBNA](https://www.youtube.com/watch?v=JdczdsYBNA)

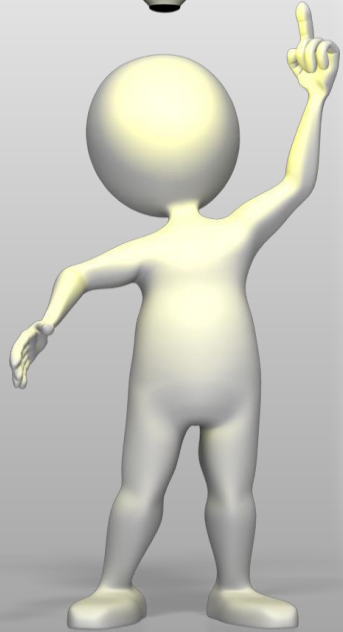




Optimistic Closure

- How and when will you introduce the QFT into your classroom with your students?





Questions?

Kelly Barber

kbarber@washoeschools.nmet

