Student Driven Inquiry

in the connected middle and high school classroom
Agenda

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● KQED Learn, Student Driven Inquiry, and the Social Studies Classroom
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What is Inquiry Based Learning?

A form of active learning that starts with a question, problem, or scenarios, rather than simply with the teacher presenting established facts or portraying a smooth path to knowledge.
THINKING TO MAKE MEAL
What is Student Driven Inquiry

A form of active learning that also starts with a question, problem, or scenarios but that shifts the focus of instruction from the teacher to the student.

Student driven inquiry is also known as student-based learning, student driven learning, and learner-centered education.
Two Great Examples of Student Driven Inquiry in the Connected Middle and High School Classroom

- CRF’s Civic Action Project
- Melissa Campanella’s Lesson on Particle Collisions
CRF’s Civic Action Project:
Lesson on Particle Collisions:
In the past, Melissa Campanella (a Denver science teacher) would have given a lecture on the relevant principles, then handed her students a step-by-step lab exercise to illustrate it.

Now, she starts the same lesson by activating glow sticks, one in hot water, the other in cold.

Students then make observations and try to figure out what might be behind the differences.

Only after sharing their ideas with each other would they read about the collision model of reactions and revise their own models.
What is KQED Learn

KQED Learn is a free, flexible platform for student driven, inquiry based learning.

A platform is an integrated set of interactive online services that provides the teacher and students in a classroom with information, tools and resources to support and enhance educational delivery and management.

Aside from being a platform for inquiry based learning, KQED Learn is also a hub for student voice, a launching pad for exploration, and a showcase for student-made media that inspires students to research, reflect and respond to timely issues.
KQED Learn, Student Driven Inquiry, and the Science Classroom

From “A New Inquiry Based, NGSS Learning Opportunity that’s Ideal For Middle School and High School Classroom.” (by Dan Rosales; May 2018)

- First he registered as a teacher at KQED Learn
- Then he created a class.
- Then he had his students register at KQED Learn and join his class using his class code.

My US History Class Code: MMAM2P
Then, he had his students

- Watch the Above the Noise video, *Does Climate Change Cause Extreme Weather?*
- Read The Lowdown articles, *After the Fires, North Bay Teachers and Students Talk Disaster Readiness* and *Is Climate Change to Blame for Hurricane Harvey and Other Extreme Weather Disasters?*
- Investigate whether climate change is to blame for the increase in the intensity of forest fires, Hurricane Harvey and other extreme weather disasters.
- Post their conclusions and supporting evidence to KQED Learn.
- Create and post to KQED Learn a digital media piece related to the core Investigation question.
Core Investigation Questions  (for most middle and high school science classrooms)

- What is the most effective way to get people and industries to save water?
- Should we expand the use of nuclear energy?
- If you could save any endangered species, which one would you choose and why?
- How has censorship affected scientific research?
- What is your solution for removing plastics from the open ocean?
- What is your solution for reducing the amount of microfibers released in wastewater from washing machines or wastewater treatment plants?
- What do you think is the most important scientific issue facing the world today and what should be done about it?
- What characteristics do engineers have in common?
- Should we genetically modify organisms to fight disease?
- Should we bring back extinct species?
- Should water be a commodity or a right?
- Should genetically modified crops be banned from the food supply? Why or why not?
- How would you use 13 gallons of water per day?
- How much single-use plastic is used on your campus every day? Design a solution for reducing the most popular item.
Example of Student Made Media (produced by the students in Dan Rosales’ science class, with each media piece responding to one of the core investigation questions.)

- Forest Fires and How they Behave (a Google Slideshow presentation)
- The Physics of Forest Fires and How We Can Help Forest Fires? (A 600-word blog post)
KQED Learn, Student Driven Inquiry, and the Social Studies Classroom
Core Investigation Questions (or most middle and high school social studies classrooms)

- What do you want your elected representatives to do about the issue of gun violence?
- If you were a researcher studying gun violence, what would you want to know more about?
- Analyze a conspiracy theory from history or the present day. What does this conspiracy theory tell us about American culture, fears or beliefs during the time period when it was most popular?
- Design a campaign that could be used in schools to inform teens about vaping
- What does it mean to be an American?
- What is your family’s American story?
● How did the threat of nuclear war affect ordinary Americans during the Cold War? How does it affect you today?
● What First Amendment rights do students have at K-12 schools? Do you think these laws are fair or should they be changed?
● What do you think was a defining moment of the Civil Rights Movement? Describe the event and why it’s so important.
● What do you think is the most important issue facing the world today and what should be done about it?
● Should athletes use their public platform to make political statements?
● Should 16-year-olds be allowed to vote?
● If you had lived in 1968, would you have supported or protested the Vietnam War? Why?
● Choose a youth-led activist movement that has made a difference in the world. What did this movement accomplish and how did it inspire you or others?
● How can people with different political views find common ground? What can we learn from them?
Examples of Student Made Media (produced by the students in my U.S. History class, with each media piece responding to one of the core investigation questions.)

- **Letter to President Donald Trump - Regarding the “Taking a Knee” Issue** (In this 750-letter to President Donald Trump, two San Marino High School juniors explain why they “strongly disagree with ‘the president’s’ belief that athletes should be forbidden from taking a knee during the national anthem.”)

- **How The Threat of Nuclear War Affected Ordinary Americans** (In this GoogleDoc slideshow presentation, four San Marino High School juniors described how the threat of nuclear war affected ordinary Americans during the Cold War and how the threat of nuclear war continues to affect ordinary Americans today.)

- **The Sino-American Youth Collaborative (focus on the Pacific)** (In this 3:39 video three San Marino High School seniors ask president Barack Obama to support their call to bring together, on an annual basis, and for at least the next ten years, a group of fifteen American high school students and a group of fifteen Chinese high school students. This group would meet in Hawaii for a one week period of time in order to figure out ways to help protect, preserve, and conserve the Pacific Ocean.)

- **Letter to the Next President - Regarding the Issue of Gun Control** (In this 750-letter to the next president, a San Marino High School junior says: “I am not asking for the removal of guns in our society, but I am asking we heavily increase the amount of gun control. I need you to demand that America puts an age requirement on the purchase of firearms, that gun license become a necessary item to obtain a firearm, and that a background check and psychological assessment are required before anyone can buy a gun.”)
Brainstorm

- KQED Learn, Student Driven Inquiry, and the ELA Classroom
- KQED Learn, Student Driven Inquiry, and the Math Classroom
- KQED Learn, Student Driven Inquiry, and the World Language Classroom

Click [here](#) to either suggest

- A question, problem, or scenarios that students might address in either an ELA, Math, or World Language classroom
- A digital media piece that your students might produce and that would respond to a core investigative question
Related Readings and Youtube Videos

- What the Heck is Inquiry Based Learning (By Heather Wolpert-Gawron; 2016)
- Bringing Inquiry-Based Learning Into Your Class (By Trevor MacKenzie; Youtube video; 2016)
- A New Inquiry Based, NGSS Learning Opportunity that’s Ideal For Middle School and High School (By Dan Rosales; 2016)
- KQED Learn – A Platform for Collaborative Investigations (By Mariana Garcia Serrato; 2018)
- Student Driven Inquiry in the Middle School Science Classroom (Edutopia; Youtube video; 2015)
- Student Centered Learning: Building Agency and Engagement (Edutopia; Youtube video; 2015)
- An Interview with Dr. David Vannasdall (Arcadia’s Innovative School District Superintendent) (By Peter Paccone; 2017)
KQED’s In the Classroom (articles by teachers for teachers describing innovative and successful ways that teachers are integrating tech and digital media into the classroom)
Feedback Survey

Click here to provide feedback

To learn more, either follow me on Twitter @PeterPaccone or contact me via email at ppaccone@smusd.us