Grades: 4-5

SciGirls, "The Awesome App Race"

This series showcases bright, curious real girls putting science and engineering to work as they answer questions and make unexpected discoveries in the world around them. In this episode San Francisco SCIGIRLS shake things up, programming their own smartphone app to highlight the history and geoscience of the 1989 San Francisco Earthquake.

After watching this episode, choose from the following questions and/or tasks to extend your learning

Question Box 1

- What is the author trying to say through the TV program? What from the text makes you believe this?
- What evidence does the TV show director give to support his or her central idea?
- What is this program "saying"? Cite several pieces of textual evidence to support your analysis.
- What are the program's supporting claims or reasons that support the central message?

Identify the Problem:

- Describe the SciGirls beginning stages of working with a client to create a mobile media app.
- What is The California Academy of Science looking for in a mobile media app?
- Why is it important to get a clear picture of the specifics requested by the client and the timeline?

Mentor Moment:

- What are the advantages of having a mentor who works in the field?
- How does the mentor help the girls brainstorm?
- How does the mentor help the SciGirls make a plan?
- How do the SciGirls begin the design process of creating?

Plan:

- How do the girls work as a team?
- What is the girls' plan for their mobile media app?
- How does planning as a group become a tricky process?
- Why is it important to listen to everyone's input?
- What plan fits best into the design constraints?
- How do the girls work together to create a game plan and present it to their clients?

Build:

- Describe the girls using the mobile media program they created.

Continued on the next page…

- Tell how the girls follow their design plan.
- What is each girls' part in the process? Why was each important?

Testing and Redesign:

- Why do the girls test, redesign, and test again?
- What problems do the girls run into?
- Describe the girls' final app that they plan to present to others.

Question Box 2

- If a part 2 of this program was created, what you like them to focus on?
- What would you like to research for extra credit? Why?
- Now that it's over, what are your first thoughts about this program? Are they mostly positive or negative? Explain?
- What is the most important thing you learned personally?
- What were some of the most interesting discoveries you made while watching this program?
- What were some of the most powerful learning moments in the program and what made them so?
- Why is a design plan important in project development?
- Would you prefer to work in a team or as an individual? Explain why?
- Why is it important to test as you are designing to make sure that it's working smoothly?
- Why is it important to "chunk" a project into smaller pieces such as: identify the problem, plan, build and test.
- Do you think a mentor is important when doing a big project?

Box 3 (Tasks)

- Describe the steps the girls used to create their mobile media app
- Think of a problem you want to solve.
  - develop a plan
  - find a mentor that can help you
  - build your project
  - test and redesign if needed
  - present your project to others
- What patterns did the SciGirls find in the geoscience of earthquakes in the San Francisco area?
- Research how often earthquakes happen in the San Francisco area.

Box 4 (Enrichment)

- Research and describe what are the causes of an earthquake.
- Research and describe how many earthquakes happen near your home.
- Click The Awesome App Race and download the pdf the Awesome Race Game and follow the directions.

Box 5 (Extend/Real-Life)

- What organization keeps track of earthquakes in California?
- Research and make a list of supplies you should keep on hand in case of a large earthquake.
- Research and make a list of steps you should take to keep your family safe during and just after an earthquake.