



Computer Scientist: Westward Expansion

Adventure Description:

In this adventure, you will think like a computer scientist and develop a new VR headset to teach students about Westward Expansion and the Transcontinental Railroad.

Activity

Step 1: Background Information (5-10 minutes)

- Show [Video: Westward Expansion](#).
- As a class, discuss how people had very different experiences when the transcontinental railroad was being built. For example, many businessmen were excited about building the railroad because they would make money off of it. However, Native Americans had a very different experience, as their land was taken from them. In addition, many Chinese immigrants were forced to build the road, meaning their experience of being exhausted and overworked while building was also different from the businessmen.
- Next, discuss how the historical sources that were created about the railroad and westward expansion may not represent all perspectives. This is because sources are often personal accounts, like diaries or journals.
 - Ask students to think about a time they had a conflict with a sibling or close friend. Ask students which person in the argument thought they were right? (both people)
 - Ask students to imagine telling a parent or guardian about that fight. Did they tell both sides of the story? Or just their side, trying to get the parent to side with them? Did they tell a 100% truthful version of the events that happened or did they embellish the bad things the other person did?
 - Explain to students that this is similar to the sources we have from the westward expansion. Each source tells one side of the story, from the storyteller's perspective. It is our job to find the real story by using all of our available sources.
- Explain to students that they will be building their own VR headset to teach students about different perspectives that people had during the time period of westward expansion and the Transcontinental Railroad.
- Provide students with [Handout: Steps to Create a VR Headset](#). As a class, review the steps. Discuss how students will create a VR headset with 3 buttons, meaning students who use the VR headset will be able to 3 different sets of images.

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Step 2: Sketching Images (15-20 minutes)

- Explain to students that they will first sketch images that students will see each time they click on a button on their VR headset. Each set of images will show a different perspective. For example, when students click on the first button, they will see the excitement of a family loading up everything they own to head West. When students click on the second button, they will see the confusion and fear from Native Americans as their land is being taken.
- Provide students with [Handout: Using Sources](#).
- Teacher Note: Students can work individually, in pairs, or in small groups.
- Remind students that they must include at least 1 source into each image.
- As students are working, ask the following questions:
 - Why do you think your two sources show such different opinions about what was happening?
 - Do you think one of your sources tells more of the “true story” than the others?

Step 3: Building the Headset (20+ minutes)

- Explain to students that they will now complete step 2, building a prototype of their VR headset. Remind students that they should make sure all requirements are included in their headset. Show [Handout: VR Headset Example](#).
- Provide groups with art supplies and building materials (ex: recycled boxes, pipe cleaners, popsicle sticks, construction paper).

Step 4: Class Discussion and Presentation (5 minutes)

- Have groups present their VR headsets to the rest of the class. They should also show the images that that will be seen when a person puts on the VR headset. Students should explain the perspectives shown in each of their images and discuss what sources were used.

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Materials List

Provided online:

- Video: Westward Expansion
- Handout: Steps to Create a VR Headset
- Handout: Using Sources
- Handout: VR Headset Example

Not Provided:

- Building Materials (ex: recycled boxes, pipe cleaners, popsicle sticks, construction paper)

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