**INQUIRY BASED LESSON PLANS**

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| **Teacher:**  **Dee Mays &**  **Krystal Stevens** | **Expected length of lesson:**  **4 Days** | **Lesson Topic:**  **Turn of the Century U.S. Inventors** | **Unit: 3 Bigger, Better, Faster: The Changing Nation** |

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|  | **Standards-Based Instructional Focus** | **Targeted Content Standards/**  **Element:**  (Include the entire standard) | SS5H1b  Describe the impact on American life of the Wright brothers (flight), George Washington Carver (science), Alexander Graham Bell (communication), and Thomas Edison (electricity). | | |
|  | **Targeted Literacy Skills or Standards:** (include as many as your lesson incorporates) | ELAGSE5L6  Acquire and use accurately grade-appropriate general, academic, and domain-specific vocabulary.  ELAGSE5W1  Write opinion pieces and support point of view with reasons.  ELAGSERI10  Read and comprehend informational texts.  ELAGSERI6  Analyze multiple accounts of the same topic. | | |
|  | **Targeted SS Matrices:** (include as many as your lesson incorporates) | Information Processing Skills: 1. Compare similarities and differences 6. Identify and use primary and secondary sources. 11. Draw conclusions and make generalizations. | | |
|  | **Inquiry Question (or what you would like the students answer)?**  (\*Teachers may present the question or require students to develop questions and narrow down to this one). | How did these people affect and change American life with their inventions? | | |
|  | **Key Vocabulary:**  Words important for understanding content and skills (ex: Tier 2 and 3 words) | **Inventors**  **Wright Brothers**  **George Washington Carver**  **Alexander Graham Bell**  **Thomas Edison**  **Kitty Hawk** | **Aviation**  **Filament**  **Generator**  **Phonograph**  **Botany**  **Crop Rotation** |  |
|  | **Learning Targets**  (I-Can Statements)  \*\*\*At the end of the week, what will students know and what will students be able to do? | | I can explain the contributions of the Wright brothers to the field of aviation.  I can explain the contributions of George Washington Carver in the field of botany.  I can explain the contributions of Alexander Graham Bell in the field of communication.  I can explain the contributions of Thomas Edison in the area of electricity.  **\*Explain means to cover the who, what, when, why, and how for each topic.**  **Directions for the 5E Portion:** Attach all 5E resources to the back of this plan in order of use. Please indicate how long you plan for each session to take. Include in your description a notation of the literacy standards or Social Studies Matrices for the activity which they align with. | | |
|  | **ENGAGE**  Describe how the teacher will capture students’ interest.  What kind of questions should the students ask themselves after the engagement? | | This will be similar to #9 in the 20 starter activities list. There will be a large piece of chart paper (or interactive board) divided into 4 quadrants. Each quadrant will have the name and picture of an inventor/pair of inventors. The students will be given facts about each inventor to stick to the quadrant that they believe corresponds to the statement. (10-15 minutes, Day 1) | | |
|  | **EXPLORE**  Describe what hands-on/minds-on activities students will be doing.  List “big idea” conceptual questions the teacher will use to encourage and/or focus students’ exploration | | The room will be split into 4 stations. Each station will have information and vocabulary about each inventor/duo and their inventions. The students will go to 2 stations per day. They will spend 20 minutes at each station. The students will have a copy of the page with 4 quadrants to take with them to the stations on which they record info for each inventor/duo (this is same info from “Engage” activity).  Each station will have information packets (attached) for the inventor(s) that the station focuses on, along with a computer component (link attached) with more information on the inventor. Each station will also have a ReadWorks passage for students to read and answer questions about the inventors. (20 minutes per station/2 stations per Day. Day 1 & 2) | | |
|  | **EXPLAIN**  Student explanations should precede introduction of terms or explanations by the teacher. What questions, resources, or strategies will the teacher use to help students connect their exploration to the concept under examination?  List higher order thinking questions which teachers will use to solicit *student* explanations and help them to justify their explanations.  Describe how the teacher will clarify the content or skill. | | The EXPLAIN section will be used as a Review time.  As a class, we will review the 4 Quadrant graphic organizer that was used in the ENGAGE phase.  The students will use the information that they have gathered from their stations to check the work that the class did in the Engage phase. The class will decide whether each statement was placed in the correct quadrant or not. This is the time that the teacher can use to “lecture,” or point out any key facts and information that the students may have missed during their explore phase.  (10-15 minutes. End of Day 2 or beginning of day 3 if needed.) | | |
|  | **ELABORATE**  Describe how students will develop a more sophisticated understanding of the concept.  What vocabulary will be introduced and how will it connect to students’ observations?  How will students make real-life connections? | | CAMPAIGN FOR THE MOST IMPORTANT INVENTOR(S)  Students will work in groups to campaign for the inventor(s) that they believe have had the biggest impact on our world today. The groups will create campaign posters that tell why their chosen inventor is the most influential. They must use facts and information gained from their time in the centers the previous two days.  (Days 3 & 4) | | |
|  | **EVALUATE**  How will students be evaluated THROUGHOUT the lesson?  How will students demonstrate that they have mastered the learning target(s)? | | The students will be given a blank Graphic Organizer with the 4 Quadrants on it. In the middle, the bubble will say: “In two to four sentences, explain how each inventor impacted American life with their invention.” They will follow up this question with “Which inventor had the greatest impact on American life? Support your answer with at least two pieces of evidence from your research.”  (15 minutes End of Day 4) | | |

**Digital Resources:**

**Flocabulary:**

George Washington Carver- <https://www.flocabulary.com/unit/george-washington-carver/>

Thomas Edison- <https://www.flocabulary.com/unit/thomas-edison/>

**BrainPop**

Thomas Edison- <https://www.brainpop.com/search/?keyword=Thomas+Edison>

Wright Brothers` <https://www.brainpop.com/technology/scienceandindustry/wrightbrothers/>

George Washington Carver- <https://www.brainpop.com/science/famousscientists/georgewashingtoncarver/>

Alexander Graham Bell <https://jr.brainpop.com/socialstudies/biographies/alexandergrahambell/>

**United Streaming**

Alexander Graham Bell - <https://app.discoveryeducation.com/learn/videos/bc451112-a95e-4085-b963-312125aeb638?hasLocalHost=true>

**EXTENSION Activities-**

TimeZoneX Games

George Washington Carver- <https://www.brainpop.com/games/timezonexgeorgewashingtoncarver/>

Thomas Edison - <https://www.brainpop.com/games/timezonexthomasedison/>

Wright Brothers - <https://www.brainpop.com/games/timezonexwrightbrothers/>

**Free School (You Tube)**

Alexander Graham Bell <https://www.youtube.com/watch?v=JsRt5lBdBfE>