

# *Man vs Machine*

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Big Ideas: Time, Change and Continuity.

Essential Question: How has the implementation of machinery changed the face of West Virginia occupations?

## **Social Studies Standards**

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SS.2.WV.4 examine the cultural life of West Virginians through storytelling and various art forms (e.g., songs, instruments, artwork, photographs, etc.)

## **Learning Plan: Day 1**

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Divide the class into two groups. One group will get a paper with five two-digit subtraction problems on it and the other group will get the same paper with a calculator. Before they begin, tell them they are going to race to see which group gets finished first. Allow students to discuss which group they think will finish first and why. Begin the race. Most likely, there will be a larger majority of individuals in the calculator group who will finish first, so discuss why. Explain to them that there was a time that students used chalk and slate for schoolwork. Ask them to offer other suggestions comparing the way they do their class work now to the way students used to do their schoolwork (paper, pencil, dry erase markers, iPads, laptops, etc.). Ask their opinions about whether this is better or worse than before and record these suggestions on chart paper. Tell students that as more and more technology is being developed, jobs are changing day by day and the way chores are done is evolving. Touch on the idea that sometimes with these changes come misunderstanding and even fear of the unknown. Tell students we are going to use one specific story as an example to explore the feelings some people have when considering the conveniences and dangers of machinery.

Introduce John Henry using the book *John Henry* written by Julius Lester using this [link](#) which takes you to the part of the storybook read online. Let the video play in its entirety (video is about 5 minutes), then ask students to summarize what happened in the story. Ask students what they believe the genre of the story is. They will likely say a fantasy or something of the like, which gives you the opportunity to introduce legends as a genre and discuss how legends compare to other genres such as fantasy. Tell students that even though it is a legend, and no one has proof that it actually happened, it sheds light on how people oftentimes feel about change and the fear that machinery can be as much harm as a step forward. If

possible, take a virtual tour of [Discovery Room 12](#) of the West Virginia State Museum which focuses on railroads and has a specific exhibit of John Henry.

### **Learning Plan: Day 2**

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Next, tell students it has been said that John Henry was born right here in West Virginia. Follow this [link](#) to explore the page discussing Talcott, West Virginia as the birthplace of John Henry spending adequate time exploring the statue that is erected there. Give each student a picture of John Henry, sculpting clay and a toothpick. Students are to use the clay to try to sculpt John Henry (utilizing the toothpicks to include detail) being sure to include a hammer in his hand. Display the statues.

### **Learning Plan: Day 3**

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Show the Vimeo called [John Henry and the Railroad](#) (20 minutes). Discuss how this telling of the story compares and contrasts with the animated story students viewed on day one. Record student suggestions on a Venn Diagram and leave posted. Discuss how John Henry had a problem and when they came to the mountain and had to figure out a way to solve their problem. Tell them that is what problem solvers must do to be successful. Tell students they have a problem that they must now solve. They are going to be given small marshmallows, toothpicks, craft sticks, straws and spaghetti noodles and they must work with their groups to build a railroad track suspended between and connecting two desks set 8 inches apart AND their track must support a small train (or matchbox car) as it travels from one desk to the other. Give students remainder of time allotted today to work on their tracks.

### **Learning Plan: Day 4**

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Allow students to bust back into groups and finish their tracks. Continue through testing phase today and discuss which tracks were a success, which ones were less successful and why. Have students record this information in their Social Studies notebooks. Also, have students include in their notebooks possible revisions they could make to improve their invention highlighting any possible technology that they could use that may improve their tracks. Last, have students include three things they learned viewed as an improvement, but is just often perceived as a nuisance.

### **Notes to the Instructor**

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Depending on the time you have allotted for this unit; you could take the lesson a step further by allowing students to tweak and improve their tracks then allow for a second attempt to traveling the tracks between desks.

## Assessment

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Student observation and discussion

Sculpture with hammer

Venn Diagram

Train track construction

Social Studies notebook entries

## Art-Inclusion Activities

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West Virginia Museum's clay statue of John Henry with hammer.



## Music/Wellness-Inclusion Activities

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Play John Henry [Song](#) by clicking this link (lyrics are included)

## STEM Activities

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Give students objects to choose from and have them construct a railroad track that will successfully remain suspended between the two desks exactly 8 inches apart. The goal will be for a small train (or matchbox car) to travel the track

from beginning to end while the track is spanning the distance between the two desks without falling apart.

### **Materials and Other Resources**

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Calculator

Chart Paper

Sculpting Clay

Toothpicks

Mini marshmallows

Straws

Spaghetti Noodles

Small train (or matchbox cars)

Social Studies Notebooks