
**Literature Annotation:** From where did the expression “the real McCoy” come? African-America inventor Elijah McCoy’s successful design of an automatic oil cup inspired the popular phrase. This book introduces children to the life of Elijah McCoy and the legacy of technological contributions that he left behind.

**Grade Level:** 3rd Grade

**Duration:** 1-2 class periods

**Maryland State Curriculum Economics Standard:** Students will develop economic reasoning to understand the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers participating in local communities, the nation, and the world.

4.A.3.a Describe how changes in technology have affected the lives of consumers such as UPC bar codes and online shopping

4.A.3.b Describe how changes in technology have affected lives of producers, such as robot-powered assembly lines

**College and Career Ready Standards for Reading Informational Text**

RI1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

RI2 Determine the main idea of a text; recount the key details and explain how they support the main idea.

RI4 Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 3 topic or subject area.

**Objectives:** Students will be able to...

- explain the importance of Elijah McCoy’s invention.
- describe how the changes in technology brought about by McCoy’s invention affected the lives of producers and consumers.

**Vocabulary**

**consumer:** an individual or group who uses resources, goods and services to satisfy economic wants

**patent:** an official document issued by the U.S. government granting the exclusive right to an invention

**productivity:** producing more using the same or less amount of labor

**producer:** an individual or group who combine economic resources to make goods and/or services

**technology:** skills, methods, tools, machines and other things used to perform activities; Technology changes over time and affects the way we live, work, and play.
Teacher Materials
- copy of: The Real McCoy: The Life of an African-American Inventor
- Sand Paper
- Vaseline
- Resource 1: Expressions Cards
- Resource 2: Meaning of Expressions
- Resource 3: Patent Drawing for McCoy’s Oil Cup
- Resource 4: Elijah McCoy Problem/Solution Outline
- Resource 5: Gallery of Inventors Exhibit Entry

Motivation
Teacher’s Note: Prior to conducting this activity, cut out the cards from Resource 1. You may wish to laminate them so that they can be used again.

Distribute one of the cards from Resource 1 to each student. Tell students that they will have five minutes to find the card that matches their own. Model the activity using a student volunteer. After five minutes, call time and have student pairs tell the class who their partner is and why. Make sure that students have the correct match ups (Resource 2). Ask students if they have ever heard the term “the Real McCoy.” Tell them that they will be reading about the origins of the term and the man who inspired it.

Development
1. Read: The Real McCoy by Wendy Towle.

2. Distribute Resource 4: Elijah McCoy Problem/Solution Outline. Display a transparency of the Resource sheet. Ask students: Do you remember the problem that McCoy faced when he was an oilman on the railroad? Re-visit the page of the book that begins with “Elijah was also the oilman of the train…” (He had to lubricate the axles, bearings and other moving parts of the each railroad car every few miles and then race back to the firebox to do his duties as a fireman.) Record student answers.

3. Ask students to hypothesize why it was so important to lubricate the moving parts of the train.

4. To illustrate the importance of lubrication break students into small groups. Distribute two pieces of sandpaper to each group. Have students rub the pieces of sandpaper together and describe what happens. What would happen if they rubbed the two pieces together for hours or days? What could be done to prevent this? Have students spread Vaseline on both pieces of their sandpaper. What happens when they rub the sandpaper together now? (Lubricating the sandpaper makes it easier for the parts to move and causes less friction.) Tell students that this is the reason why the moving parts on a train need to be lubricated and why the job of oilman was so important to the running of the train.

6. Tell student pairs to re-visit the next few pages of the book in order to fill in the “Solution” section of the graphic organizer. Display Resource 3: Patent Drawing for McCoy’s Oil Cup.

7. Display the definition of producer. Ask: How did McCoy’s invention affect the lives of producers? (It helped to increase the productivity of the trains. Increasing productivity means producing more using the same or less amount of labor. The trains could travel from one place to another in less time because they didn’t have to stop so often. Oilmen could spend their time doing other things.) Record answers on Resource 4 in the End Results producer section.

8. Display the definition of consumer. Ask: How did McCoy’s invention affect the lives of consumers? (The time it took to transport goods and the amount of workers needed to work on the trains were reduced. This would make the cost of transporting goods cheaper. The price of consumer goods would be cheaper.) Record answers on Resource 4 in the End Results consumer section.

9. Remind students of the expression activity that they did at the beginning of the class. Write the expression “The Real McCoy” on the board. Ask: To what does the expression “The Real McCoy” refer? (While many people tried to imitate McCoy’s oil cup, train engineers could tell the difference. Because of this, they always asked for “The Real McCoy.”)

Assessment
Tell students that the Baltimore Museum of Industry is sponsoring a student produced exhibit entitled “Gallery of Inventors.” Distribute Resource Sheet 5: Gallery of Inventors Exhibit Entry. Have students individually complete the assessment. Have student volunteers share their entries.

Closure
Explain that McCoy developed solutions to problems he saw in his everyday life. Reinforce this idea by discussing his other inventions -- an ironing table, lawn sprinkler, and a better rubber heel -- in terms of the problems that these inventions solved. Ask them to identify some everyday problems that they face and brainstorm inventions that they think might solve those problems.
Expressions Cards

<table>
<thead>
<tr>
<th>A Dime A Dozen</th>
<th>Very Common, Cheap</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Tuckered Out</td>
<td>Tired</td>
</tr>
<tr>
<td>Hit the Hay</td>
<td>Go to bed</td>
</tr>
<tr>
<td>Mad as a Wet Hen</td>
<td>Very Angry</td>
</tr>
<tr>
<td>On Thin Ice</td>
<td>In Danger</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Playing Possum</td>
<td>Pretending to Sleep</td>
</tr>
<tr>
<td>Rain Cats and Dogs</td>
<td>Raining heavily</td>
</tr>
<tr>
<td>Red Letter Day</td>
<td>A lucky or fortunate day</td>
</tr>
<tr>
<td>Smart as a Whip</td>
<td>Bright, Clever, Alert</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Tickle the Ivories</td>
<td>Play the Piano</td>
</tr>
<tr>
<td>Tickled Pink</td>
<td>Very delighted, pleased</td>
</tr>
<tr>
<td>Under the Weather</td>
<td>Sick</td>
</tr>
<tr>
<td>Whole Nine Yards</td>
<td>Everything</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------</td>
</tr>
<tr>
<td>Break a Leg</td>
<td>Good Luck</td>
</tr>
<tr>
<td>Kick the Bucket</td>
<td>To die</td>
</tr>
<tr>
<td>Sour Grapes</td>
<td>Act mean after a disappointment</td>
</tr>
</tbody>
</table>
Meaning of Expressions

A Dime a Dozen: very common, cheap
All Tuckered Out: tired
Break a Leg: good luck
Hit the Hay: go to bed
Kick the Bucket: to die
Mad as a Wet Hen: very angry
On Thin Ice: in danger
Playing Possum: pretending to sleep
Rain Cats and Dogs: to rain very heavily
Red Letter Day: a lucky or fortunate day
Smart as a Whip: bright, clever, alert
Sour Grapes: act mean after a disappointment
Tickle the Ivories: play the piano
Tickled Pink: very delighted, pleased
Under the Weather: sick
Whole Nine Yards: everything
Patent Drawing for McCoy’s Oil Cup

E. McCoy.

Improvement in Lubricators for Steam-Engines.


http://www.usi.edu/science/engineering/MISC/emccoy/emccoy.htm
Elijah McCoy Problem/Solution Outline

PROBLEM:

SOLUTION:

END RESULTS
Impact on Producers:

Impact on Consumers:
Gallery of Inventors Exhibit Entry

Name of Inventor: Elijah McCoy

Name of Invention:

Purpose of the Invention:

Draw a picture of how the invention impacted producers:

Draw a picture of how the invention impacted consumers: