

**Title:** *The Real McCoy: The Life of an African-American Inventor* by Wendy Towle. New York: Scholastic, 1993.

**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:** 3<sup>rd</sup> 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.

5. Return to Resource 4. Record McCoy's problem.
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**

A Dime A Dozen	Very Common, Cheap
All Tuckered Out	Tired
Hit the Hay	Go to bed
Mad as a Wet Hen	Very Angry

On Thin Ice	In Danger
Playing Possum	Pretending to Sleep
Rain Cats and Dogs	Raining heavily
Red Letter Day	A lucky or fortunate day

Smart as a Whip	Bright, Clever, Alert
Tickle the Ivories	Play the Piano
Tickled Pink	Very delighted, pleased
Under the Weather	Sick

Whole Nine Yards	Everything
Break a Leg	Good Luck
Kick the Bucket	To die
Sour Grapes	Act mean after a disappointment

### ***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

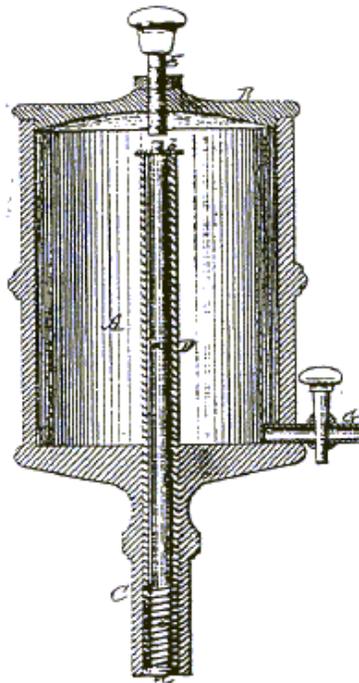
### Patent Drawing for McCoy's Oil Cup

E. MCCOY.

Improvement in Lubricators for Steam-Engines.

No. 129,843.

Patented July 23, 1872.



Witnesses  
John A. Ellis  
C. H. Weston

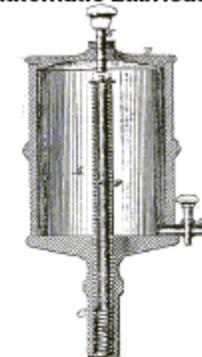
Inventor  
Elijah McCoy  
Per  
W. Alexander  
Att'y.

<http://www.usi.edu/science/engineering/MISC/emccoy/emccoy.htm>



***Gallery of Inventors Exhibit Entry***

**Automatic Lubricator**



Patent # 129,843  
July 23, 1872

Name of Inventor: **Elijah McCoy**

Name of Invention:

Purpose of the Invention:

Draw a picture of how the invention impacted producers:

A large empty rectangular box with a black border, intended for drawing a picture of how the invention impacted producers.

Draw a picture of how the invention impacted consumers:

A large empty rectangular box with a black border, intended for drawing a picture of how the invention impacted consumers.