



CRA Professional Development Institute | Literacy: Passport to the World
Rev Your Common Core Engines with High-Interest Nonfiction | November 2, 2013, 2:15 p.m.

JINGLE THE BRASS (grades K-5)

CCSS: RL, RI and SL

Pre-Reading Discussion

- Talk about different parts of a train—the engine or locomotive, the various cars that make up a train (grain, refrigerator, hopper, livestock, caboose). Talk about the people who work on the railroad—engineer, fireman, brakemen, track workers, conductor.
- Use the **What do you know about the railroad?** activity sheet (below)
- Talk about two trains traveling in the opposite direction that share one track and what sidings are used for.
- Include a discussion of the slang your students use today—what words they use and possible explanations for how the slang developed.

Reading Together

Read *Jingle the Brass* aloud to your students, allowing ample time to understand the new slang vocabulary. The pictures provide excellent clues to what the railroad jargon means. Discuss these clues with your students, then open to the glossary at the end of the book to check your answers.

What do you know about the railroad?

Draw a line from the train car to the type of freight it carries.

- | | |
|---------------------|---|
| A. Hopper | a. carries cows, pig, sheep |
| B. Refrigerator car | b. a car that loads from the top and empties from the bottom; usually carries grain |
| C. Caboose | c. track signals |
| D. Engine | d. the car that drives the train |
| E. Oil can | e. keeps fruits and vegetables cold |
| F. Livestock car | f. the office for the conductor on a freight train |
| G. Semaphore | g. a tank car for carrying liquid |

Match the following railroad workers with their jobs.

- | | |
|-----------------|--|
| A. Engineer | a. drives livestock on and off the train |
| B. Fireman | b. sets the brakes, throws track switches, and protects the rear end of the train from another train |
| C. Brakeman | c. keeps the fire burning in the engine at the correct temperature |
| D. Track worker | d. drives the train |
| E. Conductor | e. lines track and repairs the ties and railroad spikes |
| F. Cowboy | f. does the paperwork for the cargo on a freight train; takes tickets on a passenger train |

ENERGY LAB: BIOFUELS (grades 4-6)

CCSS: RI

Foldable Study Organizer

Objective: To categorize facts about biofuels in a concrete manipulative manner.

Materials:

- Print out of four columned Foldable found on page 4
- Print out of Clue Cards found on pages 5 & 6
- Scissors
- Tape
- Stapler
- The book *Biofuels*
- Picto Clue Cards found on pages 7 & 8



Procedure:

- Print Foldable found on reverse.
- Using scissors, trim around the outer border of the Foldable.
- Following the horizontal line, fold up bottom edge. Be certain that the pictures are revealed on the front of the Foldable.
- Crease along the horizontal line.
- Tape the outer edges, securing the picture flap to the back of the Foldable.
- Separate each section with a staple creating a pocket for each category.
- Cut out Clue Cards.
- Sort the Clue Cards by slipping them in the correct category pocket.
- Check your work using the Picto Clue Cards found on pages 7 & 8. Note that category is designated by the corresponding graphic identifying the Foldable classification. Depending on the students' capabilities, feel free to play the Foldable game with these Picto Clue Cards, which offer an error-free, enjoyable game playing experience.

<p>Biomass</p> 	
<p>Fossil Fuels</p> 	
<p>Biofuels</p> 	
<p>Biodiesel</p> 	

Biofuels Foldable Study Organizer: Clue Cards

Oil

Sugar Cane

Ethanol

Created by pressing 75% of the fat out of algae

Switchgrass

Petroleum

Helps reduce greenhouse gases

Sugar cane may be a better way to create ethanol

Very old biomass

Stores carbon

Plants

Can become liquid fuel

Carbon is a key ingredient in production	Kerosene
Cutback on need for non-renewable energy sources	Non-renewable energy source
Organic material made by plants	Organic materials made by animals
Algae	Corn production to create ethanol may lead to higher food prices
Costs more than regular gasoline due to lack of easy availability of algae	Some airlines are experimenting with a blend of petroleum-based jet fuel and biofuel from algae oil
Made from renewable organic materials	Gasification is the process by which energy is released by heating biomass

NUGGET ON THE FLIGHT DECK (grades K-5)

CCSS: RL and MATH

The Pilot's Clock: (Time, P.E.)

Materials: Sidewalk chalk, one per group of 3-4 students; spray bottle with water or bucket of water

Practicing the Pilot's Clock

Preparation: Draw circles with a radius of approximately two feet on the black top, one circle per group of 3-4 students

Directions:

1. Review the term Four o'clock from NUGGET ON THE FLIGHT DECK. Remind students that the space around the pilot is like a clock and show them the diagram of the aircraft on the clock circle.
2. Tell students that they are going to practice using clocks to give information to pilots. Put them into groups of 3-4, and walk them outside to the circles.
3. Help student groups write times on the clocks. Younger students may need to have every hour written on the clock, while older students may only need 12, 3, 6, and 9. Challenge sixth graders to use roman numerals on their clocks.
4. Have students take turns being the pilot. Have them hold their arms in a v-shape, perpendicular to their chests. Tell students that this is the nose, or the front of the plane and that the nose always points to 12:00.
5. Have one student in each group be the **Bogey**. Call out, "Bogey at 12:00. Bogey at 4:00," and so on. Have the Bogey move around the pilot to the correct spot. Have the other students in the group help the Bogey find the correct location. Let each student have a turn being the Bogey.
6. Use water to wash off chalk, if necessary.

Track the Bogey Game

Preparation: Draw circles with a radius of approximately two feet on the black top, one circle per group of 3-4 students.

Directions:

1. Have one student in each group stand as the pilot in the center of the circle. Have pilots hold their arms in a v-shape perpendicular to their chests.
2. Remind students that the nose of the plane indicates 12:00 on the pilot's clock.
3. Have one student be the Bogey, one student be the aircraft controller, and if there is a fourth student, he or she can stand behind the pilot as a co-pilot.
4. Have the bogey stand outside the circle. Tell the aircraft controller to call out "Bogey at ___ o'clock."
5. When the pilot hears the radio caller, he or she responds, "Roger, that." The pilot then turns to face the bogey.
6. After students practice steps 3-5 a few times, tell them that they are going to do a math mock dogfight. Remind students that math skills are important to pilots.
7. Give the radio caller grade-appropriate math problems. Have the aircraft controller call out the math problems to the bogey and the pilot. If the bogey correctly answers the question before the pilot, he "shoots down the plane" and moves to the center of the circle as the new pilot, and the old pilot becomes the aircraft controller, and the aircraft controller becomes the new bogey.
8. Use water to wash off chalk, if necessary.

NAVY SEALS: ELITE OPERATIONS (grades 3-8)

CCSS: RI and W

Writing Prompts

The only easy day was yesterday. - The wooden sign at the SEAL training base in California (25)

Use the quote above as inspiration to write a narrative about the SEAL who wrote the message on the wooden sign at the training base. Ask yourself:

- Who was this man?
- What message was he trying to convey in this statement?
- Perhaps create a character that is going through SEAL training. Describe what a day is like for a person engaging in SEAL training.
- Why is yesterday easier than the day after? What does this mean?
- Use the book to inspire your story. Find facts that will make your story come alive. Use detail and vivid language. Maybe even place yourself in the starring role of the tale!

“The greatest compliment one SEAL can bestow on another is to call him a teammate.” - Admiral William Raven, head of the U. S. Special Operations Command and a SEAL (15)

Use the quote above as a basis to formulate an opinion about the importance of teamwork, most especially as a SEAL. Ask yourself:

- What is your definition of teamwork?
- Why is teamwork such an important aspect of being a SEAL?
- Why is being called a teammate considered to be a compliment? Do you agree with this statement? Explain your position.

“My Trident is a symbol of honor and heritage...By wearing the Trident, I accept the responsibility of my chosen profession and way of life. It is a privilege that I must earn every day.” - Navy SEAL Code excerpt (29)

Explain why the Trident is a symbol of honor and heritage. Tell why wearing the Trident is considered to be a privilege. Ask yourself:

- What is the meaning of the terms honor, heritage, responsibility, and privilege?
- Why does a SEAL have to earn the privilege to wear the Trident every day?
- Explain the real message of this quote in your own words.