

Books and Blowtorches: Using Reading Strategies to Address the English Common Core State Standards in CTE Programs

Michigan Career Education Conference, February 3, 2015



Presented by the ELA staff at
The Van Buren Technology Center



Agenda

- 1) Introduction of your presenters
- 2) Why is this topic important to you?
- 3) Discussion of English Common Core Standards in relation to CTE programs/MME Update
- 4) Examples of how English is incorporated into CTE programs at the Van Buren Technology Center
 - a) Chris - Phys Tech
 - b) Steve - Info Tech
 - c) Adam - Health
 - d) Meg - Health/Human Services
- 5) Survey the Audience/Question and answer period

Why This Matters to You

- Major changes to school curriculum and standards with implementation of Common Core State Standards
- Many “sending” or “home” schools are finding it more difficult to allow students to attend technology centers due to required curriculum
- Integrating CCSS based English/Math/Science lessons may help alleviate the problem, allowing students to attend while receiving academic credit
- Currently the VBTC allow students to earn up to 1 credit of English/Fourth Year Math/Science a year through embedded and extra curriculum

Chris Roberts: Phys-Tech &

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CTE Programs Served:

- Advanced Manufacturing
- Commercial Art
- Cosmetology
- Construction Trades (on-site)
- Construction Trades (off-site)
- Graphic Arts
- **Welding**
- English Academic Credit

2014-2015 Welding-English Projects

- **Welding Fumes & Reading Strategies**
- Career Speech
- "The Veldt"
- Case Study: "Stubbs"
- Creative Writing Minis

Welding Fumes & Reading Strategies: Intersection of Standards, Scope/Sequence

ELA Standards

Reading Standards for Informational Text 6-12

1. Cite strong and thorough textual evidence to support an analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain
4. Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text

**Does it meet the
STANDARDS?**



Welding Standards

Cluster / I / C / 1 /

- a. Identify the types of risks of injury/illness at work
- b. Identify those who are susceptible to risk of injury/illness at work
- c. Describe ways to positively impact occupational safety and health

Cluster / I / E / 3 /

- c. Identify methods to correct common hazards
- e. Inspect and use personal protective equipment

Cluster / I / E / 2 /

- c. Provide examples of consequences that manufacturing organizations suffer when they fail to comply (with government policies, industry standards)

Cluster / I / 3 /

- a. Promote and maintain knowledge of organizational safety, health, and environmental management policies and procedures

Welding Fumes & Reading Strategies: Reading Strategies Applied & Content

Reading Strategies

Prior Knowledge

Vocabulary/Concept Front-Loading

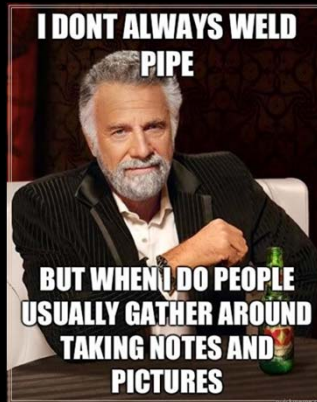
Graphic Organizer

Read Aloud / Think Aloud

Annotation (modeled)

Group Discussion

- Focused upon textual evidence



American Society of Safety Engineers article:

<https://www.asse.org/practicespecialties/articles/weldingfumes.php>

Are Welding Fumes an Occupational Health Risk Factor?

Welding fume exposure in the workplace is a serious occupational hazard. Employee exposure to welding fumes, specifically to those that contain manganese, has garnered national media attention within the last few years. Thousands of welders have filed lawsuits against welding rod manufacturers, distributors and suppliers alleging that the manganese present in welding fumes causes a host of illnesses, including Parkinson's disease. While manganese exposure does lead to symptoms that are similar to Parkinson's disease, further research must be conducted to confirm a connection between manganese and Parkinson's.

This article is adapted from recent print and online resources to provide an overview of:

- welding fumes and the health effects of manganese present in these fumes;
- the differences between Parkinson's disease and manganese-induced parkinsonism;
- current litigation among welders;
- measures to protect welders from welding fumes.

What Are Welding Fumes?

Welding is the method of joining two metal parts together by applying intense heat between them, which causes the parts to melt and intermix. This process can be done directly between the two parts or through the use of an intermediate molten filler metal. The filler, base metal and base metal coating used during welding operations and the subsequent gases that are formed during the welding process release small, solid particles into the air creating a plume. This plume is called "welding fume."

All welding processes produce these fumes, but most fumes are produced during arc welding. In this type of welding process, high heat from an electric arc (formed between the work and an electrode) is used to melt and fuse the metal at the joint between the two parts. When a welder strikes an arc, the arc's heat vaporizes a small quantity of metal and releases welding fumes into the air, which can adversely affect the health of the welder as well as the health of those in the immediate area.

The contents of the welding fumes depend on the components of the base metal, coatings and/or filler materials and the temperatures used in the welding process. Types of metals commonly found in welding fumes include aluminum, beryllium, cadmium oxides, chromium, copper, fluorides, iron oxide, lead, manganese, molybdenum, nickel, vanadium and zinc oxides. Welding fumes also produce gases, which can

Welding Fumes & Reading Strategies: Project Phases

What bad effects can be caused by fumes?

When I read this part, I am thinking...

Can you find something to back that up from the article?

Prior Knowledge

Vocab / Concept Front-Loading

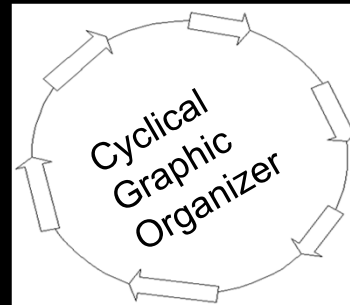
Read Aloud Think Aloud & Annotate

Graphic Organizers

Discussion

Wordle Collage

Team #4: What does it mean to "mitigate"?



Steve Ambs: Info Tech/Auto Tech

CTE PROGRAMS

- Computer Programming
- Computer Networking
- Global Business Finance/Management
- Marketing
- Automotive Brakes Engine and Suspension
- Automotive Electrical and Engine Performance
- Auto Body

Education and Experience

- 8 years at the Van Buren Technology Center (10 years teaching experience)
- Bachelor's Degree in English Education, Master's in K-12 Curriculum, Instruction and Assessment

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READY PLAYER ONE UNIT

- Used in Computer Programming Classroom
- Assignments and Lessons on Moodle Platform
- In-Class Seat Time Equates to 1 Hour Per Week
- Common Core State Standards Addressed for English Literature 11-12: 1,2,3,4,5,6 (10)
- CTE Curriculum Standards Addressed: Academic Foundations A.1.a-f, 2.g, 5.d



Reading Strategy Used for Ready Player One

“Word Study”

- Teacher provides students with a word(s)/phrase(s) with no context
- EASTER EGG
- Students then predict possible meaning of this word/phrase
- Teacher (or students) then reads portion of text aloud, stopping at the end of the sentence the phrase occurs
- Students then must figure out the meaning of the phrase from the clues in the text
- Ways to achieve this: using local context, using global context, connecting the phrase to background knowledge, examining word parts
- This technique is an excellent way to break down vocabulary barriers within the text and strengthen understanding of context

Adam Westhouse: Health

CTE Programs:

- Fundamentals of Patient Care
- Pharmacy Tech.
- Early Childhood Careers and Education
- Computer-Aided Design
- Polymer Technologies

Qualifications:

B.S. English Secondary Education
M.A. Literature & Language Studies

3 years teaching ELA at VBTC
8 years teaching total

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New York Times article: “Keeping Patients’ Details Private, Even from Kin”

Reading strategy: Coding text

- **Used in Pharmacy Tech. program
~ 1 hour per week**
- **Useful because you can model active
note taking while reading.**
- **Instructors can modify the amount of
info students are looking for based on
length of text and student needs.**

**Common Core State Standards addressed for
English - Informational text: 11-12: 1,2,3,4,5,6**

**CTE Curriculum standards:
51.II.A. 6, 9
51.II.C.1**



Reading strategy: coding text

Note taking key:

Underline 2-4 main ideas in the text. (Or have students re-state those ideas in their own words on a Post-It note)

Circle 4 unfamiliar words (use context clues or dictionary to define them)

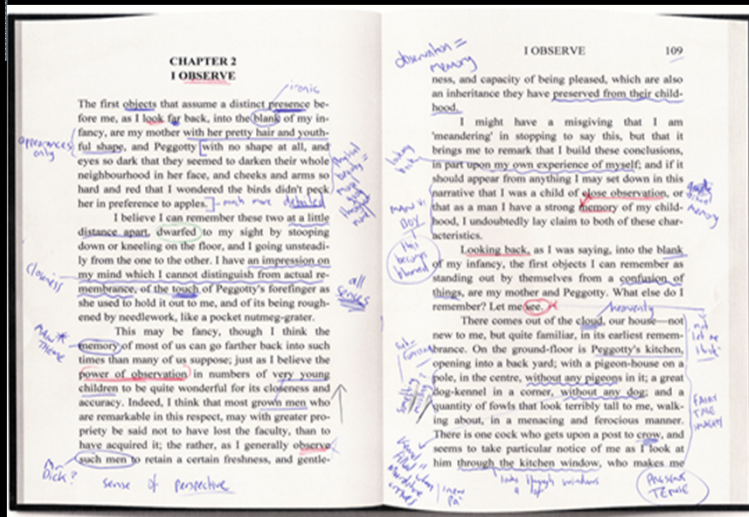
?? Write question marks next to anything that is confusing or puzzling.

★ Draw a star next to anything else the student finds important.

R This passage/sentence reminds me of...

T-S Text-to-self connections

T-C Text-to-class connections



Fundamentals of Patient Care program

After This: An Inspirational Journey for All the Wrong Reasons - Marcus Engel (memoir/non-fiction)

Vocabulary acquisition:

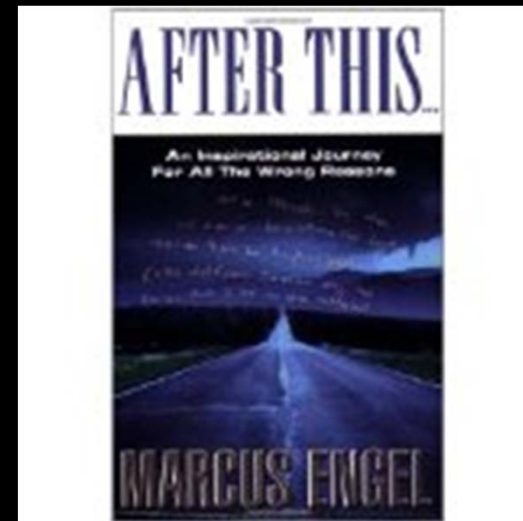
- unfamiliar vocab -- student- and instructor-generated

Reading activities:

- student-generated authentic discussion questions
- student-selected passages

Reflection essay:

- incorporate text-based evidence (writing)



Survey of the Audience

Where are you coming from?

Meg Zap: Health/Human Services

Programs

- Law Enforcement
- EMT
- Agriculture
- Culinary Arts
- Cadet Teacher
- Health Academy:
 - Psychology
 - Communications

Qualifications:

- 10 Years @ VBTC
- MAT: Curriculum, Instruction and Assessment
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Reading Opportunities

EMT: Article on EMS intubation -
Debate Unit

Agriculture: Food Inc. - Agriculture
Issues Unit - FFA

Culinary Arts: Article on Business
Plan - State and National Competition

Health Academy: Script analysis "A
Beautiful Mind" - Psychology

Cadet Teacher: Harry Wong -
Research based reading/writing unit

Law Enforcement: CPS and Abuse
Unit: novel and multigenre
presentation

Literature Circles & CTE

Passage Picker

Your job is to pick parts of the text that you found significant, engaging or unusual, record them and explain why.

These can be:

- * an interesting part
- * a good description
- * a funny part
- * a scary part
- * a sad part



Word Wizard

Your job is to look for special or unknown words in the text.

Words that are:

- * new
- * different
- * strange
- * funny
- * interesting
- * important

Find & record what the words mean.



Artful Artist

Your job is to visually depict anything about the story that engaged you:

- * a character
- * the setting
- * an event
- * a surprise
- * a problem
- * a prediction of what will happen next.



Summariser

Your job is to write and share a brief but interesting overview of the reading of the text so far.



Connector

Your job is to find & record connections between the book and the outside world. This means connecting the reading to:

- * your own life
- * other stories
- * other people
- * similar events at other times and places

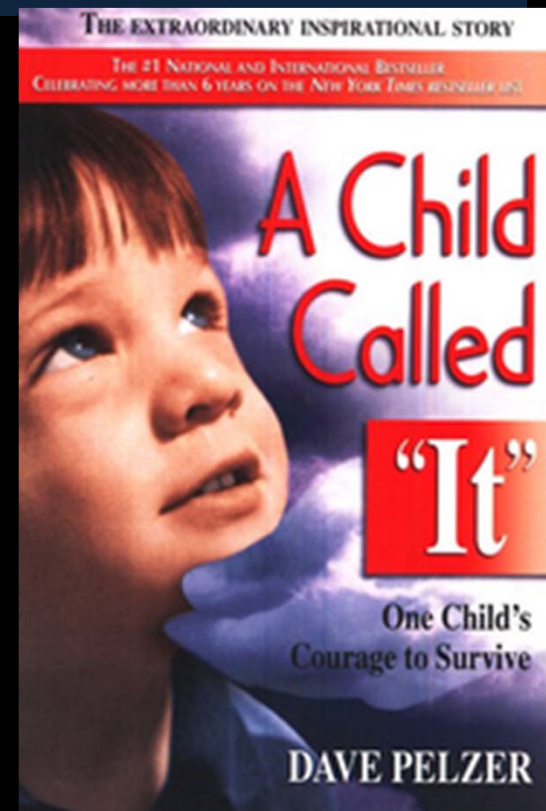


Discussion Director

Your job is to write down some good questions that you think your group would want to talk about.

Record different questions with:

Why? Who?
When? Where?
How? What if?



Common Core Crosswalk

What is crosswalking?

Out with the old (HSCE), and in with the new (CCSS).

Purpose: finding a manageable way to present lesson plans in a brief manner that allows us to accurately align them with the CCSS.

How do you do it without reinventing the wheel?

Thank You For Listening

Any questions?

