



Language as a Tool: Equipping Teachers and Multilingual Learners for CTE Success

Kennesaw State University

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Join my class in Google classroom: o2tkddd

PATHWAYS

High School Credit

Dual Enrollment Credit

Graphic Design*

Automotive Technology*

Hospitality, Recreation &
Tourism

Aviation Maintenance

Criminal Investigation*

Carpentry

Culinary Arts*

Cybersecurity

Dental Science*

Early College Essentials

HVAC & Refrigeration

Infant/Toddler Care

Patient Care*

Teaching as a Profession*

Programming

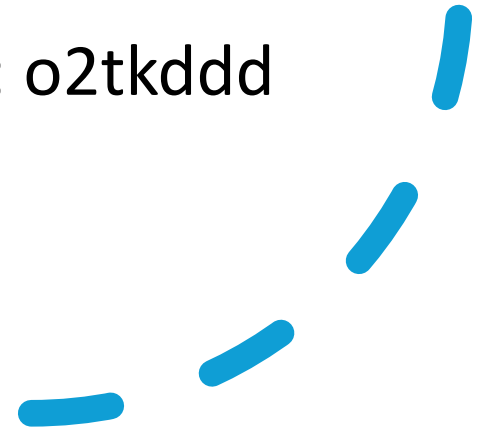
How can I help?



Objectives

- Understand linguistic demands of CTE pathways
- Explore how corpus linguistic tools can help teachers select key words to teach
- Practice with Artificial Intelligence tools to create classroom resources

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- CTE students need a vocabulary of 9,000 word families.
- “They need to walk and talk like a builder (or a chef, or a mechanic).”
- Laufer's (1989) research showed that learners who knew **95%** of the words in a text would tend to score at least **60%** on a comprehension quiz for the text, while Nation's (2006) research showed that learners who knew **98%** of the words would tend to score at least **70%**.

The Language in the Trades Education Project

Jean Parkinson, Averil Coxhead, Murielle Demecheleer, James Mackay, Len Matautia, Emma McLaughlin, Falakiko Tu'amoheloa.

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Let's play Connections for CTE Pathways!!!

Group the words according to these four CTE pathways:

Automotive Technology
Culinary Arts
Criminal Investigations
Dental Science

Career and Technical Education Pathways

Share
Puzzle 

by Michelle Ploetz

CHARGE	SOCKET	RESTORATION	FABRICATION
THRESHOLD	FILE	BEAT	CUSTODY
CANINES	GRILL	RATCHET	CASE
CARIES	BOILING	IMPRESSION	LATENT PRINT

Shuffle

Clear

Submit


How difficult is
a PPT on
infection
control from
Dental Science?

Key

Families = Word families

Types = Different words

Tokens = Number of words
in text

Freq. Level	Families (%)	Types (%)	Tokens (%)	Cumul. token (%)
K-1 :	218 (45.7)	278 (43.10)	1228 (62.3)	62.3
K-2 :	97 (20.3)	131 (20.31)	273 (13.9)	76.2
K-3 :	78 (16.4)	100 (15.50)	191 (9.7)	85.9
K-4 :	27 (5.7)	37 (5.74)	82 (4.2)	90.1
K-5 :	21 (4.4)	25 (3.88)	45 (2.3)	92.4
K-6 :	9 (1.9)	9 (1.40)	16 (0.8)	93.2
K-7 :	8 (1.7)	10 (1.55)	14 (0.7)	93.9
K-8 :	6 (1.3)	6 (0.93)	10 (0.5)	94.4
K-9 :	4 (0.8)	5 (0.78)	7 (0.4)	94.8
Coverage 95 				
K-10 :	2 (0.4)	2 (0.31)	5 (0.3)	95.1
K-11 :				
K-12 :				
K-13 :	2 (0.4)	2 (0.31)	3 (0.2)	95.3
K-14 :	1 (0.2)	1 (0.16)	1 (0.1)	95.4

Source: Lextutor.ca

Dental Science

Sort these words into categories.

Create a table contrasting the CDC and OSHA.

Feature	Centers for Disease Control and Prevention (CDC)	Occupational Safety and Health Administration (OSHA)
Primary Focus	Public health protection from infectious diseases, environmental hazards, and chronic conditions.	Worker safety and health in the workplace.
Target Audience	General public, healthcare professionals, public health officials.	Employers and employees in all industries except those covered by specific agencies (e.g., mining).
Regulatory Authority	Sets recommendations and guidelines, conducts research, and provides technical assistance.	Enforces safety and health standards through inspections, citations, and penalties.
Enforcement Power	Limited; relies on collaboration with state and local health departments.	Strong enforcement power to issue citations and fines for violations.
Examples of Activities	Develops recommendations for preventing the spread of COVID-19, investigates outbreaks of foodborne illness, conducts research on chronic diseases.	Sets standards for workplace safety, investigates workplace accidents and illnesses, provides training and educational resources on workplace hazards.



Dental Science

Create an image of a monkey feeding a zebra.



First and second images generated by DALL-E; third image generated by Gemini

Auto Technology

Explain threshold with respect to engine temperature.

Here's an explanation of threshold in the context of engine temperature:

Threshold refers to a critical value or point at which a significant change occurs in the engine's behavior or operation. It's a crucial concept for monitoring and maintaining engine health.

Here are key thresholds related to engine temperature:

1. Optimal Operating Temperature:

- The ideal temperature range for most engines is between 195°F (90°C) to 220°F (104°C).
- At this range, the engine runs efficiently, with proper oil viscosity and reduced emissions.
- Crossing this threshold in either direction can have consequences.

2. Overheating Threshold:

- Exceeding 230°F (110°C) typically signals overheating.
- At these temperatures, the coolant can boil, leading to:
 - Reduced cooling capacity
 - Engine damage (warped cylinder heads, blown head gaskets)
- Immediate action is required to cool the engine and address the underlying issue.

3. Underheating Threshold:

- Operating below 180°F (82°C) can also be problematic.
- Consequences include:
 - Reduced fuel efficiency
 - Increased wear and tear
 - Incomplete combustion and higher emissions

Definition 

Ideal range for engine operation: 195°F (90°C) to 220°F (104°C)

Select the correct term

1 Thermostat Opening Temperature

2 Optimal Operating Temperature

3 Warning Light Threshold

4 Fan Activation Temperature

Don't know?

Culinary Arts

Create a typical Mexican food menu using these culinary techniques (julienned, caramelized, chiffonaded, sauteed, fermented).

¿Buen provecho?

- **Guacamole con Totopos:** Fresh Hass avocados, **chiffonaded** red onion, chopped cilantro, a squeeze of lime, and a hint of jalapeño, served with warm, crispy corn tortillas.
- **Tostaditas de Tinga de Pollo:** Mini tostadas piled high with tinga de pollo - shredded chicken in a smoky chipotle tomato sauce - topped with crema fresca, **julienned** red onion, and crumbled queso fresco.



Criminal Investigations



Hello! Quizlet is now using the power of AI to help you study more effectively.

Looks like you're studying Fingerprint Analysis. Let's begin with Quiz me!



What is a patent fingerprint?

I don't know

Give me a hint

Next question

Your AI tutor is ready to help. Just start typing.

0/300



Sources

- Laufer, B. (2013). Lexical Thresholds for Reading Comprehension: What They Are and How They Can Be Used for Teaching Purposes. *TESOL Quarterly*, 47(4), 867–872. <http://www.jstor.org/stable/43267941>
- Nation, I. (2006). How large a vocabulary is needed for reading and listening?. *Canadian modern language review*, 63(1), 59-82.
- Parkinson, J., Coxhead, A., Demecheleer, M., Mackay, J., Matautia, L., McLaughlin, L., & Tu'amoheloa, F. (2017). (rep.). *The Language in the Trades Education Project*. Ako Aotearoa. Retrieved June 2023, from <https://ako.ac.nz/knowledge-centre/the-language-in-the-trades/the-language-in-the-trades-education-2017/>.

Questions?



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