

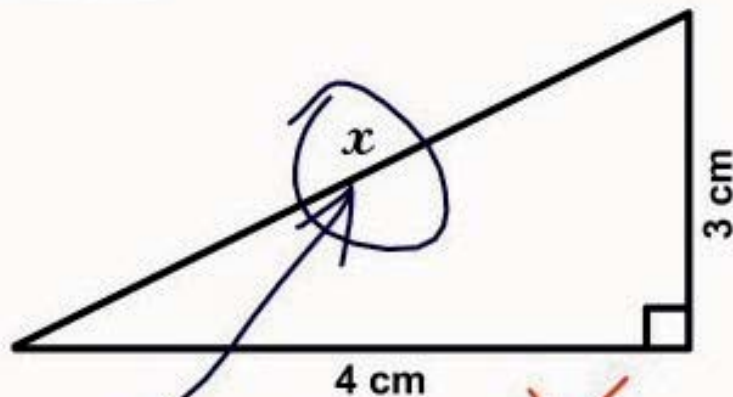
*Teaching Academic Vocabulary,
Grades 4-12:
"Deep," "Nuanced," and "Precise"*

March 4, 2013

Shane Templeton, Ph.D.
University of Nevada, Reno
wst@unr.edu

<http://shanetempleton.com>

3. Find x.



Here it is



Common Core State Standards: Vocabulary

The standards expect that students will grow their vocabularies through a mix of *conversations*, *direct instruction*, and *reading*. The standards will help students determine word meanings, appreciate the nuances of words, and steadily expand their repertoire of words and phrases.

Academic Language Defined

“Academic language is the specialized language, both oral and written, of academic settings that facilitates communication and thinking about disciplinary content”

(Nagy & Townsend, 2012, p. 92)



Joy Hakim

The Story of US

29 Ben Franklin



Franklin was famous for his countrified appearance. The French couldn't get over his fur hat.

Some people had problems with Benjamin Franklin. They accused him of not having any gravity. Now that doesn't mean he floated around like a weightless space voyager. *Gravity* has another meaning, as in "grave." No, not a place where you get buried, but you are getting closer. Someone who is grave is very serious, maybe a bit dull, and certainly not much fun. Ben Franklin did have a problem. He just couldn't stay serious or dull. He was always playing jokes or having fun.

The French had no trouble with Ben. They loved his jokes and admired his good mind. They were amazed by all the things he had done. He was a scientist, an inventor, a writer, and a great patriotic American.

His mind never seemed to stop for rest. Daylight saving time was his idea; and he invented bifocal glasses, the lightning rod, the one-arm desk chair, and an efficient stove. He founded the first public library, the first city hospital, and the University of Pennsylvania. He was the most famous journalist of his time, and the first editor to use cartoons as illustrations. He made electricity into a science. And that is only part of what he did.

Benjamin Franklin helped with the ideas that made this country special, and he got the French to help pay for the revolution that made us free.

But, as I said, some people had problems with Franklin. The


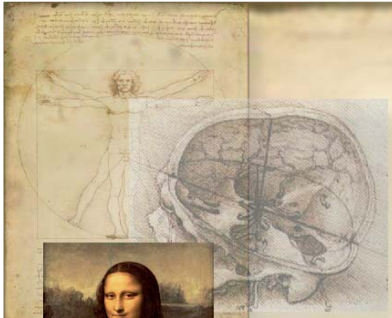
Vive Franklin!

The French were fascinated by Benjamin Franklin. (Vive means "long live" in French.) One Frenchman who met him at court said:

The most surprising thing was the contrast between the luxury of our capital, the elegance of our fashions, the magnificence of Versailles...the polite haughtiness of our nobility—and Benjamin Franklin. His clothing was rustic, his bearing simple but dignified, his language direct, his hair unpowdered. It was as though classic simplicity, the figure of a thinker of the time of Plato...had suddenly been brought by magic into...the 18th century.


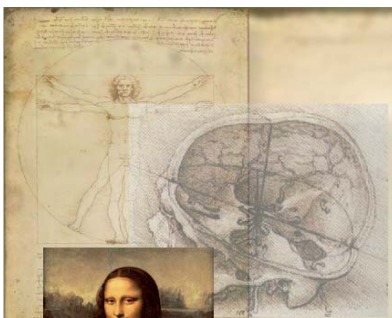
This poem was written in Franklin's honor:

To steal from Heaven its sacred fire he taught;
The arts to thrive in savage

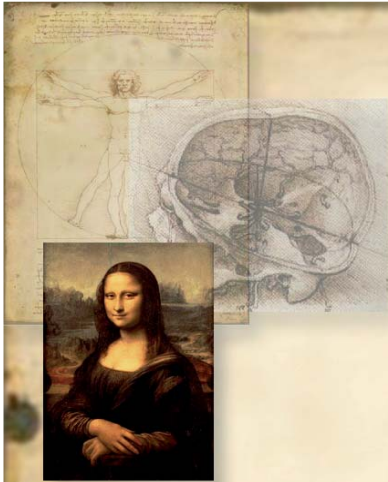


Reading to Students...

**From Asimov's "Foreword" to
A History of Mathematics
(Boyer, 1991, pp. vii-viii):**



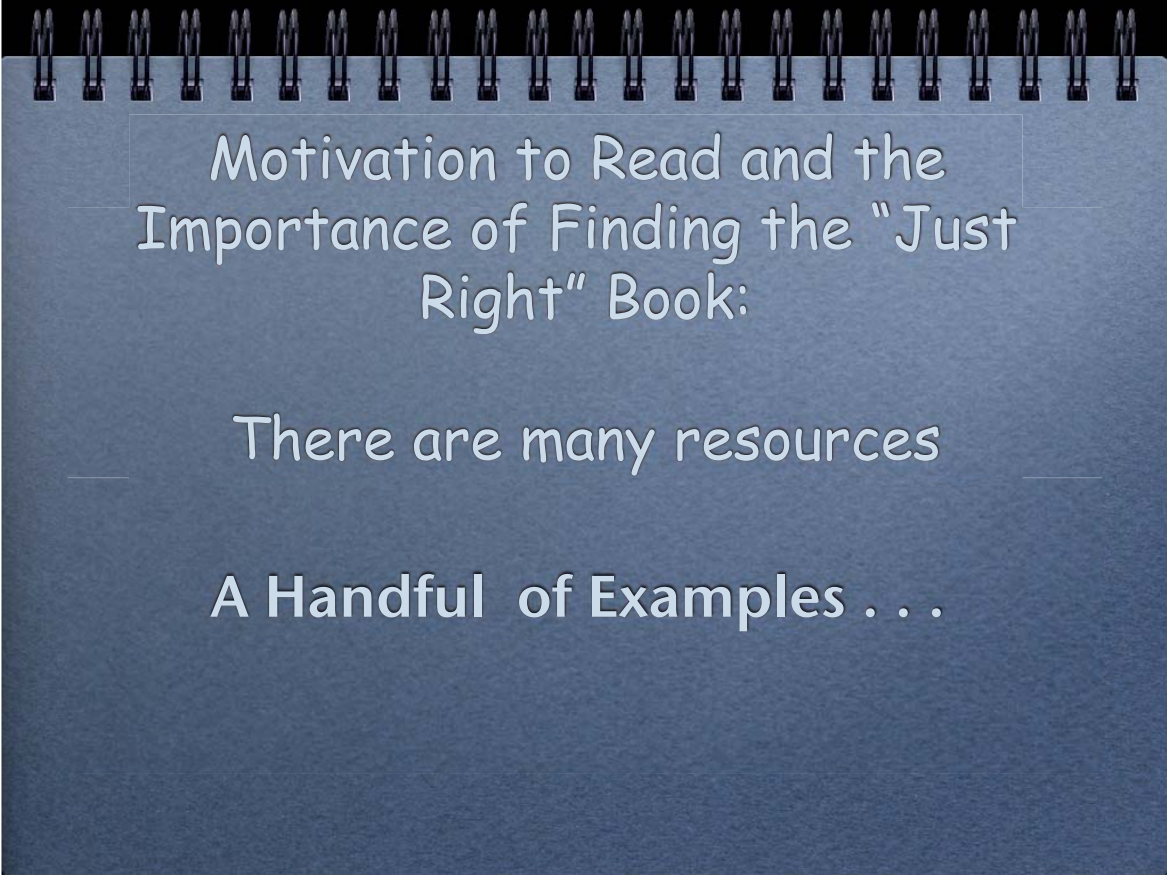
Aristotle, one of the greatest minds ever to contemplate physical laws, was quite wrong in his views on falling bodies and had to be corrected by Galileo in the 1590s . . . Even Newton, the greatest of all scientists, was wrong in his view of the nature of light . . . His masterpiece, the laws of motion and the theory of universal gravitation, had to be modified by Einstein in 1916 . . .



Only in mathematics is there no significant correction – only extension. Once the Greeks had developed the deductive method, they were correct in what they did, correct for all time. Euclid was incomplete and his work has been extended enormously, but it has not had to be corrected, His theorems are, every one of them, valid to this day.

“On an average day in middle school, fully a third of my brain was obsessed with personal safety. I feared the block 10 times more than any pop quiz.”

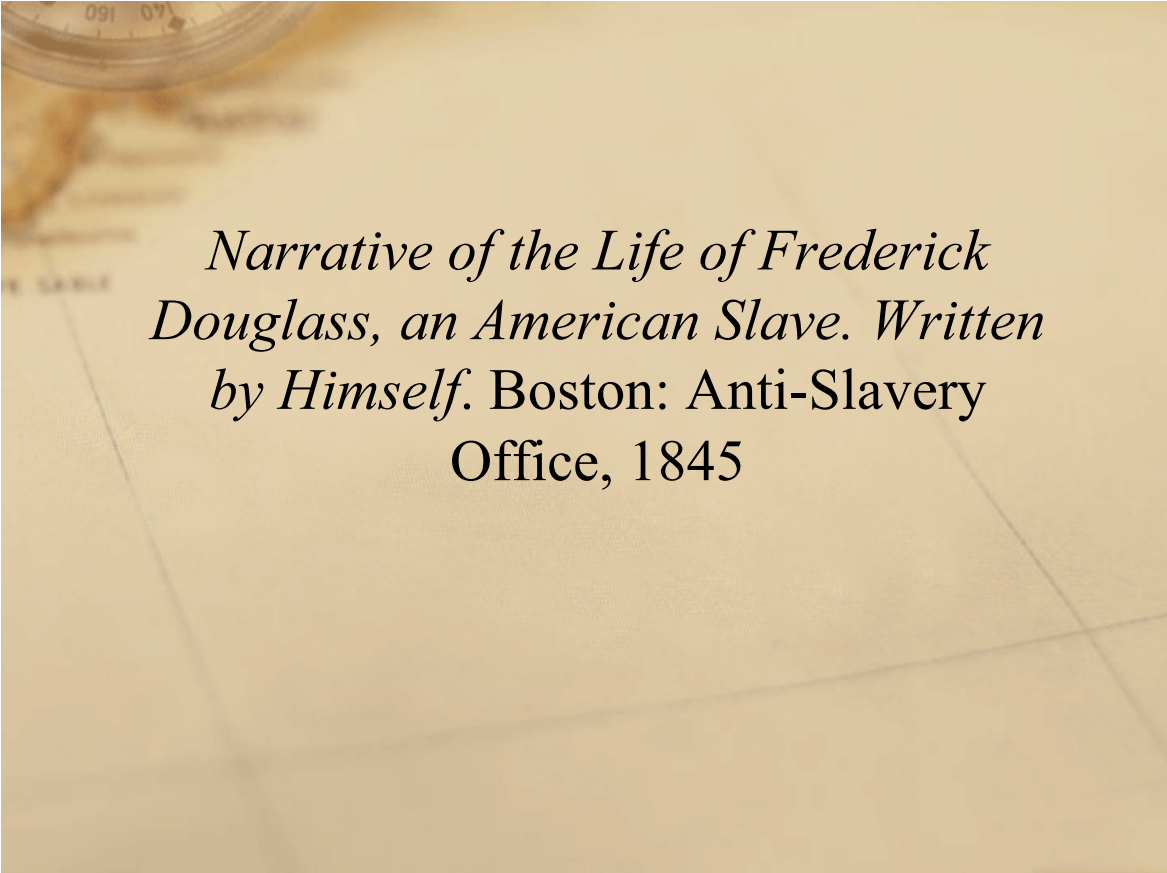
~ Natisi Coates

A blue spiral-bound notebook with silver rings at the top. The text is written in white on the notebook's surface.

Motivation to Read and the
Importance of Finding the "Just
Right" Book:

There are many resources

A Handful of Examples . . .

A close-up of an antique map with a compass rose in the upper left corner. The map is aged and yellowed, with faint lines and text visible.

*Narrative of the Life of Frederick
Douglass, an American Slave. Written
by Himself.* Boston: Anti-Slavery
Office, 1845



Sandra Cisneros, *Eleven*

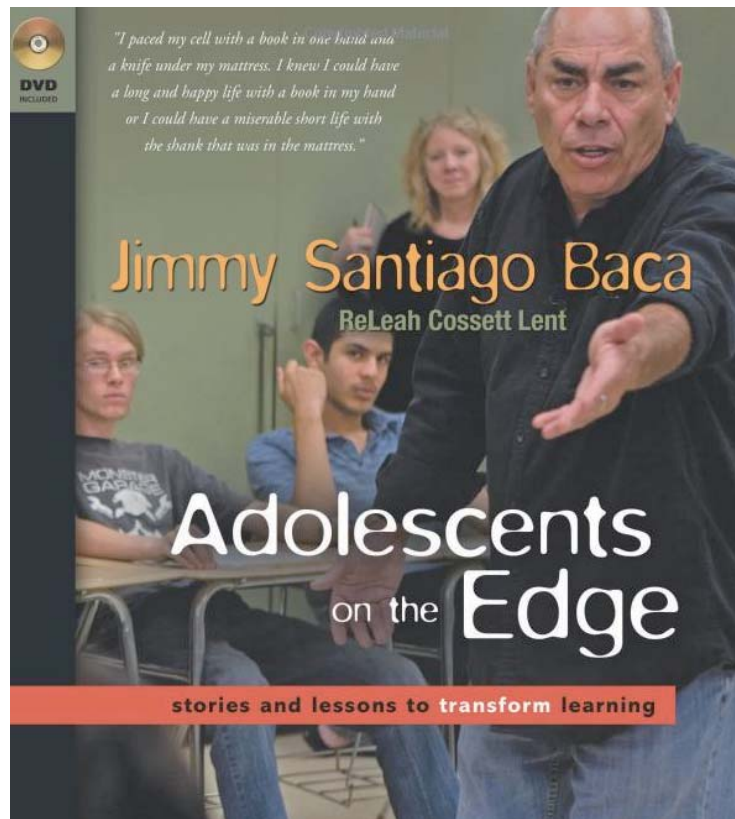
What they don't understand about birthdays and what they never tell you is that when you're eleven, you're also ten, and nine, and eight, and seven, and six, and five, and four, and three, and two, and one. And when you wake up on your eleventh birthday you expect to feel eleven, but you don't. You open your eyes and everything's just like yesterday, only it's today. And you don't feel eleven at all. You feel like you're still ten. And you are — underneath the year that makes you eleven.

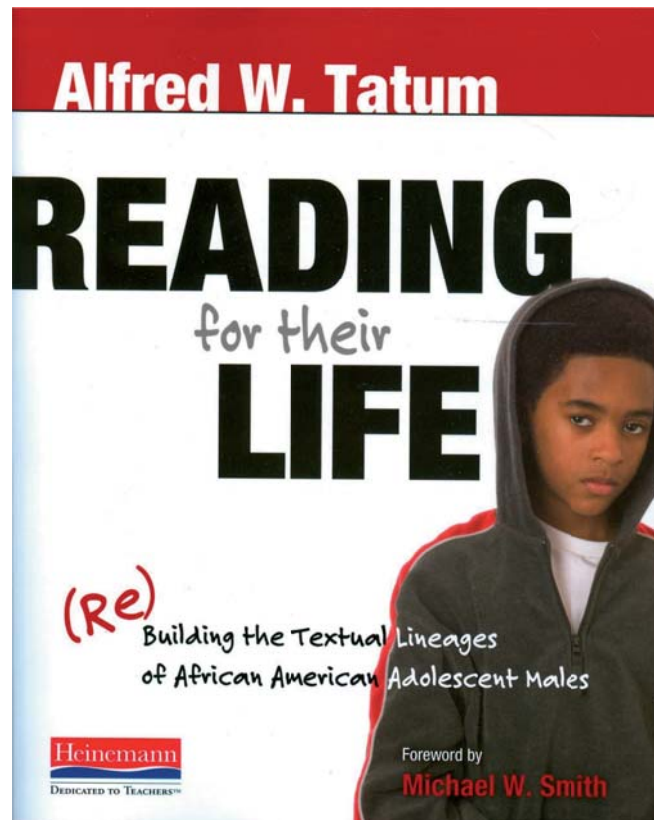
Like some days you might say something stupid, and that's the part of you that's still ten. Or maybe some days you might need to sit on your mama's lap because you're scared, and that's the part of you that's five.

And maybe one day when you're all grown up maybe you will need to cry like if you're three, and that's okay. That's what I tell Mama when she's sad and needs to cry. Maybe she's feeling three.

Because the way you grow old is kind of like an onion or like the rings inside a tree trunk or like my little wooden dolls that fit one inside the other, each year inside the next one. That's how being eleven years old is.

You don't feel eleven. Not right away. It takes a few days, weeks even, sometimes even months before you say Eleven when they ask you. And you don't feel smart eleven, not until you're almost twelve. That's the way it is.





*Narrative of the Life of Frederick
Douglass, an American Slave. Written
by Himself.* Boston: Anti-Slavery
Office, 1845



Sharon Flake

<http://www.sharongflake.com/>

Sandra Sisneros

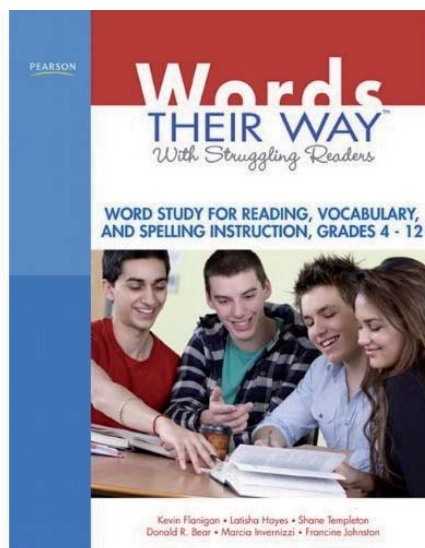
www.sandracisneros.com/

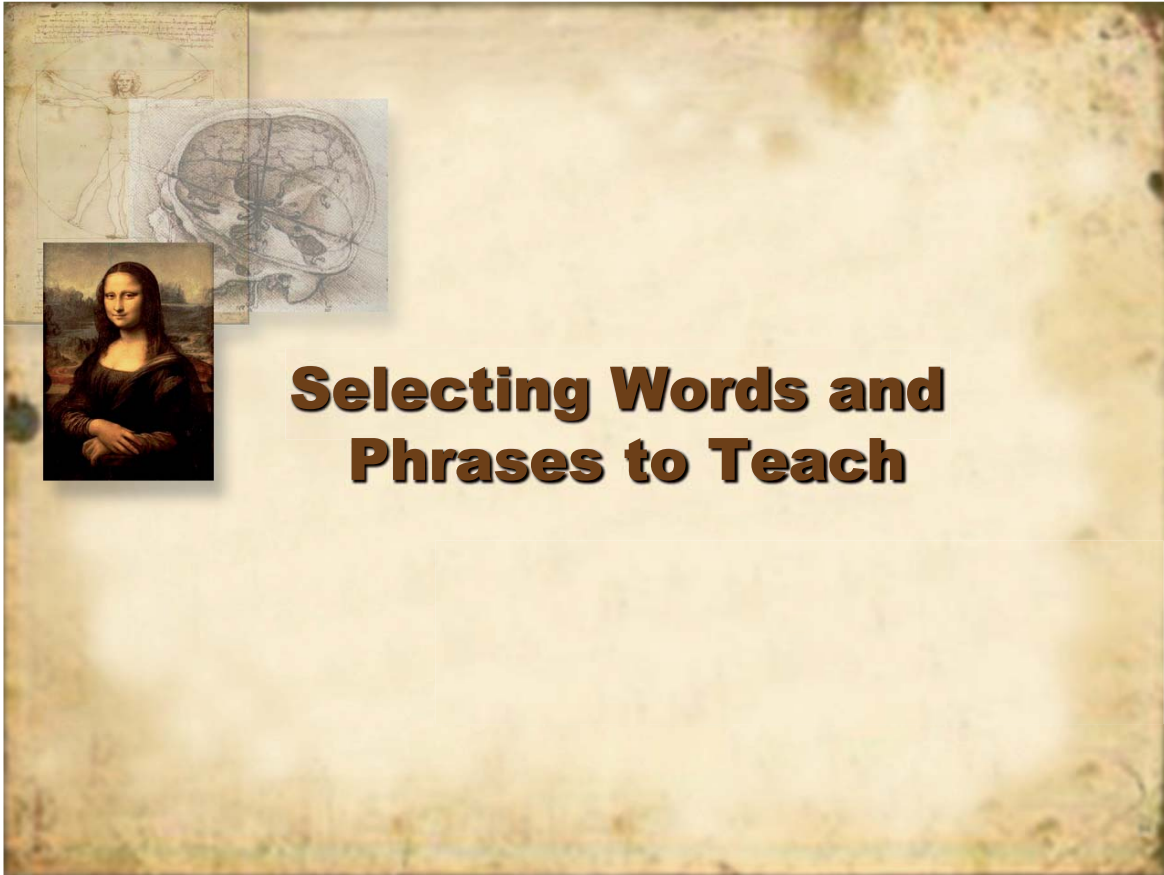
Bluford Series (\$1 per book)

<http://www.townsendpress.com/product/97.aspx>

Words Their Way with Struggling Readers:
Word Study for Reading, Vocabulary, and Spelling Instruction
Grades 4 – 12

Flanigan, Hayes, Templeton, Bear, Invernizzi, & Johnston, 2011





Two Types of Academic Vocabulary

General academic vocabulary

- used across content areas/ disciplines
- Examples: *structure, function, analyze*

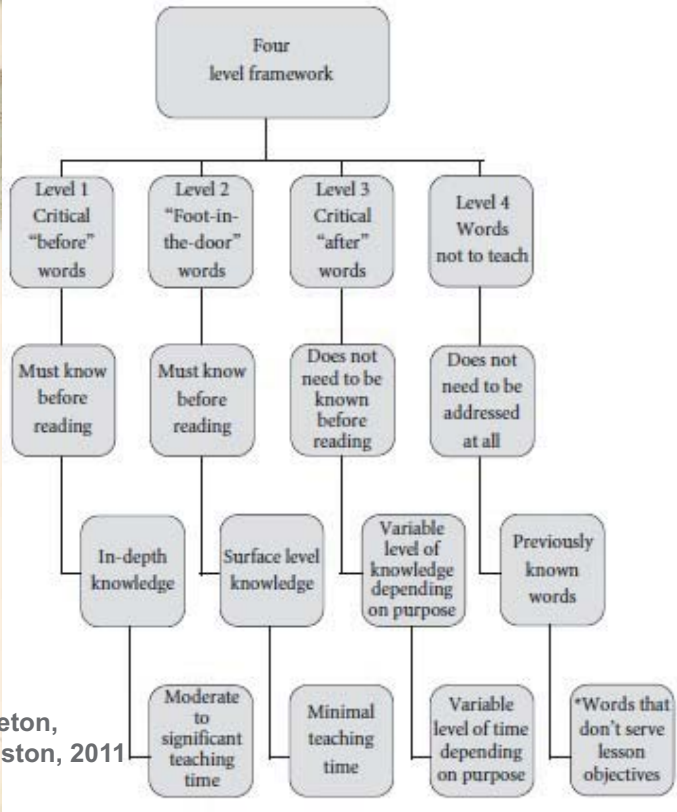
Domain-specific academic vocabulary

- unique to each content area/discipline, often have technical and/or abstract definitions
- Examples: *cytoplasm, rhombus, abolition, iambic pentameter*



For specific selections, topics, themes:

Flanigan, Hayes, Templeton, Bear, Invernizzi, & Johnston, 2011



Phrase Sort Chart

Adding/ Comparing	Contrasting	Summarizing
also	although	all in all
and	and yet	altogether
besides	but at the same time	to summarize
equally important	despite that	finally
finally	even though	in brief
furthermore	for all that	in conclusion
in addition	however	in other words
moreover	in contrast	in particular
next	in spite of	in short
second	instead	in simpler terms
still	nevertheless	in summary
too	notwithstanding	on the whole
in the same way	on the contrary	that is
likewise	on the other hand	therefore
similarly	regardless	to put it differently



Vocabulary about the Vocabulary...

General Academic =

Tier II words

“Mortar” words/phrases



Domain-Specific Vocabulary =

Tier III words =

“Brick” Words =

“Disciplinary” Vocabulary

4th – 6th Grade Content from *Time for Kids*



The Great Barrier Reef borders the 74 islands that make up Whitsunday Island, in Queensland, Australia. The reef, which stretches over 2,000 kilometers, protects the islands from ocean swells.



Here on the Great Barrier Reef, in Queensland, Australia, orange basslets and green puller fish feed on plankton. Basslets are tiny fish, no longer than 2-4 inches, with vibrant colors. Green pullers, also known as green chromis, are a type of damselfish.

<http://www.timeforkids.com/TFK/kids/specials/articles/0,28285,1984921,00.html>

Word Level = **General academic** and **domain-specific** vocabulary

The **Great Barrier Reef** **borders** the 74 islands that make up **Whitsunday Island**, in **Queensland, Australia**. The reef, which **stretches** over 2,000 **kilometers**, **protects** the islands from **ocean swells**.

Here on the **Great Barrier Reef**, in **Queensland, Australia**, **orange basslets** and **green puller fish** feed on **plankton**. **Basslets** are tiny fish, no longer than 2-4 **inches**, with **vibrant** colors. **Green pullers**, also known as **green chromis**, are a **type** of **damselfish**.

<http://www.timeforkids.com/TFK/kids/specials/articles/0,28285,1984921,00.html>

memnants

The chipped or broken "M&M's" at the bottom of the bag

rovalert

The system whereby one dog can quickly establish an entire neighborhood network of barking

disconfect

To sterilize the piece of candy you dropped on the floor by blowing on it, somehow assuming this will "remove" all the germs



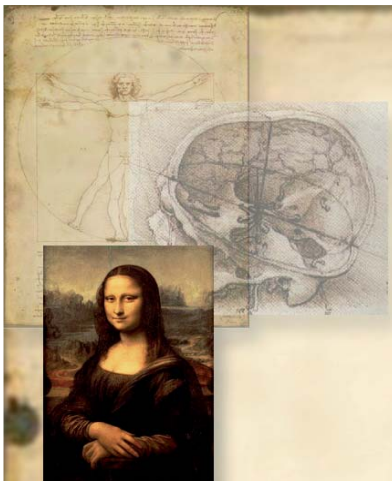
**Teaching *Generatively*
with Greek and Latin
Roots and Affixes**

What percent of English vocabulary words are Latin or Greek derived?

- Approximately 70%

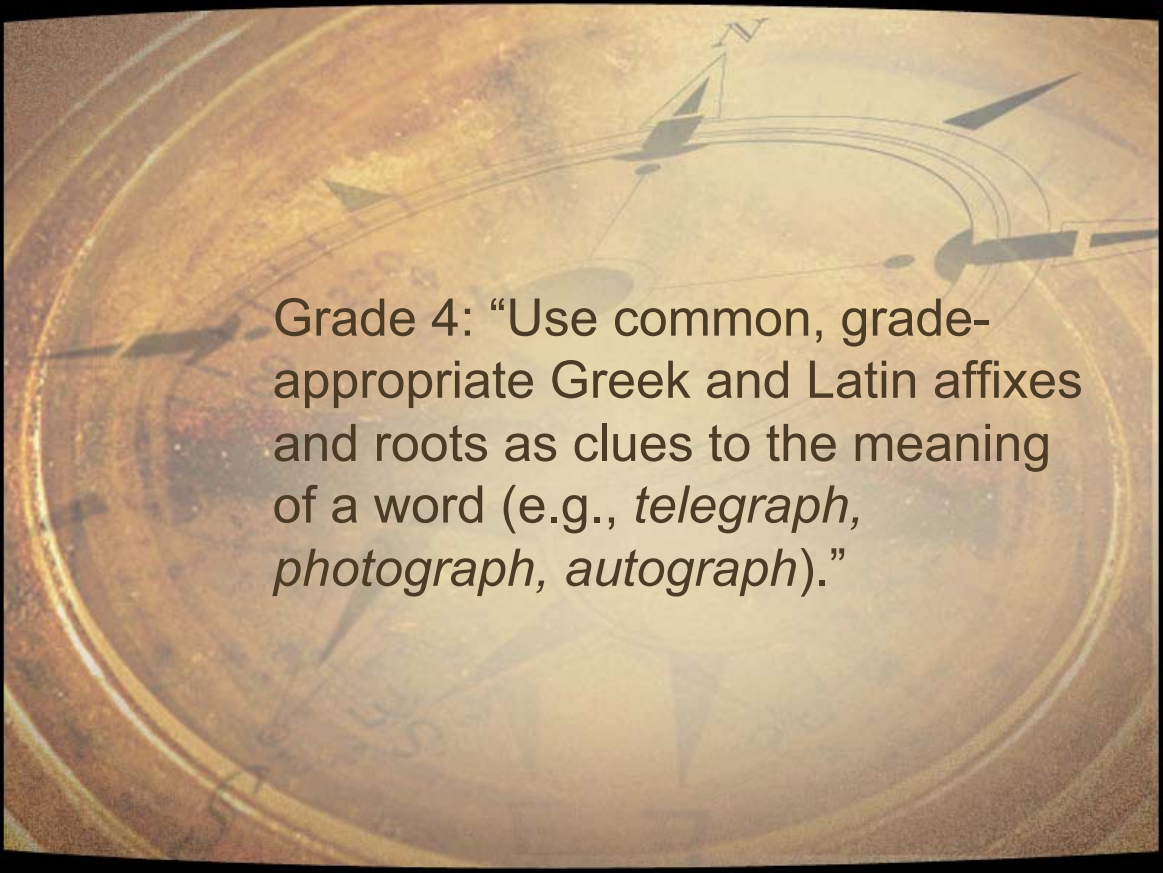
What percent of upper-level English vocabulary words (middle and high school, science, law, medicine) are Latin or Greek derived?

- Over 90%



Morphology

Knowledge of the processes of word formation in English - how prefixes, suffixes, base words, and Greek and Latin word roots combine - is the engine that will *generate* your students' learning about thousands of words (Templeton, 2004).



Grade 4: “Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word (e.g., *telegraph*, *photograph*, *autograph*).”

*“When you learn one word,
you learn ten.”*

courage

courageous

courageously

discourage

discouragingly

discourageable

encourage

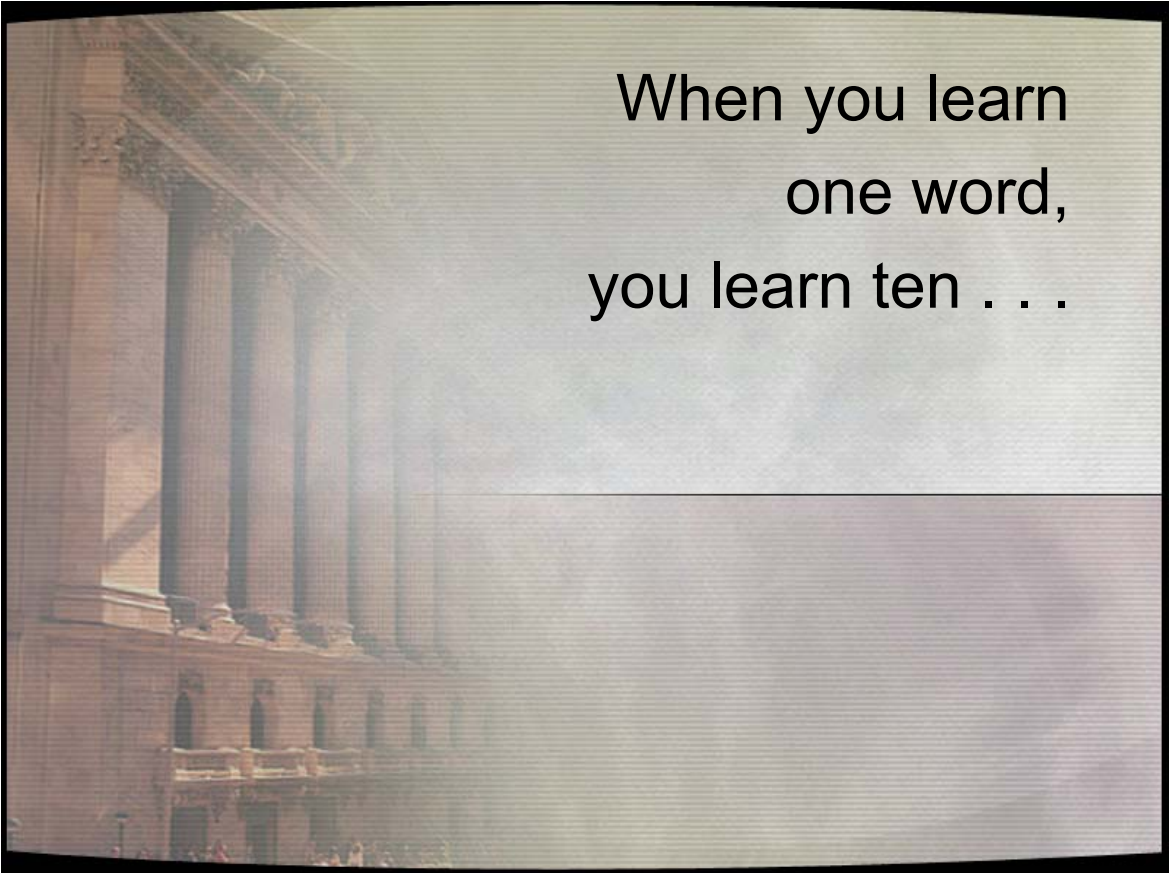
encouragement

encouragingly

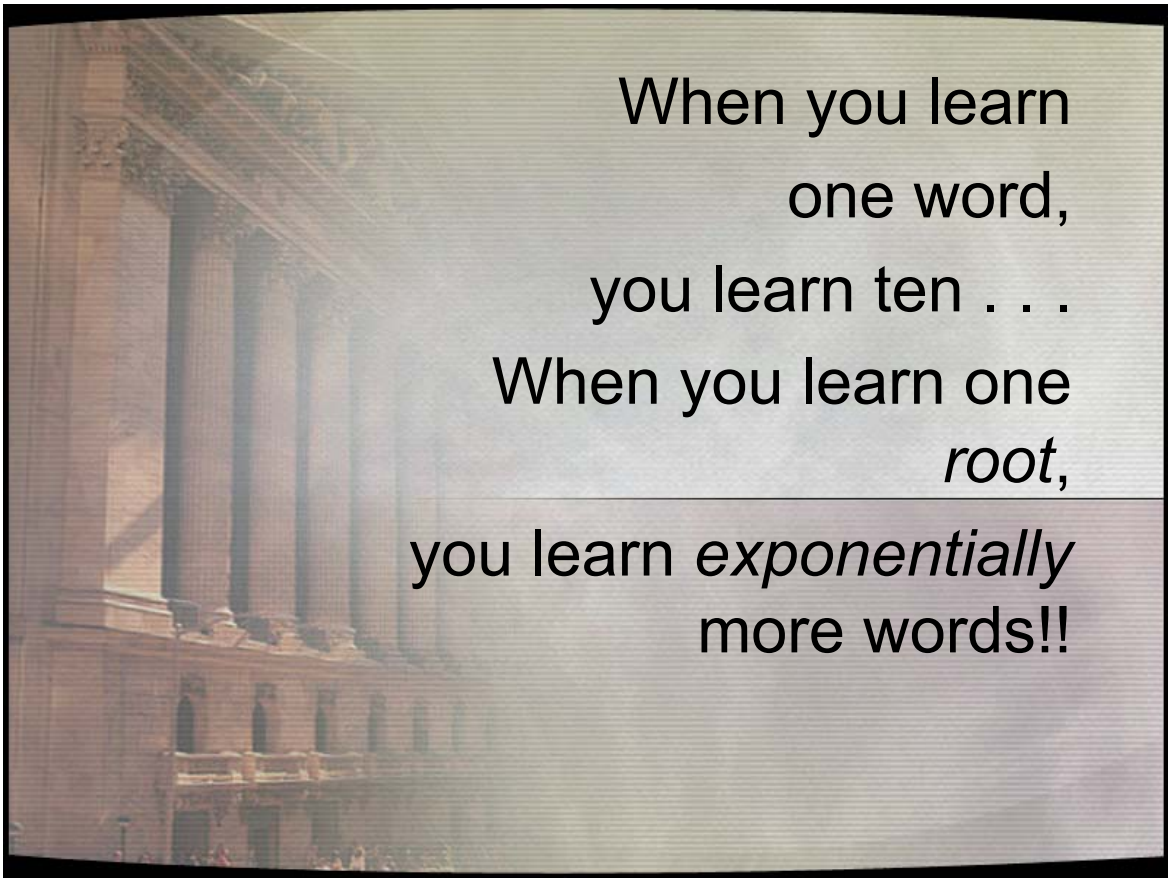
unencouragingly

etc.

"In general, students are not making associations between such words as *reduce* and *reduction*...74 percent of fourth-graders know *pretend*, but *pretense*, the noun form of *pretend*, is not commonly known until the twelfth grade" (Dale, O'Rourke, & Bamman, 1971, p. 172)

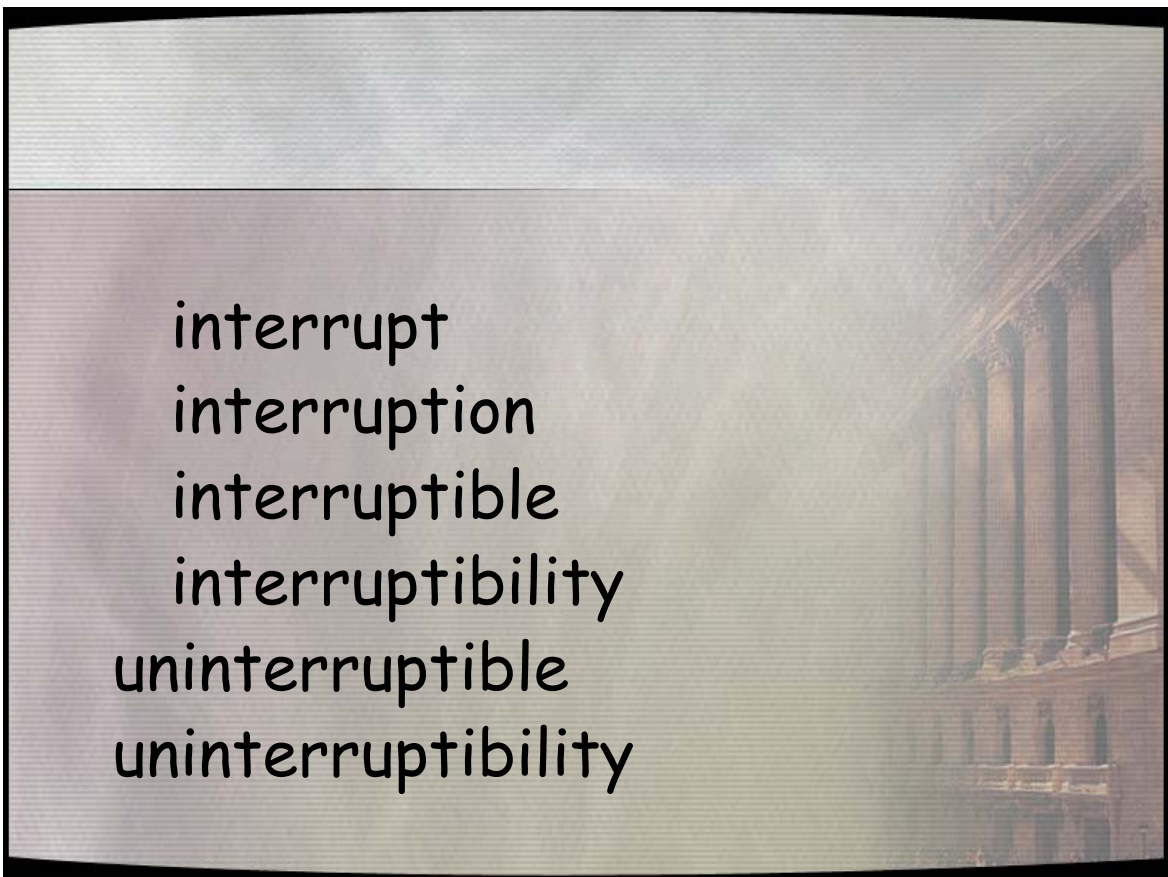


When you learn
one word,
you learn ten . . .

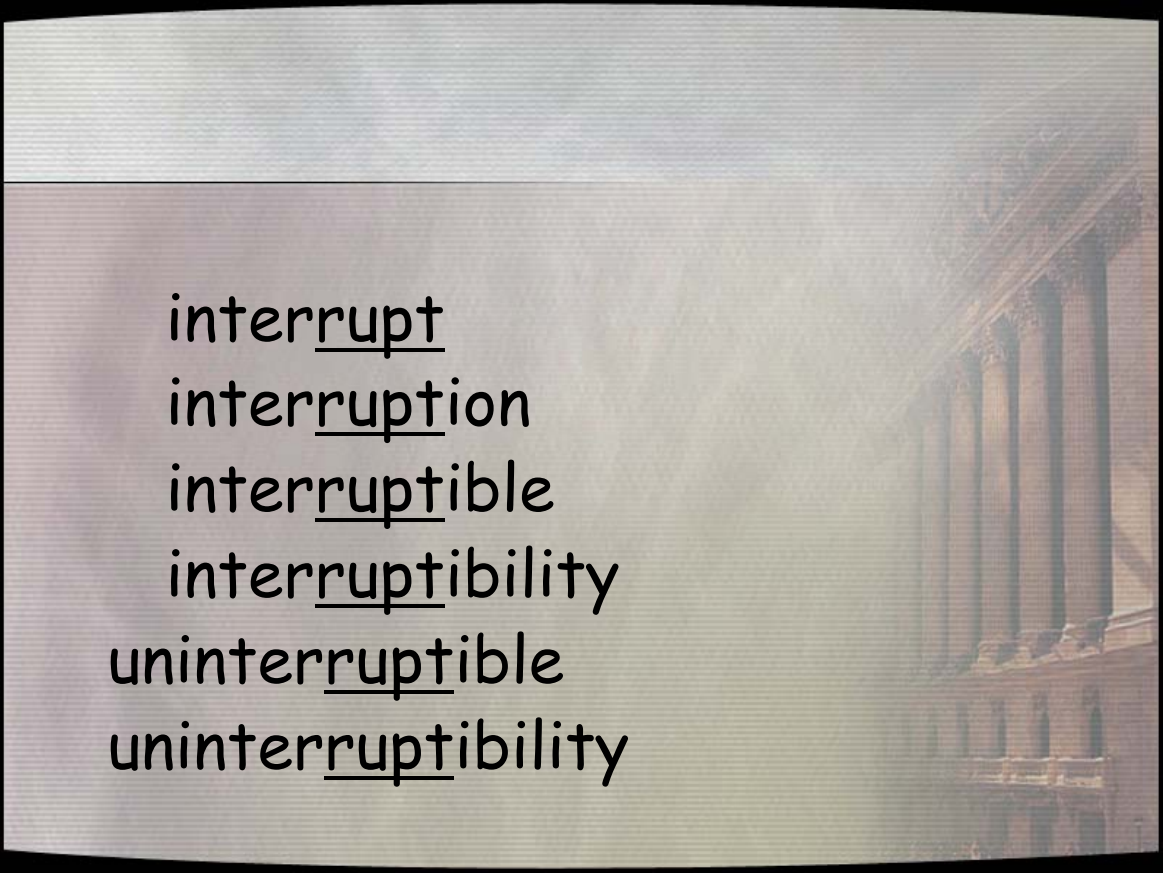


When you learn
one word,
you learn ten . . .

When you learn one
root,
you learn *exponentially*
more words!!



interrupt
interruption
interruptible
interruptibility
uninterruptible
uninterruptibility



interrupt
interruption
interruptible
interruptibility
uninterruptible
uninterruptibility



-rupt-

- | | | |
|--------------------|----------------------|---------------------|
| 1. abrupt | 26. disrupting | 51. interrupts |
| 2. abruption | 27. disruption | 52. irrupt |
| 3. abruptly | 28. disruptive | 53. irruption |
| 4. abruptness | 29. disruptively | 54. irruptive |
| 5. bankrupt | 30. disrupture | 55. prruption |
| 6. bankruptcies | 31. erupt | 56. ruptiliocarbon |
| 7. bankrupter | 32. erupting | 57. ruption |
| 8. bankrupt | 33. eruption | 58. ruptuary |
| 9. bankrupt | 34. erupt | 59. rupture |
| 10. corrupt | 35. erupt | 60. ruptured |
| 11. corrupted | 36. incorrupted | |
| 12. corrupter | 37. incorruptibility | rupture |
| 13. corruptibility | 38. incorruptible | 64. uncorrupted |
| 14. corruptible | 39. incorruptibly | 65. uncorruptible |
| 15. corrupting | 40. incruption | 66. uninterrupted |
| 16. corruption | 41. incorruptive | 67. uninterruptedly |
| 17. corruptionist | 42. incorruptly | |
| 18. corruptive | 43. interrupt | |
| 19. corruptless | 44. interrupt | |
| 20. disrupt | 45. interrupted | |
| 21. disrupt | 46. interruptedly | |
| 22. corrupress | 47. interrupter | |
| 23. disruption | 48. interrupting | |
| 24. disrupt | 49. interruption | |

inspect

-spect- = “to look”

in - = “into”

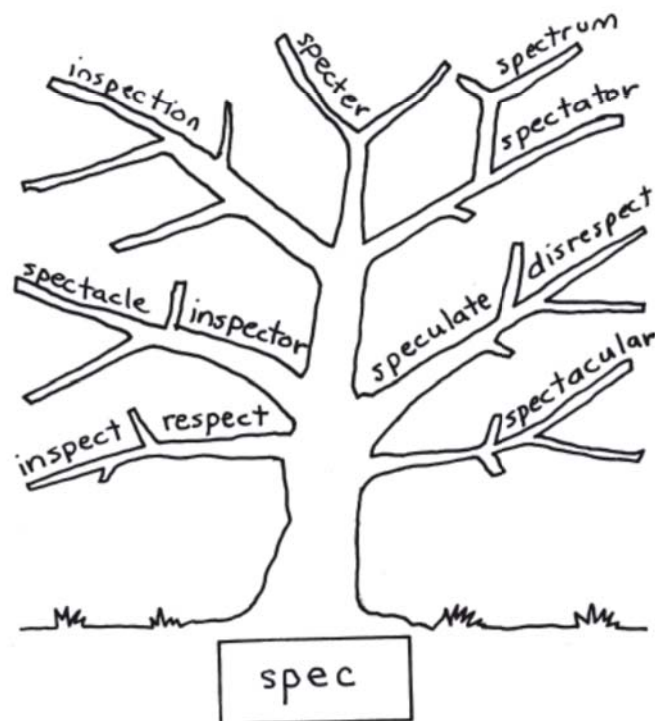
“to look into”



inspection

the act or result (-ion)
of looking (spect)
into (in-)

“the act or result of looking into”



Greek Word Roots

<u>cycl</u> ist	tele <u>gram</u>	<u>aster</u> oid
motorcycle	gram <u>mar</u>	asterisk
recycle	pro <u>gram</u>	aster
tricycle	di <u>gram</u>	disaster
unicycle	ana <u>gram</u>	astrology
bicycle		astronomy
encyclopedia		astronomical

Latin Word Roots

in <u>spect</u>	<u>port</u> er	<u>tract</u> or
spectator	reporter	retract
suspect	export	traction
perspective	portfolio	detract
inspection	transport	subtract
aspect	support	extract
introspection	seaport	attraction

SUFFIX SORT

<i>-cracy</i>	<i>-crat</i>	<i>-arch</i>	<i>-archy</i>

SUFFIX SORT

<i>-cracy</i>	<i>-crat</i>	<i>-arch</i>	<i>-archy</i>
autocracy	autocrat	monarch	monarchy
democracy	democrat	oligarch	oligarchy
plutocracy	plutocrat	matriarch	matriarchy
aristocracy	aristocrat	patriarch	patriarchy
bureaucracy	bureaucrat	anarchist(?)	anarchy
technocracy	technocrat		

WORDS THEIR WAY™

second edition

Word Sorts for Derivational Relations Spellers



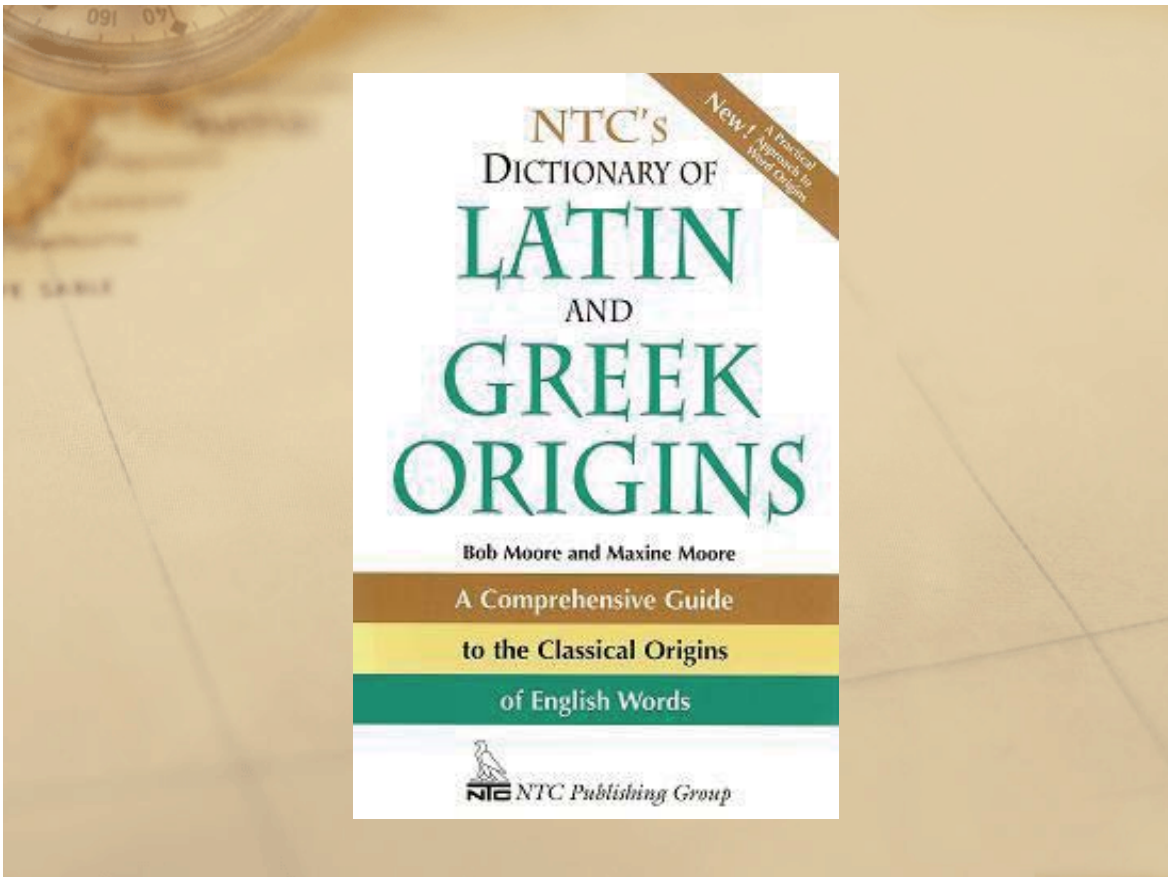
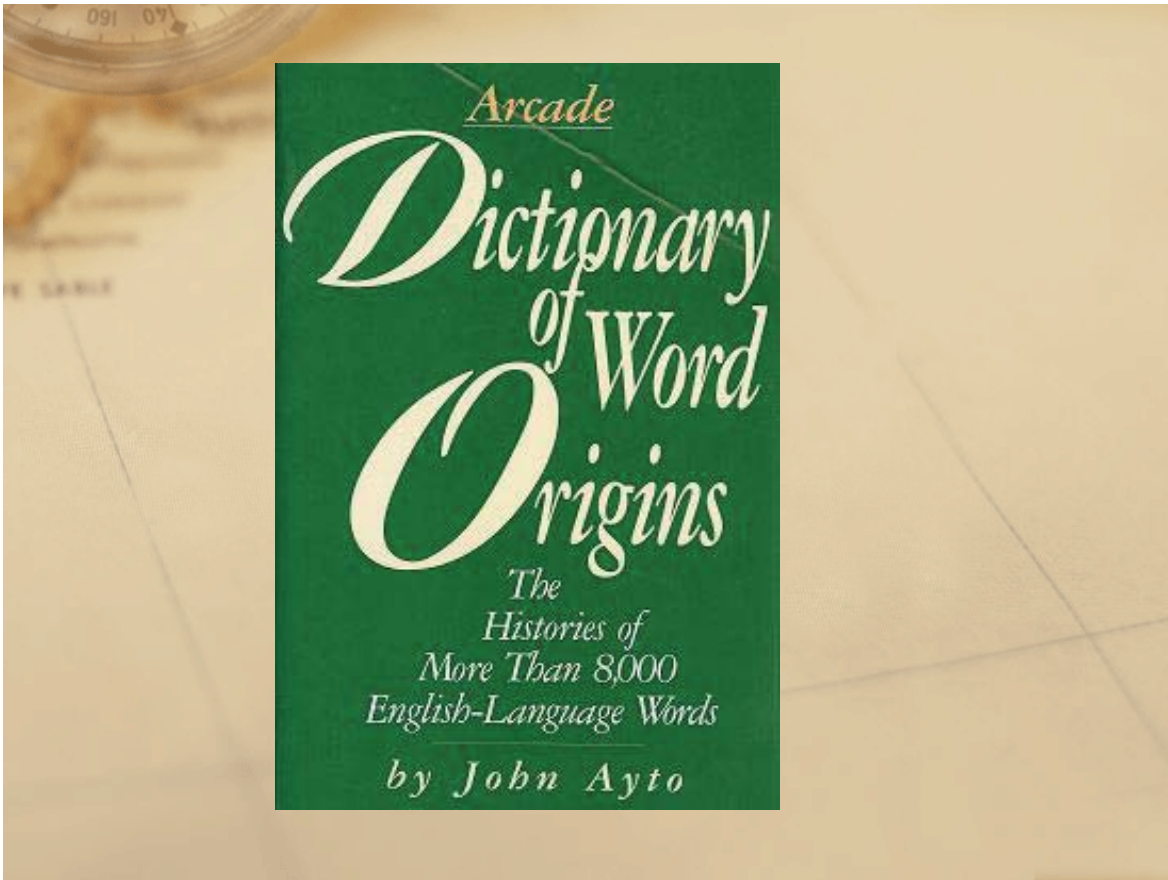
Shane Templeton • Francine Johnston • Donald R. Bear • Marcia Invernizzi

Oxford
School
Dictionary
OF
Word Origins

THE **CURIOUS** twists & turns of
the **COOL** and **WEIRD** words we use

JOHN AYTO







▶ Web Resources about Words

www.onelook.com A comprehensive dictionary website. Most of the major, well-respected dictionaries are available. Onelook.com also has excellent search capabilities that allow you to search for words that contain specific roots and affixes, spelling patterns, words as they occur in specific phrases, and words that relate to a particular concept.

www.americancorpus.org The Corpus of American English (Davies, 2008) is an invaluable online resource for locating related words in English. It requires that you register, but registration is free. It may be used to search for the occurrence of words in different contexts—for example, spoken language, magazines, fiction, and academic texts.

www.etymonline.com Very useful for exploring word histories, this site includes much of the etymological information you would find in the Oxford English Dictionary.

http://dictionary.reference.com/languages This site accesses the Kernerman English Multilingual Dictionary, which provides, for any word in English, words in a number of other languages that have the same or similar meaning. It is an excellent resource for finding cognates.

www.wordsmith.org You may subscribe for free and receive a new word in your inbox every day. Words follow a theme each week, and the categories of words discussed in this chapter—for example, eponyms—will be represented.

www.verbivore.com/rlink.htm An especially good site for wordplay, with innumerable links to excellent and informative language and word sites.

www.visualthesaurus.com One of the most comprehensive interactive sites on the Web. There is an annual subscription fee, but the benefits are more than worth the modest price.

www.visuwords.com Similar in format to visualthesaurus.com, this site offers a more abbreviated web display. One significant feature is that, at the time of this writing, the site is free.

Source: Adapted from Templeton et al., 2010.

circumspect ?

circumspect

looking (spect)
around (circum)

You "look around" and are careful
because you're thinking about possible
results of what you might do

trox horridus



trox horridus

“horrid gnawer”

Dermatophagoides

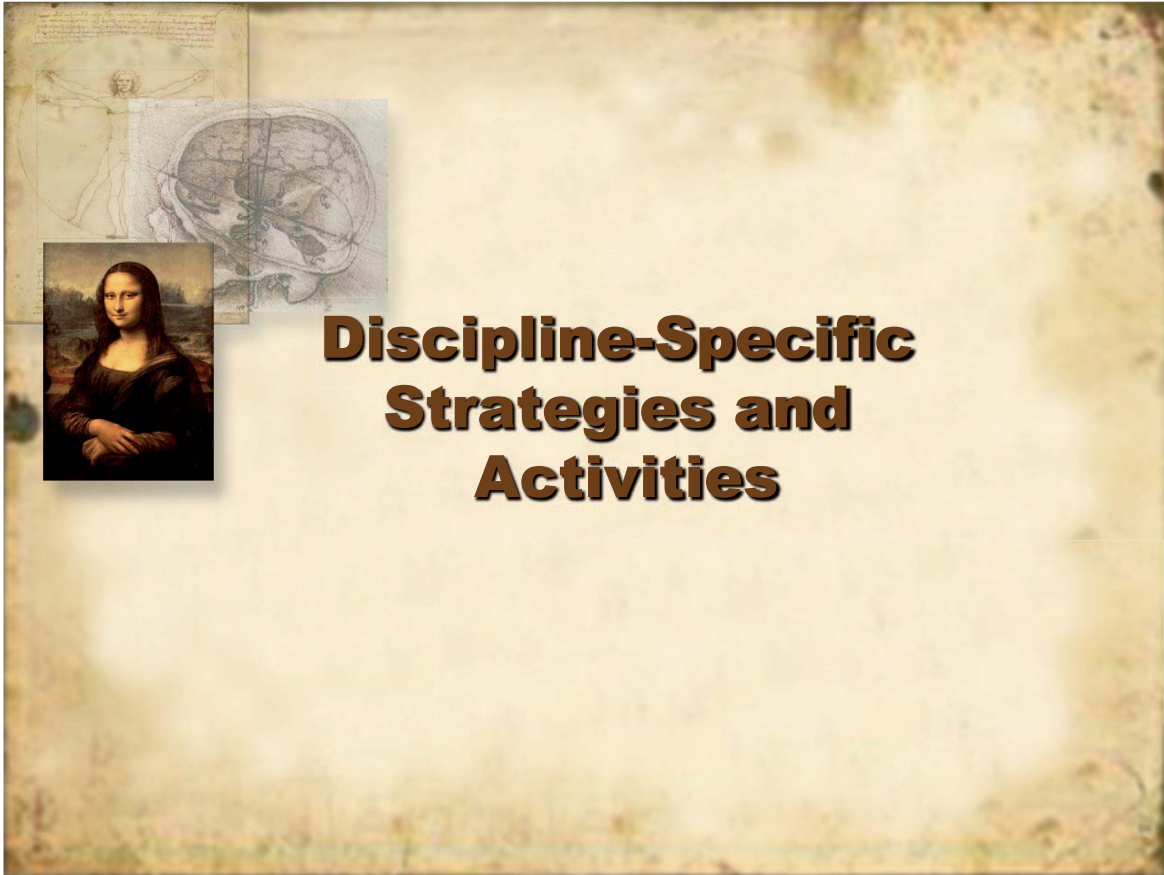




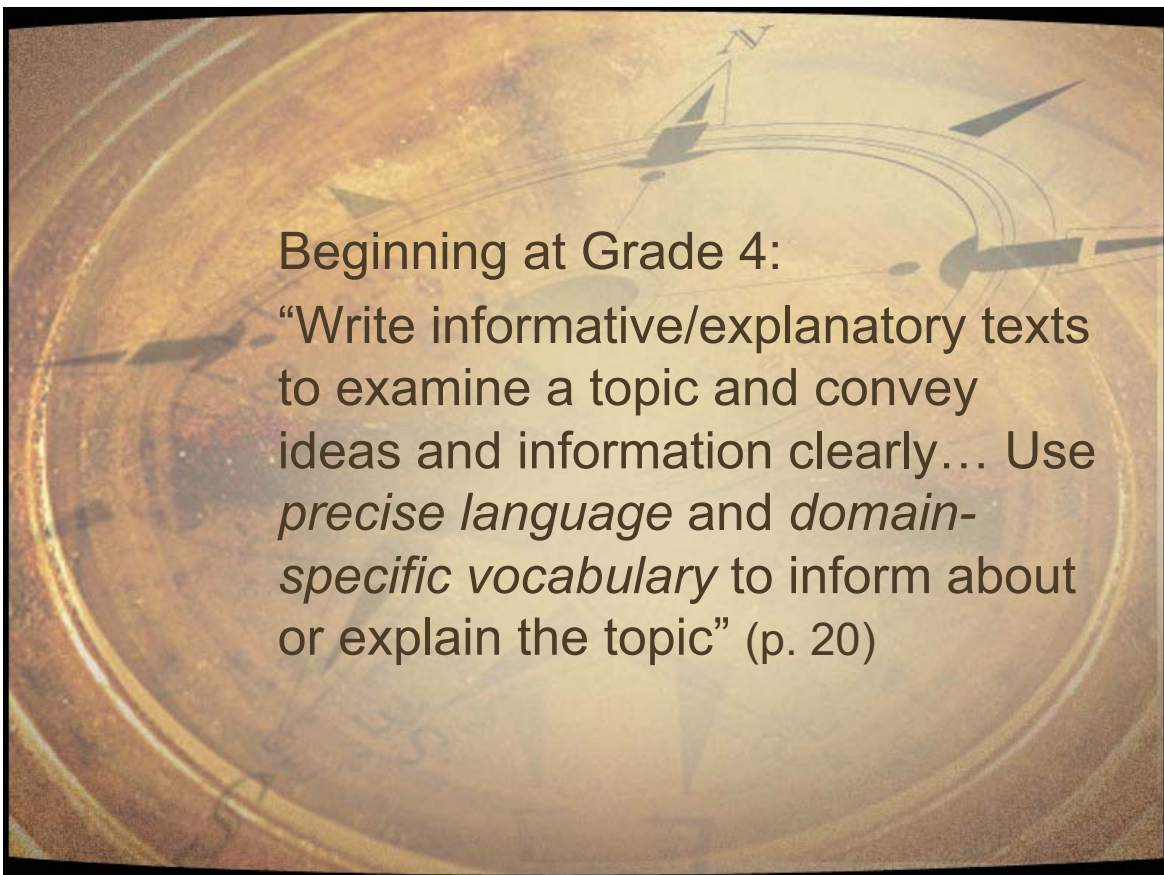
Dermatophagoides =

“eating skin”

- ✘ *The concept that the word represents, and the spelling of the word itself, work together to deepen students' understanding.*



Discipline-Specific Strategies and Activities



Beginning at Grade 4:

“Write informative/explanatory texts to examine a topic and convey ideas and information clearly... Use *precise language* and *domain-specific vocabulary* to inform about or explain the topic” (p. 20)

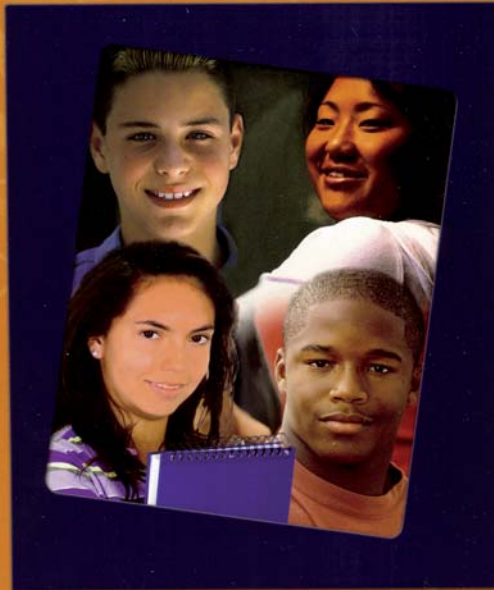
Bringing Words to Life

Robust
Vocabulary
Instruction

Isabel L. Beck, Margaret G. McKeown,
and Linda Kucan

Vocabulary Their Way™

Word Study with Middle and Secondary Students



Shane Templeton • Donald R. Bear • Marcia Invernizzi • Francine Johnston

Figure 8.1. Vocabulary Self-Assessment for Weather

Weather Vocabulary Self-Assessment

Student: _____

Dates:

(X) September 18

(O) _____

(✓) _____

Knowledge Rating → Vocabulary ↓	Never heard of it	Heard it	Have some ideas	Know it well
<i>meteorologist</i>				x <i>weatherman meteor ologist</i>
<i>anemometer</i>			x <i>measure, meter</i>	
<i>doppler</i>		x		
<i>isobar</i>	x			
<i>hemisphere</i>				x <i>half earth hemi sphere</i>
<i>radiosonde</i>	x		<i>radio</i>	
<i>precipitation</i>				x <i>rain, snow, etc.</i>
<i>front</i>			x <i>not back?</i>	

Effective Vocabulary Activities

Word or Concept maps

Venn diagrams

4-Square Diagrams

Webs

Semantic feature analyses

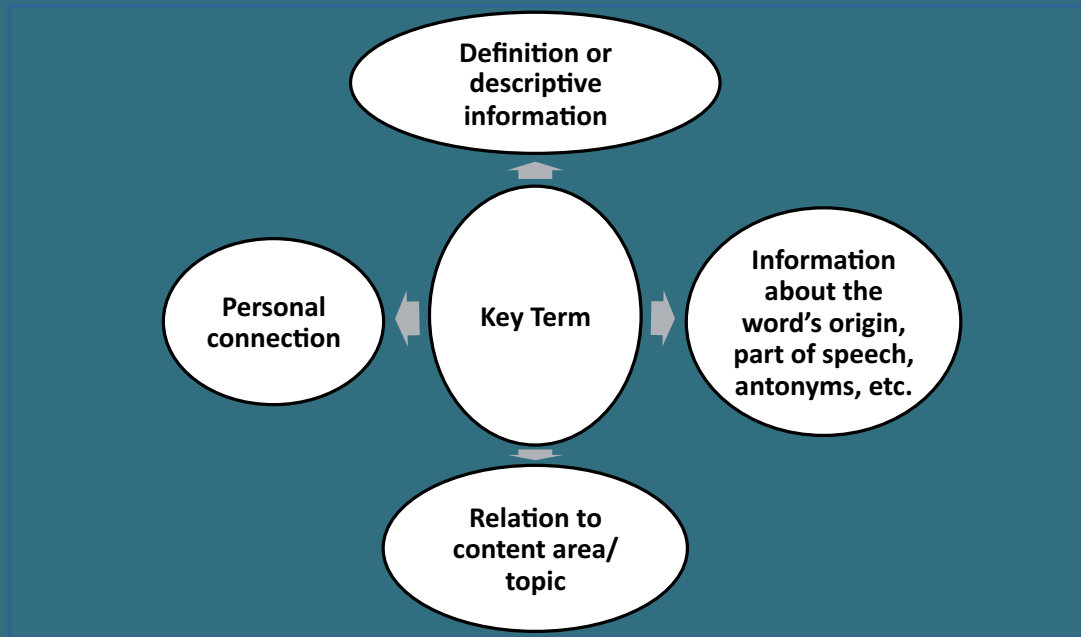
Antonym/Synonym Lines

Concept Sorts

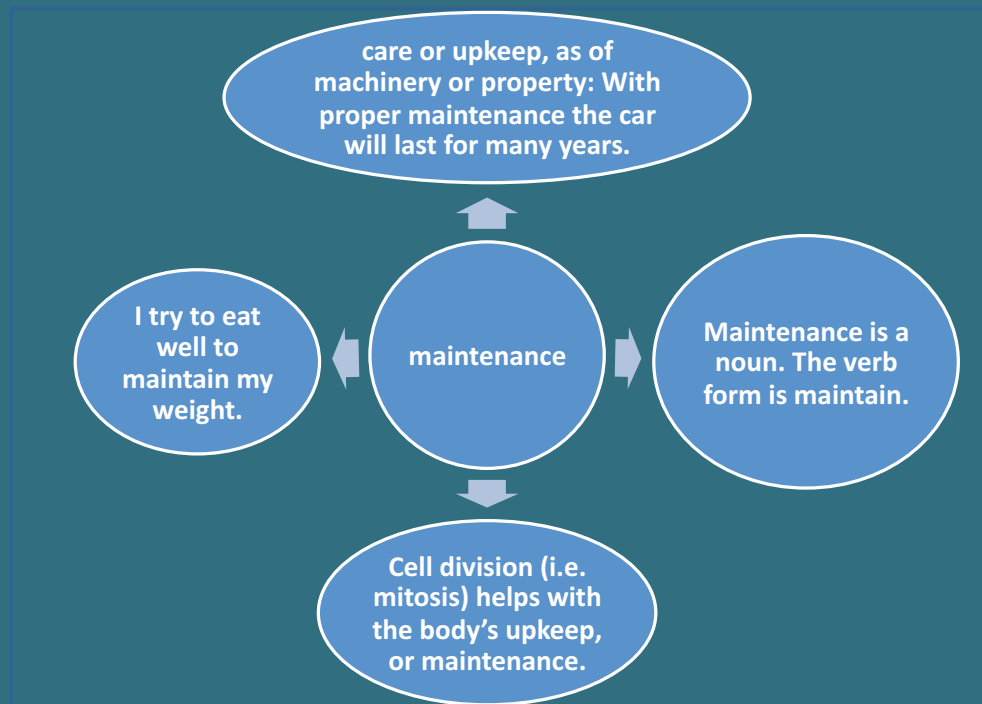
Questions

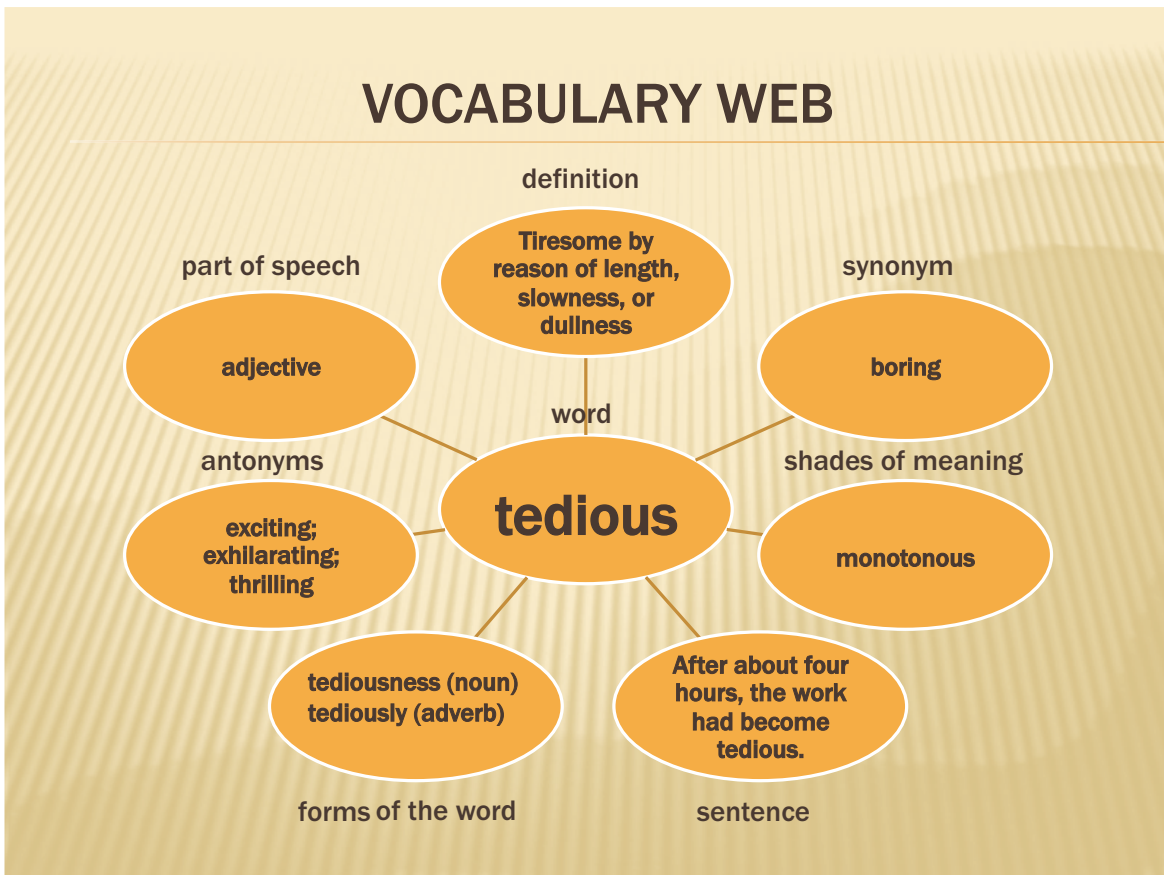
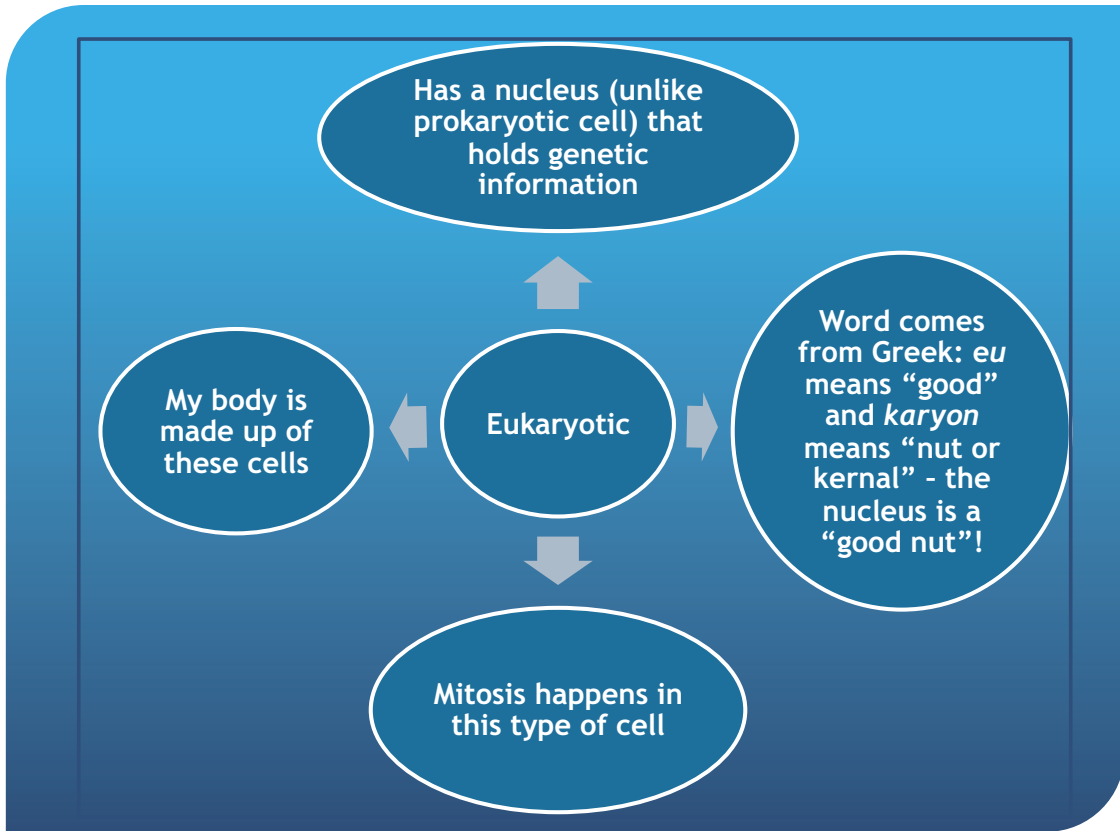
Vocab-O-Grams

Concept Maps

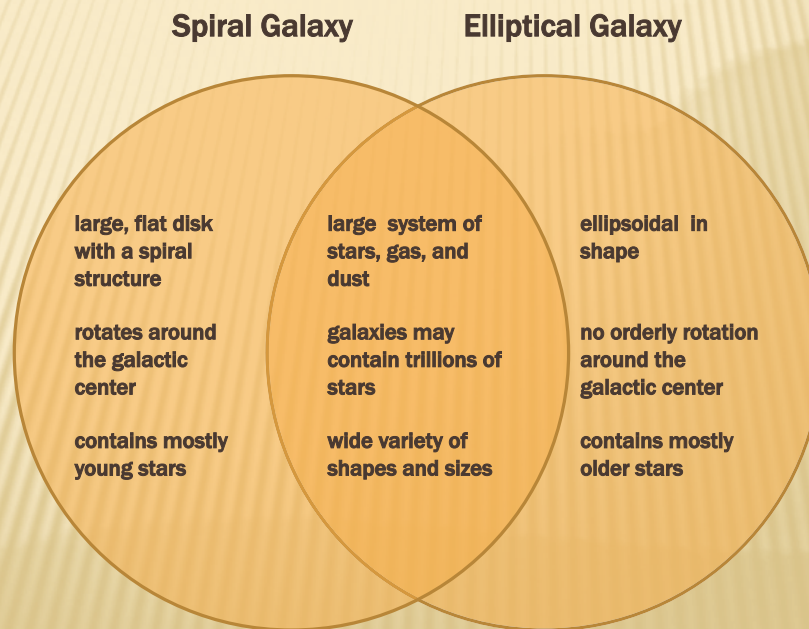


Concept Map for General Academic Word





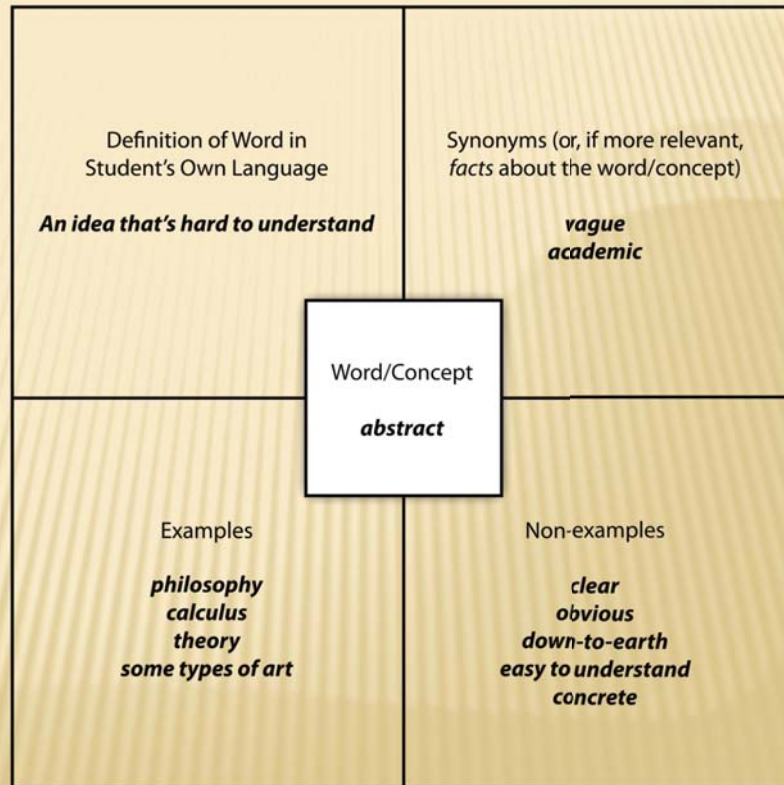
VENN DIAGRAM-GALAXIES



COMPARE/CONTRAST TABLE

Spiral Galaxies	FEATURE BEING CONTRASTED	Elliptical Galaxies
large, flat disk with a spiral structure	SHAPE	ellipsoidal in shape
rotates around the galactic center	MOVEMENT	no orderly rotation around the galactic center
mostly young stars	AGE OF STARS	Mostly older stars
FEATURES IN COMMON		
large system of stars, gas, and dust		
galaxies may contain trillions of stars		
wide variety of shapes and sizes		

“4-Square”



© 2010 Templeton, Bear, Invernizzi, & Johnston. *Vocabulary Their Way*. Pearson/Allyn & Bacon.

Antonym/Continuum Line

opaque

visible

translucent

clear

murky

foggy

opaque murky foggy translucent visible clear



Grade 7

- c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., *refined*, *respectful*, *polite*, *diplomatic*, *condescending*).

CONCEPT SORTS/CATEGORIZATION

Elements

gold
pure
one kind of atom
isotopes
molecules H₂
hydrogen
oxygen

Compounds

different atoms
molecules H₂O
water
covalent bonds
ionic bonds
metallic bonds
salt

Mixtures/ Solutions

seawater
soil
air
parts retain identities
can be separated
made of elements and compounds
spices in a sauce or cake

cylinder

triangular prism

vertex

circle

face

symmetrical

Would you store water in a bottle shaped like a *cylinder* or a *circle*?

Would you rather play catch with a *sphere* or a *triangular prism*?

Which would be more dangerous - being poked by the *face* of a box or the *vertex* of a box?

Which one of these things might be *symmetrical* ?

Why or why not ?

A car?

A water bottle?

A tree?

After the teacher reads aloud the first chapter of *The Grapes of Wrath*:

VOCAB-O-GRAM <i>The Grapes of Wrath</i>	
Discuss what you know about each of the words. Think about how Steinbeck may use the words to represent <i>external</i> and <i>internal</i> conflict. The words may be used more than once. If there are words that your group is not sure about, list them as <i>Mystery Words</i> . Use the vocabulary words to make predictions about <i>The Grapes of Wrath</i> .	
Oklahoma dust bowl California banks tenant farmer pellagra truculent quest monster Hoovervilles disconsolate perplexed union 1930s migrant prodigal misfortune animosity tarpaulin contractor wrath paradox vigilante	
<i>Internal Conflict: Person vs. Self</i>	
<i>External Conflict: Person vs. Person</i>	
<i>External Conflict: Person vs. Society</i>	
<i>External Conflict: Person vs. Elements</i>	
What Questions Do You Have?	
Mystery Words	

Think Aloud Example

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Think Aloud Example

Ok, so we're talking about a process – that means it probably has a set of steps or phases.

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Think Aloud Example

“by which” – I’ve seen this phrase before – it’s going to tell me what happens in that process

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Think Aloud Example

I can do this phrase – the nucleus divides – that means that middle/important part of the cell splits in half

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Think Aloud Example

This must mean that this process, mitosis, usually happens in this type of organisms – eukaryotic . Let's check the word wall to remember that word.

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Think Aloud Example

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Producing, that means something is made. Ok, so in mitosis, those two halves of the nucleus each become their own new nucleus.

Think Aloud Example

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

This one is kind of easy – those two new nuclei (I remember that we say nucleus if we're talking about just 1 and nuclei if we're talking about more than 1) are the same genetically.

Think Aloud Example

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

Oh, and this means they are the same as each other and the original nucleus they came from.


Think Aloud Example

***Mitosis* is the process by which the nucleus divides in eukaryotic organisms, producing two new nuclei that are genetically identical to the nucleus of the parent cell.**

All right, so putting all this together, I would say that mitosis happens in eukaryotic organisms, and it involves a set of steps or phases. The nucleus in the first cell breaks in half to create two new nuclei that are the same as each other and as the original cell.



Etymology (Word Histories)



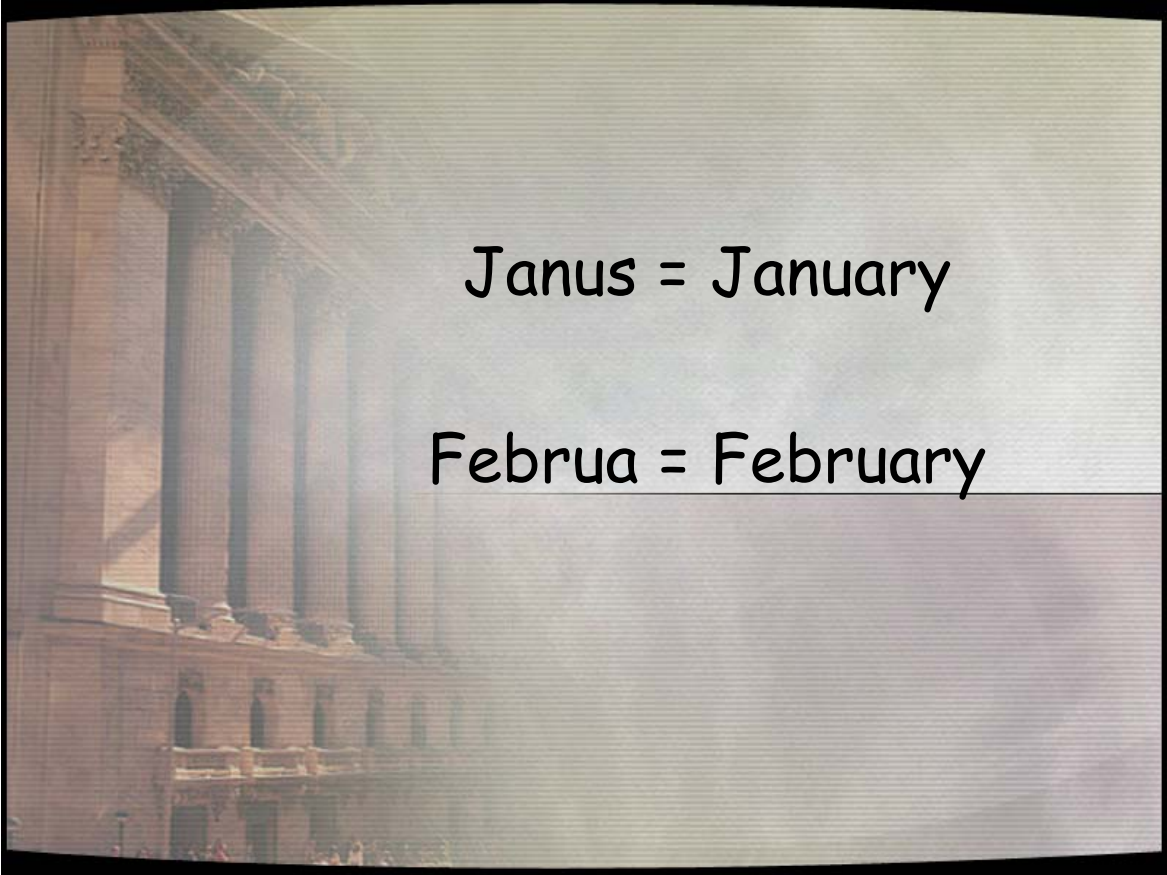
What about the
following months in the
calendar?

September

October

November

December



Janus = January

Februa = February




Quintilis

Sextilis



Quintilis
(Julius Caesar: July!)



Quintilis
(Julius Caesar: July!)

Sextilis
(Caesar Augustus: August!)



**“Deep” Eymology
here...**

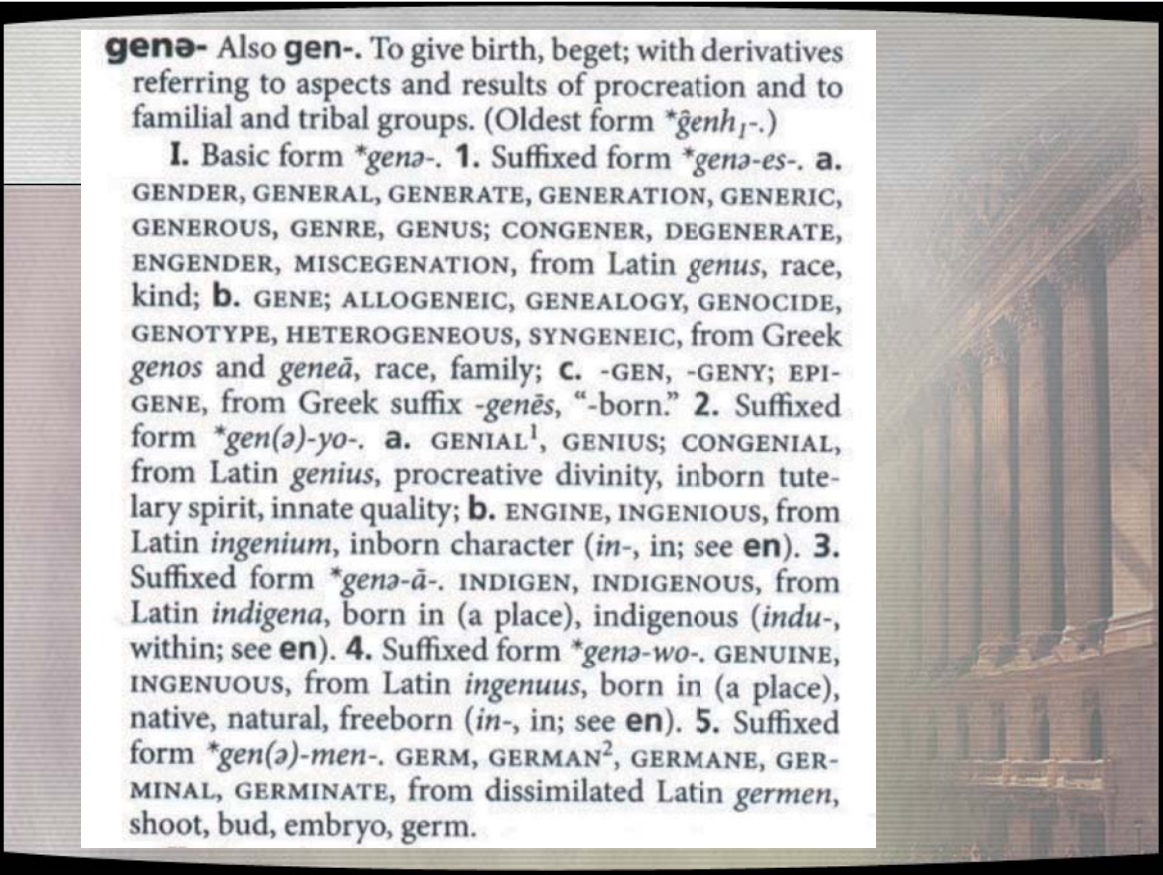


The
**AMERICAN
HERITAGE**

dictionary
of
**Indo-
European
Roots**

Revised and Edited by
CALVERT WATKINS


**THIRD
EDITION**



genə- Also **gen-**. To give birth, beget; with derivatives referring to aspects and results of procreation and to familial and tribal groups. (Oldest form **genh*₁-.)

I. Basic form **genə-*. **1.** Suffixed form **genə-es-*. **a.** GENDER, GENERAL, GENERATE, GENERATION, GENERIC, GENEROUS, GENRE, GENUS; CONGENER, DEGENERATE, ENGENDER, MISCEGENATION, from Latin *genus*, race, kind; **b.** GENE; ALLOGENEIC, GENEALOGY, GENOCIDE, GENOTYPE, HETEROGENEOUS, SYNGENEIC, from Greek *genos* and *geneā*, race, family; **c.** -GEN, -GENY; EPIGENE, from Greek suffix *-genēs*, “-born.” **2.** Suffixed form **gen(ə)-yo-*. **a.** GENIAL¹, GENIUS; CONGENIAL, from Latin *genius*, procreative divinity, inborn tutelary spirit, innate quality; **b.** ENGINE, INGENIOUS, from Latin *ingenium*, inborn character (*in-*, *in*; see **en**). **3.** Suffixed form **genə-ā-*. INDIGEN, INDIGENOUS, from Latin *indigena*, born in (a place), indigenous (*indu-*, *within*; see **en**). **4.** Suffixed form **genə-wo-*. GENUINE, INGENUOUS, from Latin *ingenuus*, born in (a place), native, natural, freeborn (*in-*, *in*; see **en**). **5.** Suffixed form **gen(ə)-men-*. GERM, GERMAN², GERMANE, GERMINAL, GERMINATE, from dissimilated Latin *germen*, shoot, bud, embryo, germ.



Thank You !!

Shane Templeton, Ph.D.
College of Education/299
University of Nevada, Reno
Reno, NV 89557
e-mail: wst@unr.edu

Available Monday Evening at
<http://shanetempleton.com>