



4th Grade Building Academic Vocabulary

Compiled by The Office of Education and Learning, Genesee Intermediate
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ACADEMIC VOCABULARY

Dear Educators,

In response to the Genesee County Superintendents' inquiry about modifying current efforts toward raising student achievement, the Genesee Intermediate School District (GISD) Office of Education and Learning is implementing the Building Academic Vocabulary Project.

This project is based on research by Dr. Robert Marzano (2005) and described in depth in his book *Building Academic Vocabulary*. In his book he says,

Teaching specific terms in a specific way is probably the strongest action a teacher can take to ensure that students have the academic background knowledge they need to understand the content they will encounter in school. When all the teachers in a school focus on the same academic vocabulary and teach it in the same way, the school has a powerful comprehensive approach. When all the teachers in a district embrace and use the approach, it becomes even more powerful.

Through his research, Marzano found that “one of the most crucial services that teachers can provide, particularly for students who do not come from academically advantaged backgrounds, is systematic instruction in important academic terms”. He developed a systematic, six step process for teaching vocabulary.

In *Building Academic Vocabulary* a list of 7,923 terms across 11 subject areas are offered as a starting point. This was one of two primary resources used in compiling the list of academic vocabulary for each grade level. The second primary resource was the State of Michigan Grade Level Content Expectations (GLCEs). The two lists were compared and divided into two specific categories: Critically Important and Instructionally Important.

Critically Important words are terms that are crucial or key to the understanding of a given subject area and in most cases are language found on the MEAP and MME. Instructionally Important words are terms used by teachers and recognized by students, but do not require focused attention or an in-depth understanding by students.

The hope of the Education and Learning Department is that teachers will use these lists as a starting point for teaching students academic vocabulary. We have included Marzano's 6 step process for reference and will continue to develop additional tools and resources that can be used to teach students academic vocabulary.

Sincerely,

The Office of Education and Learning, Genesee Intermediate School District

Six Step Process for Building Academic Vocabulary—Dr. Robert Marzano

STEP ONE: The teacher will give a description, explanation, or example of the new term.

- Provide learners information about the term
- Determine what the learner already knows about the term.
- Ask learners to share what they already know as a means of monitoring misconceptions.
- Ask learners to share what they already know to use this knowledge as a foundation for more learning.
- Utilize examples, descriptions, but not definitions. Definitions are not a recommended method for vocabulary instruction as they do not provide learners an informal, natural way to learn new vocabulary.
- Instruct learning of proper noun terms through identifying characteristics of the proper noun.

STEP TWO: The teacher will ask the learner to give a description, explanation, or example of the new term in his/her own words.

- Remind learners to not copy, but use their own words.
- Monitor students to determine if any confusion exists.
- Provide more descriptions, explanations, or examples if necessary.
- Request that students record these in the vocabulary notebook. These notebooks can travel with the learner as he/she moves through each grade level and become a compilation of vocabulary terms mastered.

STEP THREE: The teacher will ask the learner to draw a picture, symbol, or locate a graphic to represent the new term.

- Provide learners a nonlinguistic method of vocabulary mastery.
- Share examples of other learners' drawings or allow students to work in teams to help those who complain that they cannot draw.
- Teach the concept of speed drawing for those who labor too long over their work.
- Ask learner to share their work.
- Use graphics from magazines or the internet.
- Illustration terms through symbols, drawing the actual term, illustration with a cartoon, or drawing an example of the term should be encouraged.

STEP FOUR: The learner will participate in activities that provide more knowledge of the words in their vocabulary notebooks. (For notebook and academic notebook worksheet go to: <http://www.jc-schools.net/tutorials/vocab/notebook.htm>) (Teacher Led)

- Students continually reexamine their understanding of a given term
- Activities should be planned that engage students explicitly in the focused review of targeted terms.
- Provide opportunities to add to, or revise, the entry for the term in their vocabulary notebooks

STEP FIVE: The learner will discuss the term with other learners. (Teacher Guided) (Student Led)

- Interacting with other people about what we are learning deepens the understanding of everyone involved
- Teacher provides a structure for the students to have informal and unstructured discussions
- Major goal is to encourage students to help each other identify and clear up misconceptions and confusions.
- Discussing the terms with their peers helps them to detect their errors and correct their work.

Pair-Share Strategy:

- THINK: Allow think time for learners to review their own descriptions and images of the terms.
- PAIR: Put learners in pairs to discuss their descriptions, images, and any new info related to the terms.
- SHARE: Provide opportunities for groups to share aloud and discuss conceptions and misconceptions.
- Monitor as learners help each other identify and clear up confusions about new terms.

STEP SIX: The learner will participate in games that provide more reinforcement of the new term. A variety of games are available at <http://www.jc-schools.net/tutorials/vocab/notebook.htm> PowerPoint Games, Word Game Boards, Excel Games, WORDO, Twister, Fly Swat.

- Walk around the room and check their work when learners are working on their vocabulary notebooks
- Check the notebooks to evaluate accuracy.
- Listen for misconceptions when learners are playing games/activities.
- Provide an opportunity for learners to work together.

Fourth Grade English Language Arts

Critically Important:

automatically	concise	personal essay
adventure	summarization	research project
affix	direct/indirect objects	resolution
appendices	drawing parallels	sensory images
autobiography	first person	sentence structure
bibliographies	key ideas	supporting ideas
biography	legend	suspense
categorizing	marginal notes	transitions
comparative essay	myth	

Instructionally Important:

almanac	flatter	research project
deeper-understanding	newspaper	self-monitor
fantasy	poetry	thesaurus

Fourth Grade Mathematics

Critically Important:

analyze	greatest common factor (GCF)	percent (%)
angle	hundredths (place value)	polygon
angle characteristics	image	prime number
Associative Property	improper fraction	quadrilateral
common factor	inequality	ray
Commutative Property	integer	right angle
composite number	least common multiple (LCM)	similar (similarity)
common multiple	mean	simplify, simplification, simplest form
congruent (congruence)	million (place value)	symmetry
decimal	mixed number	tenths (place value)
denominators (like, unlike, common)	Natural Number	transformation
Distributive Property	ordered pair	triangle characteristics
equation		surface area
frequency		

Instructionally Important:

acute angle	kiloliter (kl)	right triangle
acute triangle	kilometer (km)	rigid motion
approximate	kite	rotation (turn)
average	liter (l)	rotational symmetry
column	meter (m)	rounding
decimeter (dm)	milligram (mg)	row
diagonal	milliliter (ml)	sample
dividend	millimeter (mm)	scalene triangle
divisor	obtuse angle	sequence
elapsed time	obtuse triangle	square prism
equiangular triangle	octagon	square pyramid
equilateral triangle	outcome	standard form
estimate (estimation)	pentagon	statistics
event	pint	straight angle
expanded notation	protractor (angle ruler)	terminating decimal
expression	quart	translation
gram (g)	random	triangular prism
hexagon	reflection (flip)	triangular pyramid
isosceles triangle	reflectional symmetry	Venn diagram
kilogram (kg)	reflex angle	

Fourth Grade Science

Unit 1 – Heat, Electricity, and Magnetism

Critically Important:

attract
battery
bulb
Celsius
closed circuit
compass
conduct(ion)
conductor
electric current

electricity
electromagnet
energy
energy transfer
Fahrenheit
friction
heat
magnet
magnetic field

magnetic poles
open circuit
repel
simple circuit
substance
temperature
thermometer

Instructionally Important:

appliance
decrease
device
evident

generator
increase
iron filings
lines of force

power source
resistance
three dimensional
wire

Fourth Grade Science

Unit 2 – Properties and Changes of Matter

Critically Important:

balance
gas
grams
kilograms

liquid
mass
matter
solid

spring scale
states of matter
volume
weight

Instructionally Important:

liter (L)

metric units

milliliter (mL)

Fourth Grade Science

Unit 3 – Relationships and Requirements of Living Things

Critically Important:

affect	fossil	populations
animals	individual differences	predator
coloring	life requirements	prey
consumer	litter	produce food
decomposer	location	producer
environment	nutrients	reproduce
evidence	observable features	similarities
food chain	organisms	star
food web	plants	survival

Instructionally Important:

advantage(s)	detrimental	obtain
beneficial	enable	physical characteristics
building material	imprint	repair
cast	mold	variations

Fourth Grade Science

Unit 4 – Sun, Moon, and Earth

Critically Important:

ability to support life
apparent movement
breathable atmosphere
cycle
Earth
Earth's axis
life support

moon
moon phases
natural satellite
orbit
planet
relative position
revolution

rotation
seasonal change
seasons
star
sun
visible shape
year

Instructionally Important:

approximately
capable of life support
day

night
predictable cycle
produce light

reflect
relative distance
solar system

Fourth Grade Social Studies—General History

Critically Important:

historian
immigrant
immigration

migrant
migration
period of history

time period

Instructionally Important:

annotate with
connections

historical document
labor movement

Fourth Grade Social Studies—Geography

Critically Important:

cardinal direction
climate
elevation

Geographer
intermediate directions

migration push or pull
factors
population density

Instructionally Important:

cultural development
geographic questions
geographic tools and technologies

significant/positive/negative effects
technical developments
technology

Fourth Grade Social Studies—Civics

Critically Important:

Bill of Rights
checks and balances
federal government
limited power

political scientist
popular sovereignty
Preamble to the
Constitution

rule of law
separation of powers
United States
Constitution

Instructionally Important:

political developments

resolution

Fourth Grade Social Studies—Economics

Critically Important:

competition
division of labor

incentives
market economy

private goods
specialization

Instructionally Important:

circular flow
consumer sovereignty
global competition

influences of incentives
market simulation
substitute goods

substitute products

Resources

Marzano, Robert, and Debra Pickering. *Building Academic Vocabulary: Teacher*. Association for Supervision and Curriculum Development, 2005. Print.

Marzano, Robert. *Building Background Knowledge for Academic Achievement*. Association for Supervision and Curriculum Development, 2004. Print.

Michigan Department of Education Grade Level Content Expectations.
http://www.michigan.gov/mde/0,1607,7-140-28753_33232---,00.html

Michigan Department of Education Science Companion Documents.
http://www.michigan.gov/mde/0,1607,7-140-28753_38684_28760_49215---,00.html

Michigan Citizenship Collaborative Curriculum. www.micitizenshipcurriculum.org

MCrel 2004 –Midcontinent Research for Education and Learning

MDE with Michigan Council of Teachers of Mathematics vocabulary list –
www.mictm.org – membership only section - K - 8

Genesee County Mathematics Curriculum Guide's vocabulary listings K – 12
GLCEs and HSCEs

Vocabulary Websites

<http://jc-schools.net/tutorials/vocab/> (Vocabulary)

<http://jc-schools.net/tutorials/vocab/ppt-vocab.html> (PowerPoint games)

<http://jc-schools.net/tutorials/PPT-games/> (PowerPoint games)

<http://jc-schools.net/tutorials/gameboard.htm> (Ready made games and game boards)

<http://www.u-46.org/roadmap/dyncat.cfm?catid=246> (Overview, lesson design sheet, word lists, examples...)

<http://sde.state.ok.us/curriculum/BAV/default.html> (Oklahoma State Department of Education—word lists, web links to other resources, PowerPoints, etc.)

<http://jc-schools.net/tutorials/vocab/excel-vocab.html> (Excel games)

<http://literacytoolbelt.tripod.com/The%20Fab%20Five/The%20Fab%20Five%20Power%20Points.htm> (Vocabulary Information)

<http://www.pppst.com/> (PowerPoints that can be used and/or adapted. Listed by subject.)

http://teach.fcps.net/trt14/Power%20Point%20Games/power_point_games.htm (Games, templates, and instruction for games)

<http://projects.coe.uga.edu/lrieber/wwild/search/PPT-search-results.asp> (PowerPoint games)

<http://innovativocab.wikispaces.com/Building+Academic+Vocabulary> (Six step process, Preliminary Report on Building Academic Vocabulary, Process for Improving Instruction in Vocabulary, Academic Vocabulary—Six Steps Info.)

<http://www.kirkwoodschools.org/keysor/staff/vocabulary/> (General Information)

<http://www.wordnik.com/> (Comprehensive dictionary. Need to sign up for a free account.)

<http://www.vocabulary.com/> (Vocabulary resources)

http://people.uncw.edu/ertzbergerj/ppt_games.html (PowerPoint games and game templates)

<http://facstaff.uww.edu/jonesd/games/> (PowerPoint games—easy to assemble educational games using technology)

<http://www.netxv.net/esc/technology/InstructionalTechnology/templates/powerpoint.htm>
(PowerPoint game templates that you can download)

<http://teach.fcps.net/trt10/PowerPoint.htm> (PowerPoint Activities)

<http://www.getworksheets.com/samples/powerpoint/games/> (PowerPoint Classroom Game Templates)

<http://www.elainefitzgerald.com/gametemplates.htm> (PowerPoint game templates)

<http://it.coe.uga.edu/wwild/pptgames/creating.htm> (PowerPoint templates)

http://www.hardin.k12.ky.us/res_techn/sbjarea/math/MATHJeopardy.htm (Math Jeopardy Games)

<http://young.springdaleschools.org/WebsitesTeachersJeopardy.htm> (Jeopardy Game Websites)

<http://www.isd12.org/gle/Jeopardy/Games.htm> (PowerPoint Jeopardy Games created by 5th graders)

<http://www.elainefitzgerald.com/powerpoint.htm> (PowerPoint Files)

<http://www.littlewoodscasino.com/education-resources/power-point-games.htm>
(Educational PowerPoint Games)

<http://www.googlesyndicatedsearch.com/u/fcrr?q=vocabulary&domains=www.fcrr.org&itesearch=www.fcrr.org> (Florida Center for Reading Research—Lots of information on Vocabulary)

http://vocabulary.co.il/blog/learning_vocabulary/category/building-vocabulary-skills/
(Vocabulary Building Games)

<http://www.murray.k12.ga.us/teacher/kara%20leonard/TeacherTools.htm> (click on Game Templates link)

<http://www.kindergarten-lessons.com/teach-math-vocabulary.html> (Ideas to teach math vocabulary to kindergarten and preschool children)

http://www.hardin.k12.ky.us/res_techn/countyJeopardygames.htm (Jeopardy games in all content areas)

http://www.lessonplanet.com/search?grade=all&keywords=vocabulary&media=lesson&rating=3&search_type=related (Vocabulary Lessons)

<http://www.vickiblackwell.com/ppttemplates.html> (PowerPoint templates)

<http://www.eslprintables.com/buscador/buscarppt.asp?eje=30&page=2&nivel=any&age=0&tipo=any&contents=VOCABULARY&orderby=#thetop> (Vocabulary PowerPoints, worksheets, and exercises)

<http://www.burlesonisd.net/it/resources/wordpress/?cat=46> (Teacher templates and games)

<http://www.time4learning.com/readingpyramid/vocabulary.htm> (Building Vocabulary Skills--Games and Activities)

On-Line Dictionary Websites

<http://www.google.com/landing/searchtips/#dictionary>

<http://www.merriam-webster.com/>

<http://dictionary.reference.com/>

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

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

<http://dictionary.cambridge.org/>

<http://www.websters-online-dictionary.org/>

<http://kids.yahoo.com/reference/dictionary/english>

<http://www.encyclopedia.com>

<http://www.visuwords.com>



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