

Digital Media I

Digital Media I

Level:	10-12
Units of Credit:	1.00
CIP Code:	11.0210
Core Code:	35-02-00-00-010
Prerequisite:	Computer Literacy requirement, Suggested: Art Drawing class
Skill Test:	Semester 1A #810, Semester 1B #811 Adobe Photoshop Adobe Illustrator Adobe Flash Adobe PremierePro

COURSE DESCRIPTION

Digital Media is the process of analyzing, designing and developing interactive media. Digital Media I is the first-year digital media course where students will create and learn digital media applications while using elements of text, graphics, animation, sound, video, and digital imaging for various formats. These abilities will prepare students for entry-level multimedia positions and provide fundamental 21st Century Learning skills beneficial for other occupational/educational endeavors.

COURSE STANDARDS, OBJECTIVES AND INDICATORS

STANDARD 1

Career Opportunities: Students will develop an awareness of digital media career opportunities.

Objective 1: Develop 21st Century Life and Career Skills related to working in the digital media industry.

- Identify occupations related to digital media careers (graphic/commercial artist, project manager, technical writer, application programmer, video and sound specialist, and subject matter expert, instructional designers, art director, copy-writer, etc.)
- Identify knowledge and skills necessary for specific digital media occupations
- Develop employable competencies/characteristics: responsibility, dependability, ethics, respect, and cooperation
- Exhibit high standards of personal performance with a positive work ethic and attitude

STANDARD 2

Digital Media Computer Functions: Students will demonstrate the ability to perform relevant computer functions on a standard platform (*PC, Mac, Linux*) as they apply to digital media while using 21st Century Skills. <http://www.p21.org>

Objective 1: Perform basic computer functions.

- Utilize asset and file management using folders and naming conventions.
- Convert and compress files using appropriate codec
- Create back-up files
- Monitor file size and disk space
- Utilize *Help* features functions keys like F1
- Utilize shortcut keys and quick-stroke commands where applicable in software applications and OS to improve performance (shift, alt, command)

Objective 2: Implement communication, critical thinking, and problem solving skills

- Communicate and collaborate with teammates
- Analyze how individuals interpret messages differently, how values and points of view are included or excluded, and how media can influence beliefs and behaviors
- Understand both how and why media messages are constructed, and for what purposes

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- d. Search for online help and solutions
- e. Evaluate information critically and competently
- f. Reflect critically on learning experiences and processes
- g. Synthesize and draw a conclusion to determine an outcome

Objective 3: Information and Communication Technologies (ICT)

- a. Understand and utilize digital technologies and the components of a basic digital media computer system.
- b. Understand and utilize the most appropriate media creation tools, characteristics and conventions.
- c. Access information efficiently (time) and effectively (sources)

Objective 4: Media Literacy ethics

- a. Read, discuss and adhere to the school's acceptable use policy (AUP)
- b. Apply a fundamental understanding of the ethical/legal issues surrounding the access and use of media

Objective 5: Fair Use Guidelines and Copyright Law

- a. Understand Fair Use Guidelines as it applies to classroom use
- b. Explain and justify appropriate application of Fair Use Guidelines
- c. Understand copyright is held by the creator or company when ideas result in a tangible product.
- d. Understand intellectual property.
- e. Understand the process of registering a copyright.
- f. Create an original content project while adhering to all copyright laws and not involving Fair Use Guidelines.
- g. Understand Public Domain.

STANDARD 3

Visual Design Concepts: Students will recognize and apply effective visual design concepts

Objective 1: Visual Design Elements -- recognize and apply the following elements and principles:

- a. Recognize and apply Shape (Shape is 2D) as it applies to: (line, value (contrast), texture, sizes, space (positive and negative), color, emphasis, balance/alignment, unity, rhythm)
- b. Recognize and apply Form (Form is 3D) as it applies to: (line, value (contrast), texture, sizes, space (positive and negative), color, emphasis, balance/alignment, unity, rhythm)

Objective 2: Color Theory -- recognize and apply the following concepts:

- a. Recognize and apply Color Properties (Hue, saturation, value)
- b. Recognize and apply Color Schemes (complimentary, analogous, triadic, monochromatic)
- c. Recognize and apply Symbolism/Emotion (warm, cool colors. What do different colors mean in different cultures?)
- d. Recognize and apply Color depth/palettes (dithering)
- e. Recognize and apply Color modes (RGB, CMYK, Grayscale)

Objective 3: Image Composition -- recognize and use the following concepts:

- a. Recognize and use mergers, simplicity, leading lines, rule-of-thirds, point-of-view, field-of-view, golden mean, pyramid, and framing in image composition
- b. Understand and apply resolution, anti-aliasing, lighting in image composition

STANDARD 4

Text: Students will effectively use text in digital media.

Objective 1: Typography -- recognize and apply the following concepts:

- a. Apply Font decisions (typeface/families, style/attributes, size)

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- b. Apply Typeface Design (serif, sans-serif, script)
- c. Apply Text Layout Techniques (leading, kerning, tracking, alignment symmetric and asymmetric)

Objective 2: Communication - demonstrate and use skills

- a. Demonstrate oral communication skills
- b. Demonstrate written communication skills

Objective 3: Readability -- Use text format to effectively communicate content

- a. Utilize correct spelling and grammar
- b. Utilize proper organization (Headings, indents, bullets, interface, navigation, etc.)
- c. Utilize effective visual design layout principles

STANDARD 5

2D Graphics: Students will produce bitmap and vector 2D graphics.

Objective 1: Raster Graphics -- Students will understand, create, manipulate and appropriately use *bitmap (raster)* graphics

- a. Identify graphic formats and their appropriate use (e.g., JPG, GIF, TIF, BMP, PSD, PNG, PDF, EPS, etc.)
- b. Acquire image assets (scanning, digital camera, internet search, stock sources, etc)
- c. Create images using a digital camera using appropriate settings
- d. Utilize appropriate visual design and image composition techniques
- e. Export/import images for project requirements (compression, resolution)
- f. Crop, Resize, Straighten Image, Transform an image
- g. Utilize techniques to effectively edit an image
- h. Use Layers, Mask, and Selection tools
- i. Apply Filters and Effects
- j. Adjust color, contrast
- k. Create Gradient
- l. Apply and maintain Transparency
- m. Restore Images
- n. Utilize Color selection techniques
- o. Use Painting and drawing tools

Objective 2: Vector Graphics – understand, create, manipulate and appropriately use *vector* graphics

- a. Identify graphic formats and their appropriate use (e.g., PDF, AI, SWF, PNG, EPS, etc.)
- b. Convert images from bitmap to vector and vice versa
- c. Export/import images for project requirements (compression, resolution)
- d. Utilize drawing tools to create and manipulate Paths (lines and Bezier Curves) using Anchor points, direction handles
- e. Apply Stroke and Fill (solid and gradient)
- f. Utilize appropriate selection tools
- g. Perform grouping and ungrouping of objects
- h. Apply Styles and Effects
- i. Transform objects
- j. Create Layers
- k. Apply and maintain transparency
- l. Utilize Text Tools
- m. Understand final output formats

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***STANDARD 10**

Digital Audio: Students will plan, produce, edit, and publish digital audio.

Objective 1: Plan and create digital audio

- a. Prepare a script and record digital audio
- b. Capture sound from an original or existing source
- c. Recognize and use appropriate types of sound (voice over/narration, music, sound effects)

Objective 2: Understand and edit digital audio

- a. Edit sound
- b. Apply special effects to audio files
- c. Create audio envelopes
- d. Understand and manipulate frequency, amplitude, decibel, pitch, sampling rate and hertz.

Objective 3: Export and publish digital audio

- a. Identify and use different audio formats (e.g., WAV, MIDI, AU, MP3, AIF, RA, AAC, MP4, M4A, CDA)
- b. Add appropriate metadata
- c. Import, Export, and convert audio in different formats
- d. Publish an audio project

Objective 4: Digital audio media management and players

- a. Use audio management tools (iTunes, Pandora, Windows Media Player, Quicktime, Real Player)
- b. Understand the use of libraries and playlists
- c. Use appropriate digital audio containers, settings and metadata

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STANDARD 6

Planning, Design, & Development: Students will demonstrate proper planning and design by utilizing an instructional design model such as ADDIE, Adobe Professional Design, Rapid Deployment Model, and so forth in the development of *digital media projects*.

Objective 1: Understand and use the ADDIE Model.

- a. *Analyze* -- gather and process contextual information affecting the goals, structure, purpose, content, audience, and design of a project.
- b. *Design*-- plan the general look and scope of the application and the media it will use, along with the budget, tools, objectives, outline content, storyboard, and schedule.
- c. *Develop* -- collect & create digital media content and testing of the application
- d. *Implement* -- publish the finished project and make it available to its audience.
- e. *Evaluate* -- assess the effectiveness of the project with the target audience and make adjustments in future revisions.

Objective 2: Understand and use the Adobe professional design and development process

- a. *Define* -- Goals, target audience, content, and delivery requirements
- b. *Structure* -- Flowchart to portray the overall structure and screen views of the project
- c. *Design* -- design of comps, review with client, redesign from client feedback, and production storyboard
- d. *Build and test* -- project production based on storyboards, technical and usability testing, revision, and final project presentation
- e. *Launch* -- launch and publish project

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STANDARD 7

Team Activities: Students will participate in individual and team (group) activities.

Objective 1: Demonstrate 21st Century Life and Career Skills in the ability to work individually in the completion of digital media projects.

- a. Demonstrate oral, written, and/or technological communication skill
- b. Apply management skills in finding solutions to project problems
- c. Monitor, define, prioritize and complete tasks without direct supervision
- d. Adapt to varied roles, job responsibilities, schedules and context
- e. Work effectively in a climate of ambiguity and changing priorities
- f. Complete projects according to specified deadlines

Objective 2: Demonstrate 21st Century Life and Career Skills in the ability to work as a team member in the completion of digital media projects.

- a. Demonstrate oral, written, and/or technological communication skills by knowing when it is appropriate to listen and when it is appropriate to speak
- b. Demonstrate the ability to respond open-mindedly to different ideas and values
- c. Demonstrate the ability to leverage social and cultural differences to create new ideas and increase both innovation and quality of work.
- d. Apply management skills in finding solutions to project problems
- e. Utilize organizational skills
- f. Demonstrate the ability to use integrity and ethical behavior in using influence and power.
- g. Demonstrate the ability to inspire and leverage strengths of others to accomplish a common goal.
- h. Demonstrate the ability to conduct themselves in a respectable and professional manner.
- i. Set goals with tangible and intangible success criteria
- j. Balance tactical (short-term) and strategic (long-term) goals
- k. Describe the roles and responsibilities of members of a digital media team (i.e., project manager, programmer, graphic artist, audio/video specialist, subject matter expert (SME), animator, etc.)

STANDARD 8

2D Animation -- Students will produce and utilize 2D animation.

Objective 1: Animations -- Create, manipulate and appropriately use animations.

- a. Identify animation file formats and their appropriate use (e.g., MOV, SWF, FLV, GIF, FLA, WMV, m4v, AVI)
- b. Perform changes to position, scale, color, and properties of an animated object
- c. Utilize Timeline animation (Frame-by-frame, Tween)
- d. Create Keyframe animation
- e. Create Tween Animation (motion, shape, path)
- f. Utilize Symbol/Instances
- g. Utilize internal and external libraries
- h. Import/Export assets
- i. Publish/Packaging appropriately for delivery medium

Objective 2: Animation Techniques -- Effectively use animation techniques

- a. Recognize and apply major principles of animation (squash and stretch, anticipation, timing, staging) [see 12 principles of animation]
- b. Effectively use the basic elements to create a story (setting, sequence & pacing, structure & plot, character & conflict, resolution)
- c. Include appropriate audio component

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STANDARD 9

Digital Video: Students will plan, create, edit, and publish digital video.

Objective 1: Plan Pre-Production of creating digital video

- a. Utilize a script
- b. Create a storyboard
- c. Build a shot plan
- d. Create a necessary equipment list
- e. Create an asset list
- f. Create a project timeline
- g. Define team member roles
- h. Define necessary cast and characters
- i. Adhere to Fair Use Guidelines for classroom projects
- j. Organize "field shoot" and assign "field shoot" roles (Gaffer, Grip, Cameraman, Director, Talent)

Objective 2: Production stage of creating digital video

- a. Create a setup/cleanup list and assign team member duties
- b. Utilize appropriate video equipment (tripod, microphone, lights, camera)
- c. Demonstrate proper shooting techniques (camera settings, composition, lighting, POV, FOV)
- d. Use a shot plan

Objective 3: Post-Production stage of creating digital video

- a. Capture video (Downloading to computer)
- b. Use appropriate codec, aspect ratio, and resolution settings
- c. Define asset management processes (naming conventions, cataloging, storage, compression)
- d. Edit video (transitions, audio/video effects, titling (safe area), aspect ratio, credits, clips, etc.)
- e. Export in appropriate format for intended use.
- f. Recognize and use appropriate video settings i.e. resolution, Regional standards such as NTSC or PAL (e.g., frame rates, frame size, compression)
- g. Identify video formats (e.g., SD, HD, AVI, MOV, SWF, WMV, MP4, m4v, FLV, VOB) and broadcast settings
- h. Publish a digital video project

STANDARD 10 *see first semester

STANDARD 11

Web Technologies: Students will create basic Web pages or documents.

Objective 1: Plan, create, edit, and publish a basic Web site.

- a. Plan and create a basic Web site of multiple pages that includes hyperlinks
- b. Apply principles of good design in the Web site

STANDARD 12

Digital Technologies: Students will explore new and digital technologies

Objective 1: Develop an awareness of digital and collaborative technologies

- a. Explore, identify and discuss emerging technologies
- b. Utilize document sharing and collaborating (Google Docs, Dropbox, Windows Live)
- c. Discuss the advantages and disadvantages of Cloud Storage and computing
- d. Discuss the advantages and disadvantages of using social networking, blogs, vlogs, Wikis, video conferencing, podcasting, RSS feeds and webinars.

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STANDARD 13

Digital Portfolio: Students will design and develop various projects to add to a digital portfolio.

Objective 1: Create a digital portfolio adhering to copyright and Fair Use Guidelines of the student's best work.

- a. Include 2D raster and vector digital graphics
- b. Include Animation sequences
- c. Include Digital video
- d. Include Digital audio
- e. Include cross-curricular content (optional)

Objective 2: Output portfolio projects to an appropriate delivery medium

- a. Determine if appropriate for Computer Based delivery (CB)
- b. Determine if appropriate for Web Based delivery (WB)
- c. Determine if appropriate for deliver using DVD, Blue-Ray, MP3 players, tablets, cell phones, and other portable digital devices

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COMMON CORE STANDARDS

Digital Media supports the following standards:

Texts, Types and Purposes

2. Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
 - d. Use precise language, domain-specific vocabulary, and techniques such as metaphor, simile, and analogy to manage the complexity of the topic.
 - f. Provide a concluding statement or section that follows from and supports the information or explanation presented (e.g., articulating implications or the significance of the topic).
3. Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
 - a. Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.
 - b. Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.
 - c. Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).
 - d. Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.
 - e. Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.

Production and Distribution of Writing

4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)
5. Develop and strengthen writing as needed by planning, revising, editing rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11–12 on page 54.)
6. Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Research to Build and Present Knowledge

8. Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience;

READING

Key Ideas and Details

1. Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain

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2. Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.
3. Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.

Craft and Structure

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 (e.g., how Madison defines faction in Federalist No. 10).
5. Analyze and evaluate the effectiveness of the structure an author uses in his or her exposition or argument, including whether the structure makes points clear, convincing, and engaging.

Integration of Knowledge and Ideas

7. Integrate and evaluate multiple sources of information presented in different media or formats (e.g., visually, quantitatively) as well as in words in order to address a question or solve a problem.

Range of Reading and Level of Text Complexity

10. By the end of grade 11, read and comprehend literary nonfiction in the grades 11–CCR text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 12, read and comprehend literary nonfiction at the high end of the grades 11–CCR text complexity band independently and proficiently.

Speaking and Listening Comprehension and Collaboration

1. Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
 - a. Come to discussions prepared having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.
 - b. Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.
 - c. Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.
 - d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
2. Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.

Presentation of Knowledge and Ideas

4. Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are

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addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

5. Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
6. Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)

LANGUAGE STANDARDS

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - b. Form and use verbs in the active and passive voice.
 - c. Form and use verbs in the indicative, imperative, interrogative, conditional, and subjunctive mood.
 - d. Recognize and correct inappropriate shifts in verb voice and mood.*
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Use punctuation (comma, ellipsis, dash) to indicate a pause or break.
 - b. Use an ellipsis to indicate

Knowledge of Language

3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.
 - a. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effects (e.g., emphasizing the actor or the action; expressing uncertainty or describing a state contrary to fact).
4. Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.
 - a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., precede, recede, and secede).
 - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
 - a. Interpret figures of speech (e.g. verbal irony, puns) in context.
 - b. Use the relationship between particular words to better understand each of the words.
 - c. Distinguish among the connotations (associations) of words with similar denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).

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6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Conventions of Standard English

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
 - a. Apply the understanding that usage is a matter of convention, can change over time, and is sometimes contested.
 - b. Resolve issues of complex or contested usage, consulting references (e.g. Merriam-Webster's Dictionary of English Usage, Garner's Modern American Usage) as needed.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
 - a. Observe hyphenation conventions.
 - b. Spell correctly.

Knowledge of Language

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
 - a. Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11–12 reading and content, choosing flexibly from a range of strategies.
 - a. Use context (e.g., the overall meaning of a sentence, paragraph, or text; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
 - b. Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).
 - c. Consult general and specialized reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning, its part of speech, its etymology, or its standard usage.
 - d. Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
 - a. Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.
 - b. Analyze nuances in the meaning of words with similar denotations.
6. Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.