

Everett Public Schools Framework: 3D Computer Illustration

Course: Graphic Design/Commercial and Advertising Art	Total Framework Hours: 90 Hours
CIP Code: 500402	Type: Preparatory
Career Cluster: Arts, Audio/Video Technology & Communications	Date Last Modified: Wednesday, January 22, 2014

Resources and Standard used in Framework Development:

Standards used are from PrintEd 2010, SkillsUSA and Teacher workshop identified specific skills as outlined in the OSPI Model Framework for 500402 Graphic Design/Commercial and Advertising Art.

Unit 1 LEARNING AND APPLYING VECTOR GRAPHICS

Hours: 15

Performance Assessment(s):

Formative
Review with vector graphics

Summative
Multiple projects with vector paper cuts varying in size, detail, colors and layers

Leadership Alignment:

TSA Competitions that relate and are directly used within the CTSO based on the modeling needs of these competitions: Architectural Renovation, Computer--Aided Design (CAD) 3D, Engineering, Computer--, Aided Design (CAD) 2D, Architecture, Computer--Aided Design (CAD) 2D, Architecture, Manufacturing Prototype, Manufacturing Prototype, Technical Sketching and Application, Biotechnology Design, SciVis

Standards and Competencies

Standard A: Industry Overview

1. Define the role of graphics in the free enterprise system.

Standard C: Digital File Preparation

1. Identify professional prepress software applications and uses, including: page layout (QuarkXPress, InDesign); image editing (Photoshop); illustration (Illustrator); Portable Document Format (PDF) generation and editing (Acrobat, PitStop); and, imposition (Preps).
2. Describe the disadvantages of using office/home-based software for professional graphic purposes.
3. Describe the difference between a raster image and a vector graphic image.
4. List advantages/disadvantages of removable storage media.
5. Explain the significance of PDF as it pertains to the printing industry.
6. Explain the difference between supplying PDF files versus native files for print.
7. Identify various file formats and their extensions: .doc; .qxd; .pdf; .tif; .eps; .rtf; .raw; .jpg; .bmp; .txt; .indd; .psd; .ai; .pub; .html; .gif; .xls; .zip; .dmg; .png; .dng.

Standard E: Color Theory

1. Explain additive and subtractive color theory.
2. Explain the effect of lighting on color perception.
3. Explain the effect of the surround on color perception.

Standard I: Measurement

1. Measure linear dimensions for printing materials in inches and fractions of inches.
2. Measure type in points and line length in picas.
4. Measure original images for reduction and enlargement using various methods to determine the percentage for final reproduction.

Standard J: Basic Math

1. Solve addition of whole number problems—two and three digits.
2. Solve addition of fraction problems.
3. Solve addition of decimal problems—two and three digits.
4. Solve subtraction of whole number problems—two and three digits.
5. Solve subtraction of fraction problems.
6. Solve subtraction of decimal problems—two and three digits.
7. Solve multiplication of whole numbers—two and three digits.
8. Solve multiplication of decimal problems—two and three digits.
9. Solve division of whole number problems—two and three digits.
15. Solve basic linear measurement problems.
16. Solve basic type calculation problems.
18. Solve basic paper cutting calculations.

Standard N: Page Layout

Advertising and Design

1. Select appropriate page layout software for a given job.
2. Set text with appropriate margins; formatting; gutters; and, proper leading.
3. Prepare a series of hand drawn sketches or computer generated layouts incorporating appropriate marks (i.e., gutters, register marks, trim marks, fold lines, etc.).
4. Design and produce a document using desired fonts; styles; margins; indents; tabs; and, colors.
17. Demonstrate the use of a digital dictionary and spell checker.
25. Design and produce a document using specified type faces, sizes, leading, margins, indents, tabs, and colors.

Standard O: Digital Illustration

1. Demonstrate an understanding of the differences between raster and vector files.
2. Use the appropriate graphics program to create a design or logo using manipulated type (rotated, circled, extended, tints and fills, etc.).
3. Create or trace drawings/photographs using a vector illustration program.
4. Create or edit images in a raster based program using layers; transparencies; layer modes; masks; and, selections, etc.
6. Demonstrate a functional knowledge of computer menus, shortcut keys, and palettes in illustration software.
7. Create a single color vector graphic.
8. Create a vector graphic using tints, fills, and color.
9. Create a vector graphic using manipulated type.
10. Trace a bitmap drawing and convert to a vector.
11. Edit an existing piece of vector art.

Standard P: Design Principles

1. Identify the basic principles of design (i.e., unity; contrast; proportions; balance; emphasis; and, rhythm).
2. Identify the basic elements of design (i.e., line; shape; direction; size; texture; value; and, color).
3. Create thumbnails and rough drafts by sketching. Use markers or colored pencils to show color.
4. Pitch a concept to demonstrate an understanding of the relationship between message; color; typography; images; and, layout.

5. Brainstorm keywords for a design concept based on customer need and target audience.
6. Demonstrate an understanding of color theory by describing primary, secondary, and tertiary colors including hue, tint, value and shade, and the effect of light and distance on color.
7. Critique a layout to determine if it meets the customer's needs, and suggest improvements.
8. Demonstrate an understanding of corporate identity including how branding affects consumer recognition.
9. Demonstrate an understanding of color relationships (complimentary, analogous, monochromatic, etc.).
10. Create a storyboard to demonstrate a time-based concept.

Standard S: Print Production

10. Operate printing machine and verify printing quality.

Standard V: Visual Techniques Drawing and Painting

1. Demonstrate skills used to define and analyze a given problem
5. Develop compositions and works using non-traditional techniques both printed and linear graphics (TV commercials, videos, etc)
8. Illustration – Materials, styles, techniques.

Standard W: Concept Development

1. Brainstorming,
2. Concept sketching
3. Thumbnails
4. Roughs
5. Mockups
6. Aesthetics

Standard X: Portfolio

1. Explore and identify content of a professional portfolio
2. Select, organize, develop and refine a marketable portfolio

Standard WR 4: Problem Solving

WR-4.1 Employ critical thinking skills independently and in teams to solve problems and make decisions.

WR-4.2 Employ critical thinking and interpersonal skills to resolve conflicts.

WR-4.3 Identify and document workplace performance goals and monitor progress toward those goals

WR-4.4 Conduct technical research to gather information necessary for decision-making

WR-4.5 Explain the importance and dynamics of individual and teamwork approaches of problem solving

WR-4.6 Describe methods of researching and validating reliable information relevant to the problem

WR-4.7 Explain strategies used to formulate ideas, proposals and solutions to problems

WR-4.8 Select potential solutions based on reasoned criteria

WR-4.9 Implement and evaluate solution(s)

Standard WR 6: Teamwork and Cooperation

WR-6.2 Establish and maintain effective working relationships with others in order to accomplish objectives and tasks.

WR-6.5 Cooperates rather than compete with team members

Aligned to Washington State Standards

Arts

Arts 1.0 The student understands and applies arts knowledge and skills in dance, music, theatre, and visual arts.

- 1.1 Understands and applies arts concepts and vocabulary.
- 1.2 Develops arts skills and techniques.
- 1.3 Understands and applies arts genres and styles from various artists, cultures, and times.
- 1.4 Understands and applies audience conventions in a variety of arts settings and performances.

Arts 2.0 The student demonstrates thinking skills using artistic processes.

2.1. Applies a creative process to the arts (dance, music, theatre and visual arts):

- Identifies audience and purpose.
- Explores, gathers, and interprets information from diverse sources.
- Uses ideas, foundations, skills and techniques to develop dance, music, theatre and visual art.
- Implements choices of arts elements, principles, foundations, skills, and techniques in a creative work.
- Reflects for the purpose of self-evaluation and improvement of the creative work.
- Refines work based on feedback, self-reflection, and aesthetic criteria.
- Presents work to others in a performance, exhibition, and/or production.
- Performs work for others in a performance and/or production.

2.2 Applies a performance and/or presentation process to the arts (dance, music, theatre and visual arts):

- Identifies audience and purpose of the work and/or performance.
- Selects artistic resources, materials and/or repertoire to create, perform and present.
- Analyzes the structure, context and/or aesthetics of the work.
- Interprets meaning through personal understanding of the work and/or performance.
- Rehearses, adjusts, and refines through evaluation, reflection and problem solving.
- Presents, exhibits, and produces work and/or performance for others.
- Reflects and self-evaluates work and/or performance to set goals.

2.3 Applies a responding process to an arts performance and/or presentation of dance, music, theatre and visual arts):

- Engages the senses actively and purposefully in perceiving the work.
- Describes what is seen, felt and/or heard (perceived/experienced).
- Interprets meaning based on personal experiences and knowledge.
- Evaluates and justifies using supportive evidence and aesthetic criteria.
- Applies a responding process to an arts presentation working towards independence with teacher mentoring.

Arts 3.0 The student communicates through the arts.

3.1 Uses the arts to express feelings and present ideas.

3.2 Uses the arts to communicate for a specific purpose.

3.3. Develops personal aesthetic criteria to communicate artistic choices.

Communication - Speaking and Listening

Health and Fitness

Language

Mathematics

CC: Geometry (G)

Congruence (G-CO)

1 - Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.

2 - Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).

3 - Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.

- 4 - Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
- 5 - Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.
- 6 - Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
- 12 - Make formal geometric constructions with a variety of tools and methods (compass and straightedge, string, reflective devices, paper folding, dynamic geometric software, etc.). Copying a segment; copying an angle; bisecting a segment; bisecting an angle; constructing perpendicular lines, including the perpendicular bisector of a line segment; and constructing a line parallel to a given line through a point not on the line.
- 13 - Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.
- Similarity, Right Triangles, and Trigonometry (G-SRT)
- Modeling with Geometry (G-MG)
- 1 - Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*

Reading

CC: Reading Informational Text

Key Ideas and Details (9-10)

- 1 - Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- 2 - Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
- 3 - Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Craft and Structure (9-10)

- 4 - Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
- 5 - Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
- 6 - Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Integration of Knowledge and Ideas (9-10)

- 7 - Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
- 8 - Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
- 9 - Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter From Birmingham Jail"), including how they address related themes and concepts.

Science		
Social Studies		
Writing		
21st Century Skills		
LEARNING AND INNOVATION Creativity and Innovation <input checked="" type="checkbox"/> Think Creatively <input checked="" type="checkbox"/> Work Creatively with Other <input checked="" type="checkbox"/> Implement Innovations Creative Thinking and Problem Solving <input checked="" type="checkbox"/> Reason Effectively <input checked="" type="checkbox"/> Use Systems Thinking <input checked="" type="checkbox"/> Make Judgements and Decisions <input checked="" type="checkbox"/> Solve Problems Communication and Collaboratio <input checked="" type="checkbox"/> Communicate Clearly <input checked="" type="checkbox"/> Collaborate with Others	INFORMATION, MEDIA AND TECHNOLOGY SKILLS Information Literacy <input checked="" type="checkbox"/> Access and Evaluate Information <input checked="" type="checkbox"/> Use and Manage Information Media Literacy <input checked="" type="checkbox"/> Analyze Media <input checked="" type="checkbox"/> Create Media Products Information, Communications, and Technology (ICT Literacy) <input checked="" type="checkbox"/> Apply Technology Effectively	LIFE AND CAREER SKILLS Flexibility and Adaptability <input checked="" type="checkbox"/> Adapt to Change <input checked="" type="checkbox"/> Be Flexible Initiative and Self-Direction <input checked="" type="checkbox"/> Mange Goals and Time <input checked="" type="checkbox"/> Work Independently <input checked="" type="checkbox"/> Be Self-Directed Learners Social and Cross-Cultural <input checked="" type="checkbox"/> Interact Effectively with Other <input checked="" type="checkbox"/> Work Effectively in Diverse Teams Productivity and Accountability <input checked="" type="checkbox"/> Manage Projects <input checked="" type="checkbox"/> Produce Results Leadership and Responsibility <input checked="" type="checkbox"/> Guide and Lead Others <input checked="" type="checkbox"/> Be Responsible to Others

Unit 2 BASIC MODELING SKILL	Hours: 15
Performance Assessment(s):	
<p>Formative 3'd model exercisers done by using a manual for step by step process to understand the 3'd modeling enviroment and program</p> <p>Summative Products produced in certain sections</p>	
Leadership Alignment:	
<p>TSA Competitions that relate and are directly used within the CTSO based on the modeling needs of these competitions: Architectural Renovation, Computer--Aided Design (CAD) 3D, Engineering, Computer--, Aided Design (CAD) 2D, Architecture, Computer--Aided Design (CAD) 2D, Architecture, Manufacturing Prototype, Manufacturing Prototype, Technical Sketching and Application, Biotechnology Design, SciVis</p>	
Standards and Competencies	
<p>Standard C: Digital File Preparation</p> <ol style="list-style-type: none"> 1. Identify professional prepress software applications and uses, including: page layout (QuarkXPress, InDesign); image editing (Photoshop); illustration (Illustrator); Portable Document Format (PDF) generation and editing (Acrobat, PitStop); and, imposition (Preps). 2. Describe the disadvantages of using office/home-based software for professional graphic purposes. 3. Describe the difference between a raster image and a vector graphic image. 4. List advantages/disadvantages of removable storage media. 5. Explain the significance of PDF as it pertains to the printing industry. 6. Explain the difference between supplying PDF files versus native files for print. 7. Identify various file formats and their extensions: .doc; .qxd; .pdf; .tif; .eps; .rtf; .raw; .jpg; .bmp; .txt; .indd; .psd; .ai; .pub; .html; .gif; .xls; .zip; .dmg; .png; .dng. <p>Standard I: Measurement</p> <ol style="list-style-type: none"> 1. Measure linear dimensions for printing materials in inches and fractions of inches. 2. Measure type in points and line length in picas. 4. Measure original images for reduction and enlargement using various methods to determine the percentage for final reproduction. <p>Standard J: Basic Math</p> <ol style="list-style-type: none"> 1. Solve addition of whole number problems—two and three digits. 2. Solve addition of fraction problems. 3. Solve addition of decimal problems—two and three digits. 4. Solve subtraction of whole number problems—two and three digits. 5. Solve subtraction of fraction problems. 15. Solve basic linear measurement problems. <p>Standard O: Digital Illustration</p> <ol style="list-style-type: none"> 1. Demonstrate an understanding of the differences between raster and vector files. 2. Use the appropriate graphics program to create a design or logo using manipulated type (rotated, circled, extended, tints and fills, etc.). 7. Create a single color vector graphic. 8. Create a vector graphic using tints, fills, and color. 9. Create a vector graphic using manipulated type. <p>Standard P: Design Principles</p> <ol style="list-style-type: none"> 1. Identify the basic principles of design (i.e., unity; contrast; proportions; balance; emphasis; and, rhythm). 2. Identify the basic elements of design (i.e., line; shape; direction; size; texture; value; and, color). 3. Create thumbnails and rough drafts by sketching. Use markers or colored pencils to show color. 	

4. Pitch a concept to demonstrate an understanding of the relationship between message; color; typography; images; and, layout.
5. Brainstorm keywords for a design concept based on customer need and target audience.
6. Demonstrate an understanding of color theory by describing primary, secondary, and tertiary colors including hue, tint, value and shade, and the effect of light and distance on color.
7. Critique a layout to determine if it meets the customer's needs, and suggest improvements.
8. Demonstrate an understanding of corporate identity including how branding affects consumer recognition.
9. Demonstrate an understanding of color relationships (complimentary, analogous, monochromatic, etc.).
10. Create a storyboard to demonstrate a time-based concept.

Standard V: Visual Techniques Drawing and Painting

1. Demonstrate skills used to define and analyze a given problem
2. Explain the importance and dynamics of individual and teamwork approaches of problem solving
3. Develop thematic compositions using a variety of techniques (sketchbooks)
5. Develop compositions and works using non-traditional techniques both printed and linear graphics (TV commercials, videos, etc)
8. Illustration – Materials, styles, techniques.

Standard WR 4: Problem Solving

WR-4.1 Employ critical thinking skills independently and in teams to solve problems and make decisions.

WR-4.2 Employ critical thinking and interpersonal skills to resolve conflicts.

WR-4.4 Conduct technical research to gather information necessary for decision-making

Aligned to Washington State Standards

Arts

Arts 1.0 The student understands and applies arts knowledge and skills in dance, music, theatre, and visual arts.

- 1.1 Understands and applies arts concepts and vocabulary.
- 1.2 Develops arts skills and techniques.

Communication - Speaking and Listening

Health and Fitness

Language

Vocabulary Acquisition and Use (9-10)

- 4 - Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies.
 - 4a - 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.
 - 4b - Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy).
 - 4c - 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, or its etymology.
 - 4d - 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).

Knowledge of Language (11-12)

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.

3a - Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.

Vocabulary Acquisition and Use (11-12)

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.

- 4a - 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.
- 4b - Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).
- 4c - 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.
- 4d - 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.
 - 5a - Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.
 - 5b - Analyze nuances in the meaning of words with similar denotations.

Mathematics

Reading

CC: Reading Informational Text

Key Ideas and Details (9-10)

- 1 - Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- 2 - Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
- 3 - Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Craft and Structure (9-10)

- 4 - Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
- 5 - Analyze in detail how an author's ideas or claims are developed and refined by particular sentences, paragraphs, or larger portions of a text (e.g., a section or chapter).
- 6 - Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

Integration of Knowledge and Ideas (9-10)

- 7 - Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
- 8 - Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
- 9 - Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter From Birmingham Jail"), including how they address related themes and concepts.

Range of Reading and Level of Text Complexity (9-10)

- 10 - By the end of grade 9, read and comprehend literary nonfiction in the grades 9–10 text complexity band proficiently, with scaffolding as needed at the high end of the range. By the end of grade 10, read and comprehend literary nonfiction at the high end of the grades 9–10 text complexity band independently and proficiently.

Key Ideas and Details (11-12)

- 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.
- 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 (11-12)

- 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.

6 - Determine an author's point of view or purpose in a text in which the rhetoric is particularly effective, analyzing how style and content contribute to the power, persuasiveness, or beauty of the text.

Integration of Knowledge and Ideas (11-12)

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.

8 - Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).

Range of Reading and Level of Text Complexity (11-12)

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.

Science

Social Studies

Writing

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- ☐ Think Creatively
- ☐ Work Creatively with Other
- ☐ Implement Innovations

Creative Thinking and Problem Solving

- ☒ Reason Effectively
- ☒ Use Systems Thinking
- ☒ Make Judgements and Decisions
- ☒ Solve Problems

Communication and Collaboratio

- ☒ Communicate Clearly
- ☒ Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- ☒ Access and Evaluate Information
- ☒ Use and Manage Information

Media Literacy

- ☒ Analyze Media
- ☒ Create Media Products

Information, Communications, and Technology (ICT Literacy)

- ☒ Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- ☒ Adapt to Change
- ☒ Be Flexible

Initiative and Self-Direction

- ☒ Mange Goals and Time
- ☒ Work Independently
- ☒ Be Self-Directed Learners

Social and Cross-Cultural

- ☐ Interact Effectively with Other
- ☐ Work Effectively in Diverse Teams

Productivity and Accountability

- ☐ Manage Projects
- ☒ Produce Results

Leadership and Responsibility

- ☐ Guide and Lead Others
- ☐ Be Responsible to Others

Unit 3 3'D MODELING PROBLEM SOLVING	Hours: 30
Performance Assessment(s):	
<p>Summative:</p> <p>All projects are summative varying in difficulty and are 3'd models that are modeled, rendered, 3'd printed and animated:</p> <p>Extruded Revolved Lathed Jewelry Kinetic Object 3'd Geometric Design 3'd puzzle</p> <p>Some of these projects are individual projects, some are team</p>	
Leadership Alignment:	
<p>TSA Competitions that relate and are directly used within the CTSO based on the modeling needs of these competitions: Architectural Renovation, Computer--Aided Design (CAD) 3D, Engineering, Computer--, Aided Design (CAD) 2D, Architecture, Computer--Aided Design (CAD) 2D, Architecture, Manufacturing Prototype, Manufacturing Prototype, Technical Sketching and Application, Biotechnology Design, SciVis</p>	
Standards and Competencies	
<p>Standard E: Color Theory</p> <ol style="list-style-type: none"> 1. Explain additive and subtractive color theory. 2. Explain the effect of lighting on color perception. 3. Explain the effect of the surround on color perception. 4. Explain the significance of standard viewing conditions in the graphic communications industry. 5. Explain the influence of the substrate on color reproduction. <p>Standard I: Measurement</p> <ol style="list-style-type: none"> 1. Measure linear dimensions for printing materials in inches and fractions of inches. 2. Measure type in points and line length in picas. 4. Measure original images for reduction and enlargement using various methods to determine the percentage for final reproduction. <p>Standard J: Basic Math</p> <ol style="list-style-type: none"> 1. Solve addition of whole number problems—two and three digits. 2. Solve addition of fraction problems. 3. Solve addition of decimal problems—two and three digits. 4. Solve subtraction of whole number problems—two and three digits. 5. Solve subtraction of fraction problems. 6. Solve subtraction of decimal problems—two and three digits. 7. Solve multiplication of whole numbers—two and three digits. 8. Solve multiplication of decimal problems—two and three digits. 9. Solve division of whole number problems—two and three digits. <p>Standard O: Digital Illustration</p> <ol style="list-style-type: none"> 1. Demonstrate an understanding of the differences between raster and vector files. 2. Use the appropriate graphics program to create a design or logo using manipulated type (rotated, circled, extended, tints and fills, etc.). 3. Create or trace drawings/photographs using a vector illustration program. 	

4. Create or edit images in a raster based program using layers; transparencies; layer modes; masks; and, selections, etc.
5. Create a spot color illustration or logo using Pantone Matching System® (PMS) or other color matching system, and view or print separations.
6. Demonstrate a functional knowledge of computer menus, shortcut keys, and palettes in illustration software.
7. Create a single color vector graphic.
8. Create a vector graphic using tints, fills, and color.
9. Create a vector graphic using manipulated type.
11. Edit an existing piece of vector art.

Standard P: Design Principles

1. Identify the basic principles of design (i.e., unity; contrast; proportions; balance; emphasis; and, rhythm).
2. Identify the basic elements of design (i.e., line; shape; direction; size; texture; value; and, color).
3. Create thumbnails and rough drafts by sketching. Use markers or colored pencils to show color.
4. Pitch a concept to demonstrate an understanding of the relationship between message; color; typography; images; and, layout.
5. Brainstorm keywords for a design concept based on customer need and target audience.
6. Demonstrate an understanding of color theory by describing primary, secondary, and tertiary colors including hue, tint, value and shade, and the effect of light and distance on color.
7. Critique a layout to determine if it meets the customer's needs, and suggest improvements.
8. Demonstrate an understanding of corporate identity including how branding affects consumer recognition.
9. Demonstrate an understanding of color relationships (complimentary, analogous, monochromatic, etc.).
10. Create a storyboard to demonstrate a time-based concept.

Standard S: Print Production

10. Operate printing machine and verify printing quality.

Standard V: Visual Techniques Drawing and Painting

1. Demonstrate skills used to define and analyze a given problem
5. Develop compositions and works using non-traditional techniques both printed and linear graphics (TV commercials, videos, etc)
8. Illustration – Materials, styles, techniques.

Standard W: Concept Development

1. Brainstorming,
2. Concept sketching
3. Thumbnails
4. Roughs
5. Mockups
6. Aesthetics

Standard X: Portfolio

1. Explore and identify content of a professional portfolio
2. Select, organize, develop and refine a marketable portfolio

Standard WR 2: Personal Success

WR-2.1 Implement effective study skills for academic success;

WR-2.2 Develop personal goals using SMART (Specific Measurable Attainable Realistic Timely), objectives and strategies.

WR-2.3 Use interpersonal skills to facilitate effective teamwork;

WR-2.4 Use a problem-solving model and critical-thinking skills to make informed decisions;

Standard WR 6: Teamwork and Cooperation

WR-6.1 Employ leadership skills to accomplish organizational goals and objectives.

WR-6.2 Establish and maintain effective working relationships with others in order to accomplish objectives and tasks.

WR-6.3 Conduct and participate in meetings to accomplish work tasks.

WR-6.4 Employ mentoring skills to inspire and teach others.
 WR-6.5 Cooperates rather than compete with team members
 WR-6.6 Offers/seeks suggestions, opinions, and information to team members.
 WR-6.7 Listens to and considers the ideas of team members.
 WR-6.8 Supports group decision even if not in total agreement.
 WR-6.9 Communicates changes or problems to team members.
 WR-6.10 Treat everybody with respect and understanding
 Standard WR 7: Ethics and Legal responsibilities
 WR-7.1 Evaluate and justify decisions based on ethical reasoning.
 WR-7.2 Evaluate alternative responses to workplace situations based on personal, professional, ethical, legal responsibilities, and employer policies.
 WR-7.5 Collaborate with classmates in researching or reviewing an Acceptable Use Policy
 WR-7.6 Internet search (optional)
 WR-7.7 Responsibilities of Internet use (using the Internet efficiently and ethically for work, identifying the risks of posting personal and work information on the internet, social networking sites, job search sites, taking measures to avoid internet security risks such as viruses, malware)
 WR-7.8 Discuss legal issues associated with locating and retrieving information from the internet
 WR-7.9 Understand Acceptable Use Policy, Copyright and Fair Use Laws
 WR-7.10 Conduct research on the Internet and correctly identify sit sources in bibliography
 WR-7.13 Understand Intellectual Properties rights

Aligned to Washington State Standards

Arts

Arts 1.0 The student understands and applies arts knowledge and skills in dance, music, theare, and visual arts.

- 1.1 Understands and applies arts concepts and vocabulary.
- 1.2 Develops arts skills and techniques.
- 1.3 Understands and applies arts genres and styles from various artists, cultures, and times.
- 1.4 Understands and applies audience conventions in a variety of arts settings and performances.

Arts 2.0 The student demonstrates thinking skills using artistic processes.

2.1. Applies a creative process to the arts (dance, music, theatre and visual arts):

- Identifies audience and purpose.
- Explores, gathers, and interprets information from diverse sources.
- Uses ideas, foundations, skills and techniques to develop dance, music, theatre and visual art.
- Implements choices of arts elements, principles, foundations, skills, and techniques in a creative work.
- Reflects for the purpose of self-evaluation and improvement of the creative work.
- Refines work based on feedback, self-reflection, and aesthetic criteria.
- Presents work to others in a performance, exhibition, and/or production.
- Performs work for others in a performance and/or production.

2.2 Applies a performance and/or presentation process to the arts (dance, music, theatre and visual arts):

- Identifies audience and purpose of the work and/or performance.
- Selects artistic resources, materials and/or repertoire to create, perform and present.
- Analyzes the structure, context and/or aesthetics of the work.
- Interprets meaning through personal understanding of the work and/or performance.
- Rehearses, adjusts, and refines through evaluation, reflection and problem solving.
- Presents, exhibits, and produces work and/or performance for others.
- Reflects and self-evaluates work and/or performance to set goals.

2.3 Applies a responding process to an arts performance and/or presentation of dance, music, theatre and visual arts):

- Engages the senses actively and purposefully in perceiving the work.
- Describes what is seen, felt and/or heard (perceived/experienced).
- Interprets meaning based on personal experiences and knowledge.
- Evaluates and justifies using supportive evidence and aesthetic criteria.
- Applies a responding process to an arts presentation working towards independence with teacher mentoring.

Arts 3.0 The student communicates through the arts.

3.1 Uses the arts to express feelings and present ideas.

3.2 Uses the arts to communicate for a specific purpose.

3.3. Develops personal aesthetic criteria to communicate artistic choices.

Communication - Speaking and Listening

Health and Fitness

Language

Mathematics

CC: Geometry (G)

Congruence (G-CO)

- 1 - Know precise definitions of angle, circle, perpendicular line, parallel line, and line segment, based on the undefined notions of point, line, distance along a line, and distance around a circular arc.
- 2 - Represent transformations in the plane using, e.g., transparencies and geometry software; describe transformations as functions that take points in the plane as inputs and give other points as outputs. Compare transformations that preserve distance and angle to those that do not (e.g., translation versus horizontal stretch).
- 3 - Given a rectangle, parallelogram, trapezoid, or regular polygon, describe the rotations and reflections that carry it onto itself.
- 4 - Develop definitions of rotations, reflections, and translations in terms of angles, circles, perpendicular lines, parallel lines, and line segments.
- 5 - Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another.
- 6 - Use geometric descriptions of rigid motions to transform figures and to predict the effect of a given rigid motion on a given figure; given two figures, use the definition of congruence in terms of rigid motions to decide if they are congruent.
- 13 - Construct an equilateral triangle, a square, and a regular hexagon inscribed in a circle.

Modeling with Geometry (G-MG)

- 1 - Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).*
- 2 - Apply concepts of density based on area and volume in modeling situations (e.g., persons per square mile, BTUs per cubic foot).*

Reading

CC: Reading Informational Text

Key Ideas and Details (9-10)

- 1 - Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- 2 - Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.
- 3 - Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Integration of Knowledge and Ideas (9-10)

- 7 - Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.
- 8 - Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.
- 9 - Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter From Birmingham Jail"), including how they address related themes and concepts.

Science

Social Studies

Writing

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- ☒ Think Creatively
- ☒ Work Creatively with Other
- ☒ Implement Innovations

Creative Thinking and Problem Solving

- ☒ Reason Effectively
- ☒ Use Systems Thinking
- ☒ Make Judgements and Decisions
- ☒ Solve Problems

Communication and Collaboratio

- ☒ Communicate Clearly
- ☒ Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- ☒ Access and Evaluate Information
- ☒ Use and Manage Information

Media Literacy

- ☒ Analyze Media
- ☒ Create Media Products

Information, Communications, and Technology (ICT Literacy)

- ☒ Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- ☒ Adapt to Change
- ☒ Be Flexible

Initiative and Self-Direction

- ☒ Mange Goals and Time
- ☒ Work Independently
- ☒ Be Self-Directed Learners

Social and Cross-Cultural

- ☒ Interact Effectively with Other
- ☒ Work Effectively in Diverse Teams

Productivity and Accountability

- ☒ Manage Projects
- ☒ Produce Results

Leadership and Responsibility

- ☒ Guide and Lead Others
- ☒ Be Responsible to Others

Unit 4 CAREERS / LEADERSHIP	Hours: 15
Performance Assessment(s):	
<p>Formative</p> <p>Research career</p> <p>Research personal skills</p> <p>Summative</p> <p>Presentation of career</p> <p>10 year plan related to a visual Communication Skills</p> <p>Cover letter</p> <p>Resume</p> <p>Interviewing skills</p>	
Leadership Alignment:	
TSA Competitions that relate and are directly used within the CTSO: Career Preparation, Future Technology Teacher, leadership training, chapter team	
Standards and Competencies	
<p>Standard WR 1: Career Planning</p> <p>WR-1.1 Complete, discuss, and analyze the results of personality, career interest, and aptitude assessments;</p> <p>WR-1.2 Explore the career clusters as defined by the U.S. Department of Education and summarize the career opportunities in a cluster of personal interest;</p> <p>WR-1.3 Create a personal career portfolio including academic, certification and technical-skill requirement, career opportunities, expected wages, skills and aptitude necessary and the impact of technology on careers of personal interest.</p> <p>WR-1.4 Determine academic/training or certification requirements for transition from one learning level to the next and explore opportunities for earning credit/certifications in high school such as advanced placement, tech prep, International Baccalaureate, college in the high school, military and apprenticeship opportunities.</p> <p>WR-1.5 Develop and analyze tables, charts, and graphs related to career interests and make oral presentation regarding the career pathway of your choice.</p> <p>WR-1.6 Develop an awareness of financial aid, scholarships, and other sources of income to support postsecondary education/training and discuss the impact of effective college and career planning.</p> <p>WR-1.7 Identify how performance on assessments such as the SAT®, ACT®, ASVAB®, COMPASS® and ACCUPLACER® impact personal academic and career goals.</p> <p>WR-1.8 Prepare a personal budget reflecting desired lifestyle and compare and contrast at least three careers of interest in regards to salary expectations and education/training costs.</p> <p>WR-1.9 Prepare a program of study for at least one career of interest</p> <p>WR-1.10 Apply knowledge gained from individual assessment to a set of goals and a career plan</p> <p>WR-1.11 Develop strategies to make an effective transition from school to career</p> <p>WR-1.13 Identify industry certification opportunities</p> <p>Standard WR 2: Personal Success</p> <p>WR-2.1 Implement effective study skills for academic success;</p> <p>WR-2.3 Use interpersonal skills to facilitate effective teamwork;</p> <p>WR-2.4 Use a problem-solving model and critical-thinking skills to make informed decisions;</p> <p>WR-2.5 Use effective time-management and goal-setting strategies;</p> <p>WR-2.6 Effectively use information and communication technology tools; and</p> <p>WR-2.7 Identify skills that can be transferable among a variety of careers.</p> <p>WR-2.8 Create and complete appropriate documents such as electronic portfolio, personal resumé, employment application, letter of intent, letters of recommendation and thank you letters.</p> <p>WR-2.9 Complete job search documents, including job applications and W-4 forms;</p>	

WR-2.10 Demonstrate proper interview techniques in various situations;

Standard WR 3: Employability and Entrepreneurship

WR-3.1 Demonstrate effective verbal, nonverbal, written, and electronic communication skills;

WR-3.2 Evaluate the impact of positive and negative personal choices, including use of electronic communications such as social networking sites;

WR-3.3 Model characteristics of effective leadership, teamwork, and conflict management;

WR-3.4 Recognize the importance of a healthy lifestyle, including the ability to manage stress;

WR-3.5 Explore and model characteristics necessary for professional success such as work ethics, integrity, dedication, perseverance, and the ability to interact with a diverse population; and

WR-3.6 Complete activities using project- and time-management techniques.

WR-3.7 Identify and model appropriate grooming and appearance for the workplace;

WR-3.8 Demonstrate dependability, punctuality, and initiative;

WR-3.9 Research positive interpersonal skills, including respect for diversity;

WR-3.11Exhibit productive work habits, ethical practices, and a positive attitude;

WR-3.12Demonstrate the ability to work with the other employees to support the organization and complete assigned tasks;

WR-3.13Demonstrate willingness to learn and further develop skills

WR-3.14Describe the importance of having a positive attitude and techniques that boost morale

WR-3.16Explain the importance of setting goals and demonstrate the ability to set, reach, and evaluate goals

WR-3.17 Explain the importance of taking pride in work accomplished and extrinsic and intrinsic motivators that can be used to increase pride

WR-3.19 Research and compare published workplace policies and procedures;

Standard WR 4: Problem Solving

WR-4.1 Employ critical thinking skills independently and in teams to solve problems and make decisions.

WR-4.2 Employ critical thinking and interpersonal skills to resolve conflicts.

WR-4.3 Identify and document workplace performance goals and monitor progress toward those goals

WR-4.4 Conduct technical research to gather information necessary for decision-making

WR-4.5 Explain the importance and dynamics of individual and teamwork approaches of problem solving

WR-4.6 Describe methods of researching and validating reliable information relevant to the problem

WR-4.7 Explain strategies used to formulate ideas, proposals and solutions to problems

WR-4.8 Select potential solutions based on reasoned criteria

WR-4.9 Implement and evaluate solution(s)

Aligned to Washington State Standards

Arts

Arts 4.0 The student makes connections within and across the arts to other disciplines, life, cultures and work.

- 4.1. Demonstrates and analyzes the connections among the arts disciplines.
- 4.2. Demonstrates and analyzes the connections between the arts and other content areas.
- 4.3. Understands how the arts impact and reflect personal choices throughout life
- 4.4. Understands how the arts influence and reflect culture/civilization, place and time.
- 4.5. Understands how arts knowledge and skills are used in the world of work including careers in the arts.

Communication - Speaking and Listening

Health and Fitness

Language

Conventions of Standard English (9-10)

1 - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

1a - Use parallel structure.*

1b - Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.

2 - Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

2a - Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.

2b - Use a colon to introduce a list or quotation.

2c - Spell correctly.

Knowledge of Language (9-10)

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.

3a - Write and edit work so that it conforms to the guidelines in a style manual (e.g., MLA Handbook, Turabian's Manual for Writers) appropriate for the discipline and writing type.

Vocabulary Acquisition and Use (9-10)

4 - Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies.

4a - 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.

4b - Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy).

4c - 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, or its etymology.

4d - 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.

5a - Interpret figures of speech (e.g., satire, sarcasm) in context and analyze their role in the text.

5b - Analyze nuances in the meaning of words with similar denotations.

Knowledge of Language (11-12)

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.

3a - Vary syntax for effect, consulting references (e.g., Tufte's Artful Sentences) for guidance as needed; apply an understanding of syntax to the study of complex texts when reading.

Vocabulary Acquisition and Use (11-12)

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.

4a - 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.

4b - Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., conceive, conception, conceivable).

4c - 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.

4d - 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.

5a - Interpret figures of speech (e.g., hyperbole, paradox) in context and analyze their role in the text.

5b - 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.

Mathematics

Reading

CC: Reading Informational Text

Key Ideas and Details (9-10)

1 - Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
2 - Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

3 - Analyze how the author unfolds an analysis or series of ideas or events, including the order in which the points are made, how they are introduced and developed, and the connections that are drawn between them.

Integration of Knowledge and Ideas (9-10)

7 - Analyze various accounts of a subject told in different mediums (e.g., a person's life story in both print and multimedia), determining which details are emphasized in each account.

8 - Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

9 - Analyze seminal U.S. documents of historical and literary significance (e.g., Washington's Farewell Address, the Gettysburg Address, Roosevelt's Four Freedoms speech, King's "Letter From Birmingham Jail"), including how they address related themes and concepts.

Key Ideas and Details (11-12)

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.

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.

Integration of Knowledge and Ideas (11-12)

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.

8 - Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).

Science

Social Studies

Writing

CC: College and Career Readiness Anchor Standards for Writing

Text Types and Purposes

2 - Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

4 - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

5 - Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.

6 - Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.

Research to Build and Present Knowledge

- 7 - Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- 8 - Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- 9 - Draw evidence from literary or informational texts to support analysis, reflection, and research.

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- ☒ Think Creatively
- ☒ Work Creatively with Other
- ☒ Implement Innovations

Creative Thinking and Problem Solving

- ☒ Reason Effectively
- ☒ Use Systems Thinking
- ☒ Make Judgements and Decisions
- ☒ Solve Problems

Communication and Collaboratio

- ☐ Communicate Clearly
- ☒ Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- ☒ Access and Evaluate Information
- ☒ Use and Manage Information

Media Literacy

- ☒ Analyze Media
- ☒ Create Media Products

Information, Communications, and Technology (ICT Literacy)

- ☒ Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- ☒ Adapt to Change
- ☒ Be Flexible

Initiative and Self-Direction

- ☒ Mange Goals and Time
- ☒ Work Independently
- ☒ Be Self-Directed Learners

Social and Cross-Cultural

- ☒ Interact Effectively with Other
- ☒ Work Effectively in Diverse Teams

Productivity and Accountability

- ☒ Manage Projects
- ☒ Produce Results

Leadership and Responsibility

- ☒ Guide and Lead Others
- ☒ Be Responsible to Others

Unit 5 PORTFOLIO DEVELOPMENT	Hours: 15
Performance Assessment(s):	
<p>Formative</p> <p>Peer Critique Techniques</p> <p>Self Evaluation Process</p> <p>Summative</p> <p>Final Self Portfolio Evaluation</p> <p>Final Peer Portfolio Evaluation</p> <p>Artist Statement</p>	
Leadership Alignment:	
TSA Competitions that relate and are directly used within the CTSO: Digital Video Production, Photographic Technology, Promotional Graphics, Video Game Design, Webmaster, On Demand Video	
Standards and Competencies	
<p>Standard E: Color Theory</p> <ol style="list-style-type: none"> 1. Explain additive and subtractive color theory. 2. Explain the effect of lighting on color perception. 3. Explain the effect of the surround on color perception. 4. Explain the significance of standard viewing conditions in the graphic communications industry. 5. Explain the influence of the substrate on color reproduction. <p>Standard P: Design Principles</p> <ol style="list-style-type: none"> 1. Identify the basic principles of design (i.e., unity; contrast; proportions; balance; emphasis; and, rhythm). 2. Identify the basic elements of design (i.e., line; shape; direction; size; texture; value; and, color). 3. Create thumbnails and rough drafts by sketching. Use markers or colored pencils to show color. 4. Pitch a concept to demonstrate an understanding of the relationship between message; color; typography; images; and, layout. 5. Brainstorm keywords for a design concept based on customer need and target audience. 6. Demonstrate an understanding of color theory by describing primary, secondary, and tertiary colors including hue, tint, value and shade, and the effect of light and distance on color. 7. Critique a layout to determine if it meets the customer's needs, and suggest improvements. 8. Demonstrate an understanding of corporate identity including how branding affects consumer recognition. 9. Demonstrate an understanding of color relationships (complimentary, analogous, monochromatic, etc.). 10. Create a storyboard to demonstrate a time-based concept. <p>Standard V: Visual Techniques Drawing and Painting</p> <ol style="list-style-type: none"> 1. Demonstrate skills used to define and analyze a given problem 2. Explain the importance and dynamics of individual and teamwork approaches of problem solving 3. Develop thematic compositions using a variety of techniques (sketchbooks) 5. Develop compositions and works using non-traditional techniques both printed and linear graphics (TV commercials, videos, etc) 8. Illustration – Materials, styles, techniques. <p>Standard W: Concept Development</p> <ol style="list-style-type: none"> 1. Brainstorming, 2. Concept sketching 3. Thumbnails 	

4. Roughs
5. Mockups
6. Aesthetics

Standard X: Portfolio

1. Explore and identify content of a professional portfolio
2. Select, organize, develop and refine a marketable portfolio

Aligned to Washington State Standards

Arts

Arts 1.0 The student understands and applies arts knowledge and skills in dance, music, theatre, and visual arts.

- 1.1 Understands and applies arts concepts and vocabulary.
- 1.2 Develops arts skills and techniques.
- 1.3 Understands and applies arts genres and styles from various artists, cultures, and times.
- 1.4 Understands and applies audience conventions in a variety of arts settings and performances.

Arts 2.0 The student demonstrates thinking skills using artistic processes.

- 2.1. Applies a creative process to the arts (dance, music, theatre and visual arts):
 - Identifies audience and purpose.
 - Explores, gathers, and interprets information from diverse sources.
 - Uses ideas, foundations, skills and techniques to develop dance, music, theatre and visual art.
 - Implements choices of arts elements, principles, foundations, skills, and techniques in a creative work.
 - Reflects for the purpose of self-evaluation and improvement of the creative work.
 - Refines work based on feedback, self-reflection, and aesthetic criteria.
 - Presents work to others in a performance, exhibition, and/or production.
 - Performs work for others in a performance and/or production.
- 2.2 Applies a performance and/or presentation process to the arts (dance, music, theatre and visual arts):
 - Identifies audience and purpose of the work and/or performance.
 - Selects artistic resources, materials and/or repertoire to create, perform and present.
 - Analyzes the structure, context and/or aesthetics of the work.
 - Interprets meaning through personal understanding of the work and/or performance.
 - Rehearses, adjusts, and refines through evaluation, reflection and problem solving.
 - Presents, exhibits, and produces work and/or performance for others.
 - Reflects and self-evaluates work and/or performance to set goals.
- 2.3 Applies a responding process to an arts performance and/or presentation of dance, music, theatre and visual arts):
 - Engages the senses actively and purposefully in perceiving the work.
 - Describes what is seen, felt and/or heard (perceived/experienced).
 - Interprets meaning based on personal experiences and knowledge.
 - Evaluates and justifies using supportive evidence and aesthetic criteria.
 - Applies a responding process to an arts presentation working towards independence with teacher mentoring.

Arts 3.0 The student communicates through the arts.

- 3.1 Uses the arts to express feelings and present ideas.
- 3.2 Uses the arts to communicate for a specific purpose.
- 3.3. Develops personal aesthetic criteria to communicate artistic choices.

Arts 4.0 The student makes connections within and across the arts to other disciplines, life, cultures and work.

- 4.1. Demonstrates and analyzes the connections among the arts disciplines.

4.2. Demonstrates and analyzes the connections between the arts and other content areas.

Communication - Speaking and Listening

Health and Fitness

Language

Conventions of Standard English (9-10)

1 - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

1a - Use parallel structure.*

1b - Use various types of phrases (noun, verb, adjectival, adverbial, participial, prepositional, absolute) and clauses (independent, dependent; noun, relative, adverbial) to convey specific meanings and add variety and interest to writing or presentations.

2 - Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

2a - Use a semicolon (and perhaps a conjunctive adverb) to link two or more closely related independent clauses.

2b - Use a colon to introduce a list or quotation.

2c - Spell correctly.

Knowledge of Language (9-10)

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.

3a - Write and edit work so that it conforms to the guidelines in a style manual (e.g., MLA Handbook, Turabian's Manual for Writers) appropriate for the discipline and writing type.

Vocabulary Acquisition and Use (9-10)

4 - Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9–10 reading and content, choosing flexibly from a range of strategies.

4a - 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.

4b - Identify and correctly use patterns of word changes that indicate different meanings or parts of speech (e.g., analyze, analysis, analytical; advocate, advocacy).

4c - 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, or its etymology.

4d - 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.

5a - Interpret figures of speech (e.g., satire, sarcasm) in context and analyze their role in the text.

5b - 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

Mathematics
Reading
Science
Social Studies
Writing
<p><u>CC: Writing (9-10)</u></p> <p>3 - Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p> <p>3a - Engage and orient the reader by setting out a problem, situation, or observation, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.</p> <p>3b - Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.</p> <p>3c - Use a variety of techniques to sequence events so that they build on one another to create a coherent whole.</p> <p>3d - Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.</p> <p>3e - Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.</p> <p><u>Production and Distribution of Writing</u></p> <p>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.)</p> <p>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 on up to and including grades 9-10 page 55.)</p> <p>6 - Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology’s capacity to link to other information and to display information flexibly and dynamically.</p>

21st Century Skills

LEARNING AND INNOVATION

Creativity and Innovation

- ☒ Think Creatively
- ☒ Work Creatively with Other
- ☒ Implement Innovations

Creative Thinking and Problem Solving

- ☒ Reason Effectively
- ☒ Use Systems Thinking
- ☒ Make Judgements and Decisions
- ☒ Solve Problems

Communication and Collaboratio

- ☒ Communicate Clearly
- ☒ Collaborate with Others

INFORMATION, MEDIA AND TECHNOLOGY SKILLS

Information Literacy

- ☒ Access and Evaluate Information
- ☒ Use and Manage Information

Media Literacy

- ☒ Analyze Media
- ☒ Create Media Products

Information, Communications, and Technology (ICT Literacy)

- ☒ Apply Technology Effectively

LIFE AND CAREER SKILLS

Flexibility and Adaptability

- ☒ Adapt to Change
- ☒ Be Flexible

Initiative and Self-Direction

- ☒ Mange Goals and Time
- ☒ Work Independently
- ☒ Be Self-Directed Learners

Social and Cross-Cultural

- ☒ Interact Effectively with Other
- ☒ Work Effectively in Diverse Teams

Productivity and Accountability

- ☒ Manage Projects
- ☒ Produce Results

Leadership and Responsibility

- ☒ Guide and Lead Others
- ☒ Be Responsible to Others