

**COURSE TITLE**

Art By Computer Design

**LENGTH**

Half Year  
Grade 9, 10, 11, and/or 12

**DEPARTMENT**

Fine, Practical & Performing Arts  
Brian Ersalesi, Supervisor of English Language Arts and Fine, Practical & Performing Arts

**SCHOOL**

Rutherford High School

**DATE**

Initial Approval: June 15, 2015  
Latest Revision: September 10, 2018

# **Art By Computer Design**

## **I. Introduction/Overview/Philosophy**

In Art by Computer Design, computer technology will be used as a vehicle to further explore the elements and principles of design introduced in Basic Drawing and Design 1. Original art work will be produced using the computer. Photoshop and Illustrator software applications will be used to manipulate images created in traditional media to create new and original computer-generated art forms. Graphic design skills will be stressed.

## II. Objectives

### Course Outline:

- A. Introduction to programs
  - a. Raster versus vector programs
  - b. Elements and principles of design
  - c. Composition
  
- B. Adobe Illustrator
  - a. Concepts:
    - 1. Black and white design
    - 2. Color design
    - 3. Positive and negative space
    - 4. Layout
    - 5. Logo design
    - 6. Adding text
    - 7. Patterns
    - 8. Perspective (1- and 2-point)
    - 9. Matting/final presentation
  
  - b. Computer:
    - 1. Document
    - 2. Toolbox
      - a. Drawing tools
      - b. Type tools
      - c. Fill/stroke
      - d. Live Trace
      - e. Live Paint
      - f. Colors and gradient
    - 3. Panels
    - 4. Layers
    - 5. Colors and gradients
    - 6. Patterns
    - 7. Filters and effects
    - 8. Image adjustments
    - 9. Scanning
    - 10. Saving/printing
  
- C. Adobe Photoshop
  - a. Concepts:
    - 1. Composition
    - 2. Color application
    - 3. Layout
    - 4. Type
    - 5. Image adjustments
    - 6. Presentation/matting

b. Computer:

1. Document layout
2. Toolbox
  - a. Selection tools
  - b. Type tools
  - c. Drawing tools
  - d. Transform tools
  - e. Adjustment tools
3. Palettes
4. Color selection
5. Layers
6. Filters
7. Scanner/digital camera connection
8. Printing

**Student Outcomes:**

After successfully completing this course, the student will be able to:

- acquire knowledge and skills that increase aesthetic awareness in visual arts.
- refine perceptual, intellectual, physical, and technical skills through creating visual arts.
- utilize arts elements and arts media to produce artistic products and performances.
- demonstrate knowledge of the process of critique.
- develop design skills for planning the form and function of space, structures and objects.
- define common Illustrator and Photoshop terminology.
- distinguish the difference between a raster and vector based program.
- transform an original sketch into a digital image.
- develop technical skills in using the computer and scanner.
- demonstrate knowledge and implementation in Adobe Photoshop and Illustrator.
- develop career planning and workplace readiness skills.
- demonstrate self-management skills.
- apply safety principles.
- Create a portfolio of 2-dimensional works that apply the elements and principles of design with personal meaning or an overarching theme

**NEW JERSEY STUDENT LEARNING STANDARDS  
VISUAL AND PERFORMING ARTS**

**STANDARD 1.1: THE CREATIVE PROCESS: ALL STUDENTS WILL DEMONSTRATE AN UNDERSTANDING OF THE ELEMENTS AND PRINCIPLES THAT GOVERN THE CREATION OF WORKS OF ART IN DANCE, MUSIC, THEATRE, AND VISUAL ART.**

**Strand D. Visual Art**

1.1.12.D.1 - Distinguish innovative applications of the elements of art and principles of design in visual artworks from diverse cultural perspectives and identify specific cross-cultural themes.

1.1.12.D.2 - Translate literary, musical, theatrical, and dance compositions by using them as stimulus/inspiration for corresponding visual artworks.

**STANDARD 1.2: HISTORY OF THE ARTS AND CULTURE: ALL STUDENTS WILL UNDERSTAND THE ROLE, DEVELOPMENT, AND INFLUENCE OF THE ARTS THROUGHOUT HISTORY AND ACROSS CULTURES.**

**Strand A. History of the Arts and Culture**

1.2.12.A.1 - Determine how dance, music, theatre, and visual art have influenced world cultures throughout history.

1.2.12.A.2 - Justify the impact of innovations in the arts (e.g., the availability of music online) on societal norms and habits of mind in various historical eras.

**STANDARD 1.3: PERFORMANCE: ALL STUDENTS WILL SYNTHESIZE THOSE SKILLS, MEDIA, METHODS, AND TECHNOLOGIES APPROPRIATE TO CREATING, PERFORMING, AND/OR PRESENTING WORKS OF ART IN DANCE, MUSIC, THEATRE, AND VISUAL ART.**

**Strand D. Visual Art**

1.3.12.D.1 - Synthesize the elements of art and principles of design in an original portfolio of two- and three-dimensional artworks that reflects personal style and a high degree of technical proficiency and expressivity.

1.3.12.D.2 - Produce an original body of artwork in one or more art mediums that demonstrates mastery of visual literacy, methods, techniques, and cultural understanding.

1.3.12.D.3 - Organize an exhibit of personal works of visual art that convey a high level of understanding of how the expression of ideas relates to the art media, art mediums, and techniques used.

1.3.12.D.4 - Analyze the syntax and compositional and stylistic principles of two- and three-dimensional artworks in multiple art media (including computer-assisted artwork), and interpret themes and symbols suggested by the artworks.

1.3.12.D.5 - Identify the styles and artistic processes used in the creation of culturally and historically diverse two- and three-dimensional artworks, and emulate those styles by creating an original body of work.

**STANDARD 1.4: AESTHETIC RESPONSES & CRITIQUE METHODOLOGIES: ALL STUDENTS WILL DEMONSTRATE AND APPLY AN UNDERSTANDING OF ARTS PHILOSOPHIES, JUDGEMENT, AND ANALYSIS TO WORK OF ART IN DANCE, MUSIC, THEATRE, AND VISUAL ART.**

**Strand A. Aesthetic Responses**

1.4.12.A.1 - Use contextual clues to differentiate between unique and common properties and to discern the cultural implications of works of dance, music, theatre, and visual art.

1.4.12.A.2 - Speculate on the artist's intent, using discipline-specific arts terminology and citing embedded clues to substantiate the hypothesis.

1.4.12.A.3 - Develop informed personal responses to an assortment of artworks across the four arts disciplines (dance, music, theatre, and visual art), using historical significance, craftsmanship, cultural context, and originality as criteria for assigning value to the works.

1.4.12.A.4 - Evaluate how exposure to various cultures influences individual, emotional, intellectual, and kinesthetic responses to artwork.

**Strand B. Critique Methodologies**

1.4.12.B.1 - Formulate criteria for arts evaluation using the principles of positive critique and observation of the elements of art and principles of design, and use the criteria to evaluate works of dance, music, theatre, visual, and multimedia artwork from diverse cultural contexts and historical eras.

1.4.12.B.2 - Evaluate how an artist's technical proficiency may affect the creation or presentation of a work of art, as well as how the context in which a work is performed or shown may impact perceptions of its significance/meaning.

1.4.12.B.3 - Determine the role of art and art-making in a global society by analyzing the influence of technology on the visual, performing, and multimedia arts for consumers, creators, and performers around the world.

**21ST CENTURY LIFE AND CAREERS  
CAREER READY PRACTICES*****CRP1 Act as a responsible and contributing citizen and employee***

Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

***CRP2 Apply appropriate academic and technical skills***

Career-ready individuals readily access and use the knowledge and skills acquired through experience and education to be more productive. They make connections between abstract concepts with real-world applications, and they make correct insights about when it is appropriate to apply the use of an academic skill in a workplace situation

***CRP3 Attend to personal health and financial well-being***

Career-ready individuals understand the relationship between personal health, workplace performance and personal well-being; they act on that understanding to regularly practice healthy diet, exercise and mental health activities. Career-ready individuals also take regular action to contribute to their personal financial wellbeing, understanding that personal financial security provides the peace of mind required to contribute more fully to their own career success.

***CRP4 Communicate clearly and effectively and with reason.***

Career-ready individuals communicate thoughts, ideas, and action plans with clarity, whether using written, verbal, and/or visual methods. They communicate in the workplace with clarity and purpose to make maximum use of their own and others' time. They are excellent writers; they master conventions, word choice, and organization, and use effective tone and presentation skills to articulate ideas. They are skilled at interacting with others; they are active listeners and speak clearly and with purpose. Career-ready individuals think about the audience for their communication and prepare accordingly to ensure the desired outcome.

***CRP5 Consider the environmental, social and economic impacts of decisions.***

Career-ready individuals understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.

***CRP6 Demonstrate creativity and innovation***

Career-ready individuals regularly think of ideas that solve problems in new and different ways, and they contribute those ideas in a useful and productive manner to improve their organization. They can consider unconventional ideas and suggestions as solutions to issues, tasks or problems, and they discern which ideas and suggestions will add greatest value. They seek new methods, practices, and ideas from a variety of sources and seek to apply those ideas to their own workplace. They take action on their ideas and understand how to bring innovation to an organization.

***CRP7 Employ valid and reliable research strategies***



Career-ready individuals are discerning in accepting and using new information to make decisions, change practices or inform strategies. They use reliable research process to search for new information. They evaluate the validity of sources when considering the use and adoption of external information or practices in their workplace situation.

***CRP8 Utilize critical thinking to make sense of problems and persevere in solving them***

Career-ready individuals readily recognize problems in the workplace, understand the nature of the problem, and devise effective plans to solve the problem. They are aware of problems when they occur and take action quickly to address the problem; they thoughtfully investigate the root cause of the problem prior to introducing solutions. They carefully consider the options to solve the problem. Once a solution is agreed upon, they follow through to ensure the problem is solved, whether through their own actions or the actions of others.

***CRP9 Model integrity, ethical leadership and effective management***

Career-ready individuals consistently act in ways that align personal and community-held ideals and principles while employing strategies to positively influence others in the workplace. They have a clear understanding of integrity and act on this understanding in every decision. They use a variety of means to positively impact the directions and actions of a team or organization, and they apply insights into human behavior to change others' action, attitudes and/or beliefs. They recognize the near-term and long-term effects that management's actions and attitudes can have on productivity, morals and organizational culture.

***CRP10 Plan education and career paths aligned to personal goals***

Career-ready individuals take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.

***CRP11 Use technology to enhance productivity***

Career-ready individuals find and maximize the productive value of existing and new technology to accomplish workplace tasks and solve workplace problems. They are flexible and adaptive in acquiring new technology. They are proficient with ubiquitous technology applications. They understand the inherent risks-personal and organizational-of technology applications, and they take actions to prevent or mitigate these risks.

***CRP12 Work productively in teams while using cultural global competence***

Career-ready individuals positively contribute to every team, whether formal or informal. They apply an awareness of cultural difference to avoid barriers to productive and positive interaction. They find ways to increase the engagement and contribution of all team members. They plan and facilitate effective team meetings.

**TECHNOLOGY STANDARDS**

**STANDARD 8.1: EDUCATIONAL TECHNOLOGY: ALL STUDENTS WILL USE DIGITAL TOOLS TO ACCESS, MANAGE, EVALUATE, AND SYNTHESIZE INFORMATION IN ORDER TO SOLVE PROBLEMS INDIVIDUALLY AND COLLABORATE AND TO CREATE AND COMMUNICATE KNOWLEDGE.**

**A. Technology Operations and Concepts:** *Students demonstrate a sound understanding of technology concepts, systems and operations.*

8.1.12.A.1 - Create a personal digital portfolio which reflects personal and academic interests, achievements, and career aspirations by using a variety of digital tools and resources.

8.1.12.A.2 - Produce and edit a multi-page digital document for a commercial or professional audience and present it to peers and/or professionals in that related area for review.

8.1.12.A.3 - Collaborate in online courses, learning communities, social networks or virtual worlds to discuss a resolution to a problem or issue.

8.1.12.A.4 - Construct a spreadsheet workbook with multiple worksheets, rename tabs to reflect the data on the worksheet, and use mathematical or logical functions, charts and data from all worksheets to convey the results.

8.1.12.A.5 - Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.

**B. Creativity and Innovation:** *Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.*

8.1.12.B.2 - Apply previous content knowledge by creating and piloting a digital learning game or tutorial.

**C. Communication and Collaboration:** *Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.*

8.1.12.C.1 - Develop an innovative solution to a real world problem or issue in collaboration with peers and experts, and present ideas for feedback through social media or in an online community.

**D. Digital Citizenship:** *Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.*

8.1.12.D.1 - Demonstrate appropriate application of copyright, fair use and/or Creative Commons to an original work.

8.1.12.D.2 - Evaluate consequences of unauthorized electronic access (e.g., hacking) and disclosure, and on dissemination of personal information.

8.1.12.D.3 - Compare and contrast policies on filtering and censorship both locally and globally.

8.1.12.D.4 - Research and understand the positive and negative impact of one's digital footprint.

8.1.12.D.5 - Analyze the capabilities and limitations of current and emerging technology resources and assess their potential to address personal, social, lifelong learning, and career needs.

**E: Research and Information Fluency:** *Students apply digital tools to gather, evaluate, and use information.*

8.1.12.E.1 - Produce a position statement about a real world problem by developing a systematic plan of investigation with peers and experts synthesizing information from multiple sources.

8.1.12.E.2 - Research and evaluate the impact on society of the unethical use of digital tools and present your research to peers.

**F: Critical thinking, problem solving, and decision making:** *Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.*

8.1.12.F.1 - Evaluate the strengths and limitations of emerging technologies and their impact on educational, career, personal and or social needs.

### **TECHNOLOGY STANDARDS**

**STANDARD 8.2: TECHNOLOGY EDUCATION, ENGINEERING, DESIGN, AND COMPUTATIONAL THINKING – PROGRAMMING: ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE NATURE AND IMPACT OF TECHNOLOGY, ENGINEERING, TECHNOLOGICAL DESIGN, COMPUTATIONAL THINKING, AND THE DESIGNED WORLD AS THEY RELATE TO THE INDIVIDUAL, GLOBAL SOCIETY, AND THE ENVIRONMENT.**

**A. The Nature of Technology: Creativity and Innovation** *Technology systems impact every aspect of the world in which we live.*

8.2.12.A.1 - Propose an innovation to meet future demands supported by an analysis of the potential full costs, benefits, trade-offs and risks, related to the use of the innovation.

8.2.12.A.2 - Analyze a current technology and the resources used, to identify the trade-offs in terms of availability, cost, desirability and waste.

8.2.12.A.3 - Research and present information on an existing technological product that has been repurposed for a different function.

**B. Technology and Society:** *Knowledge and understanding of human, cultural and societal values are fundamental when designing technological systems and products in the global society.*

8.2.12.B.1 - Research and analyze the impact of the design constraints (specifications and limits) for a product or technology driven by a cultural, social, economic or political need and publish for review.

8.2.12.B.2 - Evaluate ethical considerations regarding the sustainability of environmental resources that are used for the design, creation and maintenance of a chosen product.

8.2.12.B.3 - Analyze ethical and unethical practices around intellectual property rights as influenced by human wants and/or needs.

8.2.12.B.4 - Investigate a technology used in a given period of history, e.g., stone age, industrial revolution or information age, and identify their impact and how they may have changed to meet human needs and wants.

8.2.12.B.5 - Research the historical tensions between environmental and economic considerations as driven by human needs and wants in the development of a technological product, and present the competing viewpoints to peers for review.

**C. Design:** *The design process is a systematic approach to solving problems.*

8.2.12.C.1 - Explain how open source technologies follow the design process.

8.2.12.C.2 - Analyze a product and how it has changed or might change over time to meet human needs and wants.

8.2.12.C.3 - Analyze a product or system for factors such as safety, reliability, economic considerations, quality control, environmental concerns, manufacturability, maintenance and repair, and human factors engineering (ergonomics).

8.2.12.C.4 - Explain and identify interdependent systems and their functions.

8.2.12.C.5 - Create scaled engineering drawings of products both manually and digitally with materials and measurements labeled.

8.2.12.C.6 - Research an existing product, reverse engineer and redesign it to improve form and function.

8.2.12.C.7 - Use a design process to devise a technological product or system that addresses a global problem, provide research, identify trade-offs and constraints, and document the process through drawings that include data and materials.

**D. Abilities for a Technological World:** *The designed world is the product of a design process that provides the means to convert resources into products and systems.*

8.2.12.D.1 - Design and create a prototype to solve a real world problem using a design process, identify constraints addressed during the creation of the prototype, identify trade-offs made, and present the solution for peer review.

8.2.12.D.2 - Write a feasibility study of a product to include: economic, market, technical, financial, and management factors, and provide recommendations for implementation.

8.2.12.D.3 - Determine and use the appropriate resources (e.g., CNC (Computer Numerical Control) equipment, 3D printers, CAD software) in the design, development and creation of a technological product or system.

8.2.12.D.4 - Assess the impacts of emerging technologies on developing countries.

8.2.12.D.5 - Explain how material processing impacts the quality of engineered and fabricated products.

8.2.12.D.6 - Synthesize data, analyze trends and draw conclusions regarding the effect of a technology on the individual, society, or the environment and publish conclusions.

**E. Computational Thinking: Programming:** *Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.*

8.2.12.E.1 - Demonstrate an understanding of the problem-solving capacity of computers in our world.

8.2.12.E.2 - Analyze the relationships between internal and external computer components.

8.2.12.E.3 - Use a programming language to solve problems or accomplish a task (e.g., robotic functions, website designs, applications, and games).

8.2.12.E.4 - Use appropriate terms in conversation (e.g., troubleshooting, peripherals, diagnostic software, GUI, abstraction, variables, data types and conditional statements).

**21ST CENTURY LIFE AND CAREERS**

**STANDARD 9.2: CAREER AWARENESS, EXPLORATION, AND PREPARATION**

9.2.12.C.1 – Review career goals and determine steps necessary for attainment.

9.2.12.C.2 – Modify Personalized Student Learning Plans to support declared career goals.

9.2.12.C.3 – Identify transferable career skills and design alternate career plans.

9.2.12.C.4 – Analyze how economic conditions and societal changes influence employment trends and future education.

9.2.12.C.5 – Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.

9.2.12.C.6 – Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.

9.2.12.C.7 – Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.

9.2.12.C.8 – Assess the impact of litigation and court decisions on employment laws and practices.

9.2.12.C.9 – Analyze the correlation between personal and financial behavior and employability.

### **III. Proficiency Levels**

Art by Computer Design is an elective course open to students in Grades 9-12. **Prerequisite:** Basic Drawing and Design 1 or Photography 1.

## **IV. Methods of Assessment**

### **Student Assessment**

- A variety of assessments will be provided including, but not limited to, the following items:
  - Teacher observation
  - Quizzes
  - Homework
  - Sketches/Designs
  - Classwork
  - Class Participation
  - Individual Projects (graded based on the project rubric)
  - Group and individual critiques
  - Progress Indicators
  - Display of student work

### **Curriculum/Teacher Assessment**

The teacher will provide the subject area supervisor with suggestions for changes on an ongoing basis.



## **V. Grouping**

This elective course is opened to students in grades 9-12 who have successfully completed the prerequisite: Basic Drawing and Design I.

## **VI. Articulation/Scope & Sequence/Time Frame**

Art by Computer Design is a one-semester course.

## **VII. Resources**

### ***Texts/Supplemental Reading/References***

#### **Videos**

- [Elements of Design](#)
- [Elements and Principles of Design](#)
- [Commercial Art: General Vol. 1](#)
- [Commercial Art: Media Vol. 2](#)
- [Commercial Art: Design Vol. 3](#)

#### **Books**

- [Design Essentials](#)
- [Computer Graphics](#)
- [Computer Graphics 2](#)
- [Graphic Design Basics](#)
- [Adobe Illustrator CS3 Revealed](#)
- [Adobe Photoshop CS3 Revealed](#)

#### **Materials & Tools Used**

- iMac computers
- Adobe Illustrator Creative Cloud AI
- Adobe Photoshop Creative Cloud AP
- Scanner
- Digital camera
- Matte board
- Matte cutter

## VIII. Suggested Activities

- Preliminary sketches
- Field trips
- Videos/DVD's
- Classroom presentation
- Individual and group critique
- Projects:
  - Adobe Illustrator
    - Positive and Negative Problem
    - Product Patterns
    - Portrait Patterns
    - Object Design
    - Signature Logo Design
    - Company Logo Design
    - Illustrated Words
    - Playing Cards
  - Adobe Photoshop –
    - Color Design
    - Name Problem
    - Road Sign
    - Painterly Photos
    - Surrealism (combining imagery)
    - Color and Sound Problem
    - Sound Into Visual Scanned Image Problem
  - Showcase Final Project

## IX. Methodologies

A wide variety of methodologies will be used. The following are suggestions, not limitations, as to how the program may be implemented and facilitated. Codes refer to the New Jersey Student Learning Standards for 21<sup>st</sup> Century Life and Careers – Career Ready Practices (2014).

- Cooperative learning groups CRP1, CRP4, CRP5, CRP6, CRP8, CRP9, CRP12
- Differentiated instruction methods CRP2, CRP6, CRP8, CRP10
- Workshop approach CRP1, CRP4, CRP5, CRP6, CRP8, CRP9, CRP12
- Individual assignments CRP2, CRP4
- Whole class instruction CRP2, CRP4
- Small group instruction CRP1, CRP4, CRP5, CRP6, CRP8, CRP9, CRP12
- Technology-aided instruction CRP2, CRP4, CRP8, CRP11
- Peer-to-peer instruction CRP1, CRP4, CRP9, CRP12

Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career and life success. By end of grade 12, students will be able to:

- 9.2.12.C.1 – Review career goals and determine steps necessary for attainment.
- 9.2.12.C.2 – Modify Personalized Student Learning Plans to support declared career goals.
- 9.2.12.C.3 – Identify transferable career skills and design alternate career plans.
- 9.2.12.C.4 – Analyze how economic conditions and societal changes influence employment trends and future education.
- 9.2.12.C.5 – Research career opportunities in the United States and abroad that require knowledge of world languages and diverse cultures.
- 9.2.12.C.6 – Investigate entrepreneurship opportunities as options for career planning and identify the knowledge, skills, abilities, and resources required for owning and managing a business.
- 9.2.12.C.7 – Examine the professional, legal, and ethical responsibilities for both employers and employees in the global workplace.
- 9.2.12.C.8 – Assess the impact of litigation and court decisions on employment laws and practices.
- 9.2.12.C.9 – Analyze the correlation between personal and financial behavior and employability.

## **X. Interdisciplinary Connections**

Interdisciplinary curriculum coordination will be done with other departments on a regular basis.

The nature of the art discipline demands varied access any of the following areas: social studies/history, music, science, mathematics, business, and/or technology.

This art course may reinforce concepts taught in:

- Social Studies/History
- English Language Arts
- Humanities
- Mathematics
- Psychology
- Science
- Technology
- Appropriate and competent use of relevant websites and digital software and equipment 8.1.8
- Recording student performances/projects using appropriate audio, video, and /or photographic means to facilitate classroom critique of student growth and progress 8.1.8
- Presentation and exploration of related career possibilities 9.2.8
- Working in teams to create group based learning activities and projects CRP1
- Application of skills learned in class to project based activities CRP2

## **XI. Differentiating Instruction for Students with Special Needs: Students with Disabilities, Students at Risk, English Language Learners, and Gifted & Talented Students**

Differentiating instruction is a flexible process that includes the planning and design of instruction, how that instruction is delivered, and how student progress is measured. Teachers recognize that students can learn in multiple ways as they celebrate students' prior knowledge. By providing appropriately challenging learning, teachers can maximize success for all students.

Differentiating in this course includes but is not limited to:

*Differentiation for Support (ELL, Special Education, Students at Risk)*

- Peer mentoring on problems
- Differentiated teacher feedback on assignments
- Modelling out accounting problems on whiteboard
- Visual aids as we project problems on whiteboard
- Study guides
- Tiered assignments
- Scaffolding of materials and assignments
- Re-teaching and review
- Guided note taking
- Exemplars of varied performance levels
- Multi-media approach to accommodating various learning styles
- Use of visual and multi-sensory formats
- Use of assisted technology
- Use of prompts
- Modification of content and student products
- Testing accommodations
- Authentic assessments
- Pre-teaching of vocabulary and concepts
- Visual learning, including graphic organizers
- Use of cognates to increase comprehension
- Teacher modeling
- Pairing students with beginning English language skills with students who have more advanced English language skills
- Scaffolding
  - word walls
  - sentence frames
  - think-pair-share
  - cooperative learning groups
  - teacher think-alouds

*Differentiation for Enrichment*

- Supplemental reading material for independent study
- Flexible grouping
- Tiered assignments
- Topic selection by interest
- Enhanced expectations for independent study
- Elevated questioning techniques using Webb's Depth of Knowledge matrix
- Adjusting the pace of lessons
- Curriculum compacting
- Inquiry-based instruction
- Independent study
- Higher-order thinking skills
- Interest-based content
- Student-driven
- Real-world problems and scenarios



## **XII. Professional Development**

The teacher will continue to improve expertise through participation in a variety of professional development opportunities.

### XIII. Curriculum Map/Pacing Guide

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk, English Language Learners, & Gifted & Talented Students	Standards	Assessments
<p><b>Unit 1: Introduction</b></p> <ul style="list-style-type: none"> <li>• Paper, pencil, markers, simple and complex objects for still life</li> <li>• Identify raster versus vector programs</li> <li>• Review the elements and principles of design</li> <li>• Review composition</li> <li>• Students will identify various uses for computer graphics</li> <li>• Students will draw a contour line drawing from observation</li> <li>• Students will identify positive and negative space within an original still life drawing</li> </ul>	<p>2 weeks</p>	<p><i>For Support:</i></p> <ul style="list-style-type: none"> <li>• Peer mentoring on problems</li> <li>• Differentiated teacher feedback on assignments</li> <li>• Exemplars of varied performance levels</li> <li>• Teacher modeling</li> </ul> <p><i>For Enhancement:</i></p> <ul style="list-style-type: none"> <li>• Enhanced expectations for independent study</li> <li>• Adjusting the pace of lessons</li> </ul>	<p><i>NJCCCS – Arts:</i></p> <ul style="list-style-type: none"> <li>• 1.1.12.D.2, 1.3.12.D.1, 1.3.12.D.2, 1.3.12.D.3, 1.3.12.D.4, 1.3.12.D.5, 1.2.12.A.1, 1.4.12.A.2, 1.4.12.A.4, 1.4.12.B.1, 1.4.12.B.2, 1.4.12.B.3</li> </ul> <p><i>21<sup>st</sup> Century Standards CRP:</i></p> <ul style="list-style-type: none"> <li>• CRP1, CRP2, CRP4, CRP6, CRP7, CRP10, CRP11,</li> </ul> <p><i>Technology Standards 8.1:</i></p> <ul style="list-style-type: none"> <li>• 8.1.12.A.1, 8.1.12.A3, 8.1.12.D1</li> </ul> <p><i>21<sup>st</sup> Century Standards 9.2:</i></p> <ul style="list-style-type: none"> <li>• 9.2.12.C.1</li> </ul>	<p><i>Formative Assessment:</i></p> <p>Observation of student engagement and understanding during demonstration.</p> <p>Observation of student engagement and understanding during studio work, including in-class participation and progress indicators.</p> <p>Observation of student engagement and understanding during critique.</p> <p><i>Summative Assessment:</i></p> <p>Group elements of design poster and presentation</p> <p>Contour Line Drawing</p>

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk, English Language Learners, & Gifted & Talented Students	Standards	Assessments
<p><b>Unit 2: Adobe Illustrator</b></p> <ul style="list-style-type: none"> <li>Materials: sketchbooks, pencil, Epson scanners, Adobe Illustrator, iMac computers</li> <li>Students will identify parts of the Illustrator workspace (document page: title, control panel, toolbar, panels, artboard, scratchboard)</li> <li>Students will use a variety of Illustrator drawing and selection tools to redraw simple and complex imagery</li> <li>Students will use a scanner to transfer their drawn image into a bitmap image</li> <li>Students will use an original drawing as a template to redraw using a variety of tools in Illustrator</li> <li>Students will use effects to create various recognizable and non-recognizable effects on</li> </ul>	<p>12 weeks</p>	<p><i>For Support:</i></p> <ul style="list-style-type: none"> <li>Peer mentoring on problems</li> <li>Differentiated teacher feedback on assignments</li> <li>Exemplars of varied performance levels</li> <li>Use of visual and multi-sensory formats</li> <li>Teacher modeling</li> </ul> <p><i>For Enhancement:</i></p> <ul style="list-style-type: none"> <li>Topic selection by interest</li> <li>Enhanced expectations for independent study</li> <li>Elevated questioning techniques using Webb's Depth of Knowledge matrix</li> <li>Adjusting the pace of lessons</li> </ul>	<p><i>NJCCCS – Arts:</i></p> <ul style="list-style-type: none"> <li>1.1.12.D.2, 1.3.12.D.1, 1.3.12.D.2, 1.3.12.D.3, 1.3.12.D.4, 1.3.12.D.5, 1.2.12.A.1, 1.4.12.A.2, 1.4.12.A.4, 1.4.12.B.1, 1.4.12.B.2, 1.4.12.B.3</li> </ul> <p><i>21<sup>st</sup> Century Standards CRP:</i></p> <ul style="list-style-type: none"> <li>CRP1, CRP2, CRP4, CRP6, CRP7, CRP10, CRP11,</li> </ul> <p><i>Technology Standards 8.1:</i></p> <ul style="list-style-type: none"> <li>8.1.12.A.1, 8.1.12.A3, 8.1.12.D1</li> </ul> <p><i>21<sup>st</sup> Century Standards 9.2:</i></p> <ul style="list-style-type: none"> <li>9.2.12.C.1</li> </ul>	<p><i>Formative Assessment:</i></p> <p>Observation of student engagement and understanding during demonstration.</p> <p>Observation of student engagement and understanding during studio work, including in-class participation and progress indicators.</p> <p>Observation of student engagement and understanding during critique.</p> <p>Group elements of design poster and presentation</p> <p>Contour Line Drawing</p> <p><i>Summative Assessment:</i></p> <p>Sketches</p> <p>Tangrams</p> <p>Positive and Negative Design Project</p> <p>Logo Design Project</p>

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk, English Language Learners, & Gifted & Talented Students	Standards	Assessments
<p>an original design</p> <ul style="list-style-type: none"> <li>● Students will determine the purpose of a logo and identifiable visual features of a strong logo</li> <li>● Students will create a design for a company logo and recreate the logo digitally in Illustrator</li> <li>● Students will create an original pattern for use in the swatches panel of Illustrator</li> <li>● Student will draw from observation</li> <li>● Students will use Illustrator’s Live Trace function to turn a bitmap image into a vector image</li> <li>● Students will add color using the color panel, swatches panel, and Live Paint bucket</li> <li>● Students will create imagery with various color schemes</li> <li>● Students will download fonts and translate them into vector objects</li> </ul>				<p>Product Pattern Project                      Portrait Pattern Project                      Object Design Project                      Word Project                      Interior Design Project</p>

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk, English Language Learners, & Gifted & Talented Students	Standards	Assessments
<ul style="list-style-type: none"> <li>Students will use Illustrator’s perspective grid tool to draw an interior design</li> </ul>				
<p><b>Unit 3: Adobe Photoshop</b></p> <ul style="list-style-type: none"> <li>Students will identify parts of the Photoshop workspace (document page: title, current active toolbar, toolbar, palettes)</li> <li>Students will use the various selection tools to select individual objects in Photoshop</li> <li>Students will create a vignette using a series of selection tools and the options bar</li> <li>Students will create a compositional strong flyer using Photoshop</li> <li>Students will use art resources to research a famous artist or art style</li> <li>Students will use enhancement tools to adjust original photographs</li> <li>Students will use filters to create effects on imagery</li> </ul>	6 weeks	<p><i>For Support:</i></p> <ul style="list-style-type: none"> <li>Peer mentoring on problems</li> <li>Differentiated teacher feedback on assignments</li> <li>Exemplars of varied performance levels</li> <li>Multi-media approach to accommodating various learning styles</li> <li>Teacher modeling</li> </ul> <p><i>For Enhancement:</i></p> <ul style="list-style-type: none"> <li>Topic selection by interest</li> <li>Enhanced expectations for independent study</li> <li>Elevated questioning techniques using Webb's Depth of Knowledge matrix</li> <li>Adjusting the pace of lessons</li> </ul>	<p><i>NJCCCS – Arts:</i></p> <ul style="list-style-type: none"> <li>1.1.12.D.2, 1.3.12.D.1, 1.3.12.D.2, 1.3.12.D.3, 1.3.12.D.4, 1.3.12.D.5, 1.2.12.A.1, 1.4.12.A.2, 1.4.12.A.4, 1.4.12.B.1, 1.4.12.B.2, 1.4.12.B.3</li> </ul> <p><i>21<sup>st</sup> Century Standards CRP:</i></p> <ul style="list-style-type: none"> <li>CRP1, CRP2, CRP4, CRP6, CRP7, CRP10, CRP11,</li> </ul> <p><i>Technology Standards 8.1:</i></p> <ul style="list-style-type: none"> <li>8.1.12.A.1, 8.1.12.A3, 8.1.12.D1</li> </ul> <p><i>21<sup>st</sup> Century Standards 9.2:</i></p> <ul style="list-style-type: none"> <li>9.2.12.C.1</li> </ul>	<p><i>Formative Assessment:</i></p> <p>Observation of student engagement and understanding during demonstration.</p> <p>Observation of student engagement and understanding during studio work, including in-class participation and progress indicators.</p> <p>Observation of student engagement and understanding during critique.</p> <p>Group elements of design poster and presentation</p> <p>Contour Line Drawing</p> <p><i>Summative Assessment:</i></p> <p>Sketches Flyer Project Painterly Photo Project</p>

Unit Topic	Time Allocated	Differentiating Instruction for Students with Disabilities, Students at Risk, English Language Learners, & Gifted & Talented Students	Standards	Assessments
<ul style="list-style-type: none"> <li>Students will create a digital composite that overlays images, creating depth, dimension, and texture through transparencies</li> </ul>				Reflective Portrait Project