Course of Study

Graphic Arts Production
Tech Prep

Warren County Career Center

3525 North State Route 48
Lebanon, Ohio 45036

Adopted 06-28-07

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Table of Contents

Acknowledgements 3

School Board Approval 4

Statement of Recommendation 5

Warren County Career Center Vision and Mission Statements and Values 6

Course Design 7

Course Philosophy 7

Course Goals 8

Course Description 9

Academic and Technical Integration 10

Technology 10

Job Shadowing/Internships/Career Placement 11

Students Served 12

Scope and Sequence 13

Technology Standards 62

Performance Measures/Student Assessments/Instructional Strategies 65

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Graphic Arts Production Tech Prep
Warren County Career Center

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Warren County Career Center
Resolution Of School Board Approval

WHEREAS, representatives of the Career Technical Advisory Committee of the Warren County Career Center have reviewed the Graphic Arts Production Tech Prep Course of Study; and

WHEREAS, this Course of Study is based upon Integrating Technical and Academic Competencies adopted by the State of Ohio for the Graphic Arts Production Tech Prep program; and

WHEREAS, the Graphic Arts Production faculty and the Career-Technical Advisory Committee have reviewed and added competencies as needed to address local labor market needs and trends in the industry;

NOW, THEREFORE, BE IT RESOLVED, in accordance with the Superintendent's recommendation, that the Warren County Career Center adopt the Graphic Arts Production Tech Prep Course of Study.

_____

District Superintendent Date

_____

President, Board of Education Date

Statement of Recommendation

The Graphic Arts Production Tech Prep Advisory Committee at Warren County Career Center has reviewed this course of study and recommends it for use as the foundation for instruction in the Graphic Arts Production Tech Prep class.

The developers of this course of study have considered local labor market needs and the school's ability to offer specialized programs. The competencies have been reviewed and accepted as being congruent with our school's vision, mission, and strategic goals. When appropriate, additional competencies related to the program area have been incorporated into this course of study.

Achievement of technical competencies, utilizing proper attitudes, and demonstrating appropriate values are critical for successful employment and for furthering educational opportunities within a student's chosen field. We believe that this course of study adequately and correctly focuses upon student development.

This course of study is recommended on: 06-28-07

Warren County Career Center Vision Statement

WCCC is the valued partner of choice within the educational and economic systems of our communities, by providing quality academic and career technical education.

We pave the way for a future of opportunities unique to each of our learners.

Warren County Career Center Mission Statement

To prepare youths and adults to make informed career choices and to successfully enter, compete, and advance in a changing work world.

Warren County Career Values

- Treating each other with respect, dignity, trust and mutual value
- Communicating openly and honestly
- Taking ownership of personal actions and being held accountable for results
- Upholding and demonstrating high ethical, educational and fiscal standards
- Exhibiting high levels of professionalism
- Providing high quality instruction and highly qualified staff to ensure success for all learners
- Making quality customer service a high priority
- Promoting partnerships and a team environment
- Celebrating team and individual achievements
- Using data to drive planning, decision making and actions

Course Design

Courses are designed to reflect career-focused education, which combines high-level academics with real-life technical skills. The intent is to maximize a student's present and future academic and career success.

Career-focused education enhances the integration of academic and technical skills, designs programs that prepare students with transferable skills and promotes each student's career opportunities.

Course Philosophy

We believe that each student participating in Graphic Arts Production should be properly prepared to continue their education at a post-secondary institution as well as secure a successful workplace experience per the College Tech Prep and Career/Technical Education office of the Department of Education. Through the use of speakers, field trips, job shadowing, internships, advanced placement and other opportunities provided by Career-Technical education each student will be exposed to various opportunities available to him/her.

We believe that each student needs a strong work ethic, a sense of responsibility, problem-solving skills, an ability to function effectively as a member of a team, strong interpersonal skills and exceptional business communication skills. Activities, both inside and outside the classroom, will provide each student the opportunity to develop, improve and master each of these skill sets. Such activities will include, but not be limited to, classroom projects, internships, advance placement, summer employment, Skills USA competitions and College Tech Prep competitions.

We believe that each student should strive to develop employability, organizational and leadership skills. Skills USA activities, College Tech Prep Activities and assignments in and out of the classroom will provide each student the opportunity to develop these skills.

We believe that each student, upon successful completion of Graphic Arts Production, will be prepared to excel in related postsecondary and career options of their choosing and to embrace the philosophy of life-long learning.

Course Goals

The course goals for Graphic Arts Production are to:

1. Develop the competencies of Graphic Arts Production as outlined in the Technical Competency Profile prepared for the course by Ohio Department of Education, College Tech Prep Consortiums, business committees and educator committees. These competencies will enable each student to compete in a changing global workplace.

2. Develop competencies in the academic skill areas of communications, math, science, economics and government. These competencies will enable each student to successfully enter and advance through postsecondary options and eventually in the workplace.

3. Develop competencies in employability, technology and entrepreneurship to enable each student to enter and advance through postsecondary opportunities and a changing global workplace.

4. Develop the areas of leadership, teamwork, work ethic, interpersonal skills, business communication skills and sense of responsibility. These skills will enable each student to obtain postsecondary placement and career placement in a changing global workplace.

5. Upon successful completion of the Graphic Arts Production program students will be prepared to enter postsecondary options at either a two or four year institution. Upon successful completion of College Tech Prep 2+2 students will be prepared to begin a career in digital design, visual communications or other areas of business.

Course Description

Graphic Arts Production is a two-year program designed to prepare students to follow the Career/Technical pathway as well as the College Tech Prep 2+2 pathway. After completing two years at the Warren County Career Center students can secure employment in the industry of Graphic Arts Production and/or enroll in an additional two years at an articulated college. Students will be prepared to enter a dynamic and rewarding career in any number of design, production and technology-related careers. Students will have the opportunity to compete in both College Tech Prep and Skills USA competitive events. Opportunities are available to compete on local, state and national levels. Leadership opportunities are available on the local, state and national levels also. Students will be encouraged to pursue job shadowing opportunities and further contact with business and industry professionals will be created through field trips and in-class speakers. Opportunities for internships and advanced placement will be incorporated into the curriculum. Field trips to articulated colleges along with classroom projects will encourage students to research career and post-secondary options. The concept of life-long learning will be put forth to each student throughout the entire program. Finally each student will have the opportunity to pursue an interesting, rewarding career in an extremely dynamic and rapidly growing industry

Academic and Technical Integration

Expectations of curriculum must be aligned with what is written, taught, assessed, and reported. Student expectations focus on active, project-centered learning—an approach to learning that emphasizes a connection between ideas in a discipline and the outside world. Educational programming and course content will clearly connect career and post-secondary opportunities. At the Warren County Career Center, the main goal is to design courses and projects that use strategies for authentic instruction. These characteristics of instruction focus on deep understanding, established opportunities for concept connections, provide anticipatory and abstract thinking, and emphasize genuine application.

The academic courses at the WCCC follow the state model curricula. They are designed to meet both associate school and state requirements. These standards respond to the need to improve student achievement, quality of curriculum and instruction, and strengthen school and community relationships.

Technology

The Warren County Career Center board and staff believe that technology skills are essential for all students to achieve in the 21st century. It is the goal of this district to infuse technology into all facets of education:

- Instruction
- Assessment
- Administration
- Career planning
- Course design
- Professional development

Strategies to incorporate technology into all facets of education are a priority of the district and there is commitment to a continual process to provide updated hardware, software, and professional development for staff members for the purpose of providing a high quality education, with the integration of technology, for all students.

Job Shadowing

Job Shadowing is designed to give the student a short-term overview of the many opportunities within a career field. Career-technical instructors confer with students to determine appropriate experiences.

Internships and Job Placement vary somewhat, but during each experience students should accomplish the following goals:

1. Work with mentors, supervisors, co-workers, and others to accomplish assigned tasks that contribute to the long- and short-term goals of the student. All aspects of the internship/placement (including dates, times, responsibilities, evaluations, etc.) will be outlined in an approved Internship Learning Plan that is coordinated by the career-technical instructor.

2. Apply basic skills and knowledge to "real world" business settings and learn new skills that are relevant to the career path.

3. Demonstrate a solid understanding of the basic skills outlined in the Internship Learning Plan.

4. Reflect upon the internship/placement/job shadowing in terms of post-secondary education/career options.

The criterion for participation in career-based learning experiences is included in the approved packet for each activity and may be obtained by the instructor.

The specifics of how these opportunities are offered in this career-technical program or statement of academic support are:

Students that meet the requirements set forth by the Early Placement Committee are eligible to work with local businesses during the second semester of their senior year. This allows the student to work during designated lab time with the approval of the Instructor. The Instructor will monitor academic eligibility along with the status of their field progress using contractor evaluations. In addition, parent approval and a written contract with the student for certain goals to be achieved will be required.

Students Served

The population served by this program is juniors and seniors.

Scope and Sequence

Definitions and Codes

Determined by Business, Industry and Labor (BIL)

Essential (E) Competency:
E = Competency is needed to ensure minimal level of employability. Entry-level employees (defined as graduates of an associate degree program) should be able to perform this competency for career success.

Recommended (R) Competency:
R = Competency should be included but is not essential for minimal level of employability or is related only to a subspecialty within a pathway.

Determined by Educator (EDU) Panel

Grade Level:

12	=	by the end of grade 12
AD	=	by the end of the associate degree program

Depth:

I	=	Introduce competency
R	=	Reinforce or add depth after introducing a competency **OR** after proficiency
P	=	Proficient or achievement of the competency; ability to apply knowledge of and/or perform the competency

Determined by Academic Review Panel

Correlated English Language Arts Academic Content Benchmarks
Benchmarks drawn from the *Ohio Academic Content Standards for English Language Arts* that have been determined to be embedded in corresponding technical competency

Correlated Mathematics Academic Content Benchmarks
Benchmarks drawn from the *Ohio Academic Content Standards for Mathematics* that have been determined to be embedded in the corresponding technical competency

Correlated Science Academic Content Benchmarks
Benchmarks drawn from the *Ohio Academic Content Standards for Science* that have been determined to be embedded in the corresponding technical competency

Correlated Social Studies Academic Content Benchmarks
Benchmarks drawn from the *Ohio Academic Content Standards for Social Studies* that have been determined to be embedded in the corresponding technical competency

Sample Competency

Unit 16: Writing and Communications

Business, Industry and Labor

Secondary and Postsecondary Educator

Competency should be proficient by the end of 12th grade and reinforced during the associate degree.

Pathway	BIL	EDU: 12	EDU: AD
Performing Arts	E	P	R
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 16.2: **Apply active listening skills to obtain and clarify information provided in oral communications.**

Unit number

Descriptors:

16.2.1 Identify and apply active listening techniques one-to-one and in team/group meetings.
16.2.2 Interpret verbal cues and behaviors to enhance communication.
16.2.3 Interpret nonverbal cues and behaviors to enhance communication.
16.2.4 Paraphrase and repeat information to confirm understanding.
16.2.5 Record and summarize information in written notes.
16.2.6 Generate questions to seek or confirm understanding.

Competency number

Descriptor number

Correlated English Language Arts Academic Content Benchmark

- *Use a variety of strategies to enhance listening comprehension.* (Communication: Oral and Visual A, 8-10; Communication: Oral and Visual A, 11-12)

Benchmark from the *English Language Arts Academic Content Standards*

Arts and Communication
Definitions

Arts and Communication Career Field
Individuals working in this career field are visual educators, translators and conceptors often integrating a variety of expressive forms and crossing many disciplines.

Visual Design and Imaging Pathway
These artists, designers and printers work in two-dimensional and three-dimensional design and distribution and production environments, time-based and still media, analog and digital for commercial and noncommercial purposes.

Performing Arts Pathway
These artists and designers are involved in the performance, artistic and administrative production, and technology of music, dance and theatre.

Media Arts Pathway
Individuals working in media arts conceptualize research, develop record, edit and distribute multi-media content.

Arts and Communication Overview Chart

BIL: Determined by Industry, Industry and Labor (BIL) Panel

Essential Competency: E = Competency is needed to ensure minimal level of employability. Entry-level employees should be able to perform this competency without supervision.

Recommended Competency: R = Competency should be included but is not essential for minimal level of employability.

Determined by Educator (EDU) Panel

Grade Level:

12	=	by the end of grade 12
AD	=	by the end of the associate degree program

Depth:

I	=	Introduce competency
R	=	Reinforce, or add depth after introducing a competency, **OR** after proficiency
P	=	Proficient or achievement of the competency, ability to apply knowledge of and/or perform the competency

Competency	Visual Design and Imaging			Media Arts		
	BIL	**12**	**AD**	**BIL**	**12**	**AD**
Unit 1: Career Exploration and Development						
1.1 Explore career pathways in arts and communication.	E	I	P	E	P	R
1.2 Compare and contrast the performance skills of individuals in the media, visual and performing arts.	E	I	P	E	P	R
1.3 Examine the history, trends and current issues related to visual design and imaging, media and performing arts.	R	I	R	E	I	P
1.4 Explain the impact of government influence and public opinion on the arts.	R	I	R	E	I	P
Unit 2: Personal Employability Traits						
2.1 Demonstrate the ability to seek and apply for employment.	E	P	R	E	P	R
2.2 Demonstrate positive work behaviors and personal qualities.	E	P	R	E	P	R
2.3 Apply problem solving and critical thinking techniques to workplace situations.	E	I	P	E	P	R
2.4 Demonstrate the ability to lead or work on a team.	E	I	P	E	P	R
Unit 3: Business Processes						
3.1 Explain basic economic principles.	E	I	P	E	I	P

3.2 Design a business plan.	R	I	R	R	I	I
3.3 Examine written documents to direct the work.	E	I	P	R	I	I
3.4 Employ an inventory control system.	R	I	I	R	I	P
3.5 Apply marketing techniques.	E	I	P	R	I	P
3.6 Develop promotional materials.	E	I	P	E	I	P
3.7 Demonstrate customer service and sales techniques.	E	I	P	E	I	P
3.8 Analyze and evaluate business finances.	R	I	I	R	I	I
3.9 Explain the major measures used to manage and improve performance.	E	I	P	R	I	I
3.10 Demonstrate the efficient use of technology.	E	I	P	E	P	R
Unit 4: Health and Safety						
4.1 Maintain general safety in accordance with established regulations, health standards and best practices.	E	P	R	E	P	R
4.2 Demonstrate ergonomic practices associated with the arts and communications industry.	E	I	P	E	P	R
4.3 Identify state, federal and local worker safety, health and environmental regulations in relation to arts and communications.	R	I	I	R	I	I
4.4 Handle hazardous materials in accordance with government regulations and health standards.	E	P	R	R	I	I
Unit 5: Legal and Ethical Aspects						

5.1 Explain the laws and regulations governing information gathering and media production.	E	P	R	E	P	R
5.2 Identify the influence of media, arts and performances on society.	E	I	P	E	P	R
5.3 Describe government regulations and codes.	R	I	I	R	I	I
Unit 6: Visual Design						
6.1 Analyze the elements and principles of visual art forms.	E	I	P	E	I	P
6.2 Analyze the communicative effects of art elements.	E	I	P	E	I	P
6.3 Critique various elements of design.	E	I	P	E	I	P
6.4 Explain color theory and the use of color processes.	E	I	P	R	I	I
6.5 Assess art elements and principles of two-dimensional forms.	E	I	P	R	I	I
6.6 Analyze art elements and principles of three-dimensional forms.	E	I	P	R	I	I
6.7 Demonstrate basic art studio skills.	E	I	P	N/A		
6.8 Analyze web page parameters and usage.	E	I	P	E	I	P
Unit 7: Digital Media Design						
7.1 Assess multimedia applications of software and hardware for visual communication purposes.	E	I	P	E	P	R
7.2 Examine and apply visual style guidelines and design layouts.	E	I	P	E	P	R
7.3 Examine interactive multimedia products.	E	I	P	E	I	P
7.4 Analyze the effects of interactive multimedia on graphic design.	E	I	P	E	I	P

Unit 8: Layout						
8.1 Create visual layouts.	E	P	R	E	I	P
8.2 Assess typographical elements.	E	P	R	E	I	P
8.3 Utilize desktop publishing systems to design layouts.	E	I	P	R	I	P
Unit 9: Prepress and Image Generation						
9.1 Demonstrate image generation operations.	E	I	P	R	I	P
9.2 Preflight files.	E	I	P	N/A		
9.3 Analyze image carrier generation.	E	I	P	N/A		
9.4 Analyze color proofs for prepress operations.	E	I	P	N/A		
Unit 10: Imaging Technologies						
10.1 Set up substrate and image control systems for conventional printing and digital printing.	E	I	P	N/A		
10.2 Create printed images according to the customer's signed proof.	E	I	P	N/A		
Unit 11: Screen Printing						
11.1 Examine screen printing operations.	R	I	R	N/A		
11.2 Print final product.	R	I	R	N/A		
Unit 12: Post Image Transfer						
12.1 Evaluate post image transfer finishing methods.	E	P	R	N/A		

12.2	Identify specifications for finishing techniques.	E	I	P	N/A		
Unit 13: Acquire Moving and Still Images							
13.1	Apply principles of design and composition.	E	I	P	E	P	R
13.2	Analyze lighting requirements.	R	I	P	E	I	P
13.3	Demonstrate scanning techniques and procedures.	E	I	P	R	I	P
13.4	Calibrate equipment.	E	I	P	E	I	P
13.5	Organize a video or photo shoot.	E	I	P	R	I	P
13.6	Explain the history and evolution of image acquisition.	R	I	R	E	P	R
13.7	Acquire images.	R	I	P	E	P	R
13.8	Demonstrate techniques specific to acquiring images with video/film.	R	I	P	E	P	R
13.9	Demonstrate post-capture image manipulation techniques.	E	I	P	E	I	P
Unit 14: Audio Production							
14.1	Explain the science of sound.	N/A			E	P	R
14.2	Demonstrate the processes and principles of capturing and recording audio.	R	I	I	E	P	R
14.3	Apply principles of manipulating audio.	R	I	I	R	I	P
14.4	Enhance an audio track with sound effects.	N/A			R	I	P
14.5	Apply audio dynamics by reinforcing, mixing and equalizing sound.	N/A			R	I	P

Unit 15: Audio and Visual Editing						
15.1 Identify the functions and equipment for editing.	N/A			E	P	R
15.2 Edit an audio and video product.	N/A			E	I	P
Unit 16: Writing and Communication						
16.1 Deliver formal and informal presentations that demonstrate organization and delivery skill.	E	P	R	E	P	R
16.2 Apply active listening skills to obtain and clarify information provided in oral communications.	E	P	R	E	P	R
16.3 Write coherent and focused documents.	R	P	R	E	P	R
16.4 Use appropriate grammar and spelling.	E	P	R	E	P	R
16.5 Use visual imagery to support communication.	E	P	R	E	P	R
16.6 Match a product to the audience.	E	I	P	E	I	P
16.7 Obtain information to use in writing a fact based story.	N/A			E	I	P
16.8 Develop a fact based story.	N/A			E	I	P
16.9 Develop scripts/libretti for communication.	N/A			E	I	P

Unit 1: Career Exploration and Development

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 1.1: Explore career pathways in arts and communication.

Descriptors:

1.1.1 Explore specific arts and communications interests (e.g., shadowing, professional readings, community service, internship).

1.1.2 Identify education and licensing requirements needed for a career in arts and communications.

1.1.3 Identify the professional organizations and associations that directly affect a pathway of interest.

Correlated English Language Arts Academic Content Benchmarks

- *Apply reading comprehension strategies to understand grade-appropriate text.* (Reading Process A, 8-10; Reading Process A, 11-12)
- *Compile, organize and evaluate information, take notes and summarize findings.* (Research B, 11-12)

Correlated Social Studies Academic Content Benchmark

- *Evaluate various means for citizens to take action on a particular issue.* (Citizenship Rights and Responsibilities A, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 1.2: Compare and contrast the performance skills of individuals in the media, visual and performing arts.

Descriptors:

1.2.1 Identify the role and function of individuals in each pathway (technical and non-technical).

1.2.2 Identify the areas of specialization and related occupations.

1.2.3 Explore the types of work techniques, processes and procedures a typical individual in each pathway might be called on to perform.

1.2.4 Describe the education, training and certification required to work in each of the pathways.

1.2.5 Compare and contrast career lifestyles associated with different levels of employment.

1.2.6 Describe the interrelationships between creators, performers and technicians.

1.2.7 Describe the interrelationships between media, visual design and imaging and performing arts.

Correlated English Language Arts Academic Content Benchmarks

- *Formulate open-ended research questions suitable for investigation and adjust questions as necessary while research is conducted.* (Research A, 8-10)

- *Formulate open-ended research questions suitable for inquiry and investigation and adjust questions as necessary while research is conducted.* (Research A, 11-12)
- *Compile, organize and evaluate information, take notes and summarize findings.* (Research B, 11-12)

Correlated Social Studies Academic Content Benchmark

- *Explain the use of a budget in making personal economic decisions and planning for the future.* (Economics E, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	R
Media Arts	E	I	P

Competency 1.3: **Examine the history, trends and current issues related to visual design and imaging, media and performing arts.**

Descriptors:

1.3.1 Trace the historical evolution and changing purposes of the arts.
1.3.2 Describe the impact of arts and communications on society.
1.3.3 Identify the current trends and issues impacting arts and communications.
1.3.4 Research history, politics, and policies related to the issues.
1.3.5 Determine the issues' effects on the industry.
1.3.6 Determine potential resolutions to the issues.

Correlated English Language Arts Academic Content Benchmarks

- *Formulate open-ended research questions suitable for investigation and adjust questions as necessary while research is conducted.* (Research A, 8-10)
- *Organize information from various resources and select appropriate sources to support central ideas, concepts and themes.* (Research C, 8-10)
- *Formulate open-ended research questions suitable for inquiry and investigation and adjust questions as necessary while research is conducted.* (Research A, 11-12)
- *Compile, organize and evaluate information, take notes and summarize findings.* (Research B, 11-12)

Correlated Social Studies Academic Content Benchmarks

- *Use historical interpretations to explain current issues.* (History B, 11-12)
- *Explain the role of diverse cultural institutions in shaping American society.* (People in Societies C, 11-12)
- *Critique data and information to determine the adequacy of support for conclusions.* (Social Studies Skills and Methods B, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	R
Media Arts	E	I	P

Competency 1.4: **Explain the impact of government influence and public opinion on the arts.**

Descriptors:

1.4.1 Cite examples of public opinion and/or cultural perspectives influencing a product, work of art or service.
1.4.2 Cite examples of how government funding influences a product, work of art or service.
1.4.3 Describe the evolution of cultural issues within a society that affect art forms and communication.
1.4.4 Describe how cultural issues influence government and its legislative actions toward the arts.

Correlated English Language Arts Academic Content Benchmarks

- *Formulate open-ended research questions suitable for investigation and adjust questions as necessary while research is conducted.* (Research A, 8-10)
- *Organize information from various resources and select appropriate sources to support central ideas, concepts and themes.* (Research C, 8-10)
- *Formulate open-ended research questions suitable for inquiry and investigation and adjust questions as necessary while research is conducted.* (Research A, 11-12)

Correlated Social Studies Academic Content Benchmarks

- *Explain the role of diverse cultural institutions in shaping American society.* (People in Societies C, 11-12)
- *Analyze the role of fiscal and regulatory policies in a mixed economy.* (Economics D, 11-12)
- *Evaluate, take and defend positions about issues concerning the alignment of the characteristics of American democracy with realities in the United States today.* (Government A, 11-12)

Unit 2: Personal Employability Traits

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 2.1: Demonstrate the ability to seek and apply for employment.
Descriptors:
2.1.1 Identify personal goals and objectives in concert with arts and communications.
2.1.2 Identify personal skill sets as they relate to arts and communications.
2.1.3 Research employers and the applicability of personal skill sets.
2.1.4 Maintain a resume, list of references and portfolio.
2.1.5 Compare and contrast employment opportunities.
2.1.6 Rehearse your interview/audition.
2.1.7 Interview/audition for employment.

Correlated English Language Arts Academic Content Benchmarks

- *Produce letters (e.g., business, letters to the editor, job applications) that follow the conventional style appropriate to the text and that include appropriate details and exclude extraneous details and inconsistencies.* (Writing Applications C, 8-10)
- *Produce functional documents that report, organize and convey information and ideas accurately, foresee readers' problems or misunderstandings and that include formatting techniques that are user friendly.* (Writing Applications C, 11-12)

- *Evaluate the usefulness and credibility of data and sources and synthesize information from multiple sources.* (Research C, 11-12)
- *Use a variety of strategies to enhance listening comprehension.* (Communication: Oral and Visual A, 8-10; Communication: Oral and Visual A, 11-12)
- *Select and use effective speaking strategies for a variety of audiences, situations and purposes.* (Communication: Oral and Visual C, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 2.2: Demonstrate positive work behaviors and personal qualities.
Descriptors:
2.2.1 Describe the importance of punctuality and attendance.
2.2.2 Demonstrate a positive work ethic (e.g., professionalism, passion, creativity, self-discipline, positive attitude and integrity, focus).
2.2.3 Describe common performance expectations for individuals.
2.2.4 Address diversity in relation to personnel issues.
2.2.5 Discuss the role that different values play in generating conflict.
2.2.6 Identify how the effects of substance abuse, mental health and disabilities impact conflict.

Correlated Social Studies Academic Content Benchmarks

- *Analyze how issues may be viewed differently by various cultural groups.* (People in Societies A, 11-12)
- *Work in groups to analyze an issue and make decisions.* (Social Studies Skills and Methods, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 2.3: Apply problem solving and critical thinking techniques to workplace situations.
Descriptors:
2.3.1 Define problem-solving methods.
2.3.2 Combine critical thinking and team-building skills to solve problems.
2.3.3 Apply the best solution to the problem.
2.3.4 Adjust plans/schedules to respond to unexpected events and conditions.
2.3.5 Evaluate the solution.

Correlated Mathematics Academic Content Benchmarks

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Science Academic Content Benchmark

- *Explain the ways in which the processes of technological design respond to the needs of society.* (Science and Technology A, 9-10)

Correlated Social Studies Academic Content Benchmark

- *Work in groups to analyze an issue and make decisions.* (Social Studies Skills and Methods D, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 2.4: Demonstrate the ability to lead or work on a team.
Descriptors:
2.4.1 Recognize the importance of teamwork and its impact.
2.4.2 Describe the interpersonal skills that contribute to positive leadership and teamwork.
2.4.3 Listen and speak effectively to contribute to group discussions and meetings.
2.4.4 Use motivational techniques to enhance performance in others.
2.4.5 Perform responsibly as a team member/leader.
2.4.6 Identify the basic psychological needs that motivate behavior (e.g., belonging, power, freedom).

Correlated English Language Arts Academic Content Benchmarks

- *Use a variety of strategies to enhance listening comprehension.* (Communication: Oral and Visual A, 8-10; Communication: Oral and Visual A, 11-12)
- *Select and use effective speaking strategies for a variety of audiences, situations, and purposes.* (Communication: Oral and Visual C, 11-12)

Correlated Social Studies Academic Content Benchmark

- *Work in groups to analyze an issue and make decisions.* (Social Studies Skills and Methods D, 11-12)

Unit 3: Business Processes

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 3.1: Explain basic economic principles.
Descriptors:
3.1.1 Describe the essential nature of profitability and value.
3.1.2 Describe job costing with direct and indirect costs.
3.1.3 Explain basic economic concepts (e.g., supply, demand, price, cost, profit, value, cash flow).

Correlated Mathematics Academic Content Benchmarks

- *Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.* (Patterns, Functions and Algebra D, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Correlated Social Studies Academic Content Benchmark

- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	R
Media Arts	R	I	I

Competency 3.2: Design a business plan.
Descriptors:

3.2.1 Explain how work plans and budgets are used to allocate people and resources
3.2.2 Establish a mission statement.
3.2.3 Establish short- and long-term goals that impact organizational performance.
3.2.4 Identify types of businesses by their legal structures.
3.2.5 Identify organizational structures.
3.2.6 Identify and select the types and quantities of resources needed (e.g., capital, people, equipment, materials).
3.2.7 Create a plan that takes into account the aspects of scope, time, costs and specifications.
3.2.8 Describe the components of a business agreement.
3.2.9 Describe the components of a marketing plan.
3.2.10 Describe the components of a promotions plan.
3.2.11 Identify quality control points for the production.
3.2.12 Chart the process from pre-production through post-production.

Correlated English Language Arts Academic Content Benchmarks

- *Determine the usefulness of organizers and apply appropriate pre-writing tasks.* (Writing Processes B, 8-10)
- *Edit to improve sentence fluency, grammar and usage.* (Writing Processes D, 8-10)
- *Produce functional documents that report, organize and convey information and ideas accurately, foresee readers' problems or misunderstandings and that include formatting techniques that are user friendly.* (Writing Applications C, 11-12)
- *Evaluate the usefulness and credibility of data and sources.* (Research B, 8-10)

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Construct convincing arguments based on analysis of data and interpretation of graphs.* (Data Analysis and Probability F, 8-10)
- *Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.* (Data Analysis and Probability A, 11-12)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Social Studies Academic Content Benchmarks

- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)
- *Identify factors which inhibit or spur economic growth and cause expansions or recessions.* (Economics B, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	R	I	I

Competency 3.3: Examine written documents to direct the work.
Descriptors:

3.3.1 Identify types of reports (e.g., quality assurance, shift turnover, schedules, preventive maintenance).
3.3.2 Interpret work orders, including change order requests.
3.3.3 Calculate job costs and prepare billing documents.
3.3.4 Apply concepts of tolerances and equivalency to specifications.
3.3.5 Describe the components of contract documents.

Correlated English Language Arts Academic Content Benchmarks

- *Demonstrate comprehension of print and electronic text by responding to questions (e.g., literal, inferential, evaluative and synthesizing).* (Reading Process B, 8-10; Reading Process B, 11-12)
- *Evaluate how features and characteristics make information accessible and usable and how structures help authors achieve their purposes.* (Reading Applications: Informational, Technical and Persuasive Text A, 8-10)

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Social Studies Academic Content Benchmarks

- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	I
Media Arts	R	I	P

Competency 3.4: Employ an inventory control system.
Descriptors:

3.4.1 Compare/contrast carrying an inventory versus a just-in-time (JIT) inventory system.
3.4.2 Describe procedures for accessing inventory.
3.4.3 Calculate inventory needs and describe ordering strategies.
3.4.4 Utilize technology to manage inventory.

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.* (Data Analysis and Probability A, 11-12)
- *Connect statistical techniques to applications in workplace and consumer situations.* (Data Analysis and Probability D, 11-12)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	P

Competency 3.5: Apply marketing techniques.
Descriptors:

3.5.1 *Differentiate between marketing, promotions and publicity.*
3.5.2 *Identify and evaluate methods of marketing products and services (e.g., Internet advertising, radio, television, print).*
3.5.3 *Identify and develop strategies for self-promotion and image enhancement.*
3.5.4 Design and develop a professional portfolio and résumé.
3.5.5 *Research products and service design(s).*
3.5.6 *Merchandise products and services.*
3.5.7 *Advertise products and services.*
3.5.8 *Conduct market research and analysis.*
3.5.9 *Explain the need for truthfulness in advertising.*
3.5.10 *Evaluate the impact of advertising and promotion on sales.*

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Produce functional documents that report, organize and convey information and ideas accurately, foresee readers' problems or misunderstandings and that include formatting techniques that are user friendly.* (Writing Applications C, 11-12)
- *Evaluate the usefulness and credibility of data and sources and synthesize information from multiple sources.* (Research C, 11-12)
- *Analyze the techniques used by speakers and media to influence an audience, and evaluate the effect this has on the credibility of a speaker or media message.* (Communication: Oral and Visual B, 8-10)

Correlated Mathematics Academic Content Benchmarks

- *Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.* (Data Analysis and Probability A, 11-12)
- *Design and perform a statistical experiment, simulation or study; collect and interpret data; and use descriptive statistics to communicate and support predictions and conclusions.* (Data Analysis and Probability C, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 3.6: Develop promotional materials.
Descriptors:
3.6.1 Identify and develop strategies for self-promotion and image enhancement.
3.6.2 Identify the different types of pre- and post-promotional materials.
3.6.3 Identify effective promotional strategies based on target audience.
3.6.4 Utilize persuasive language and imagery.
3.6.5 Research supporting materials.
3.6.6 Research and utilize discipline-specific language.
3.6.7 Utilize appropriate technology.

Correlated English Language Arts Academic Content Benchmarks

- *Recognize the importance and function of figurative language.* (Acquisition of Vocabulary C, 8-10)
- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Identify examples of rhetorical devices and valid and invalid inferences, and explain how authors use these devices to achieve their purposes and reach their intended audiences.* (Reading Applications: Informational, Technical and Persuasive Text B, 8-10)
- *Use a range of strategies to elaborate and persuade when appropriate, including appeal to logic, use of personal anecdotes, examples, beliefs, expert opinions or cause-effect reasoning.* (Writing Applications E, 11-12)
- *Give persuasive presentations that structure ideas and arguments in a logical fashion, clarify and defend positions with relevant evidence and anticipate and address the audience's concerns.* (Communication: Oral an Visual D, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Construct convincing arguments based on analysis of data and interpretation of graphs.* (Data Analysis and Probability F, 8-10)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)
- *Assess the adequacy and reliability of information available to solve a problem.* (Mathematical Processes C, 11-12)

Correlated Social Studies Academic Content Benchmarks

- *Analyze how issues may be viewed differently by various cultural groups.* (People in Societies A, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 3.7: Demonstrate customer service and sales techniques.
Descriptors:

3.7.1 Identify internal and external customer needs.
3.7.2 Describe the relationship between meeting customer needs and profitability.
3.7.3 Build and develop customer relationships.
3.7.4 Identify key components to organize a sale.
3.7.5 Conduct sales presentation.
3.7.6 Develop sales goals and incentive programs.
3.7.7 Provide post-sale service.
3.7.8 Handle customer complaints.
3.7.9 Prospect new customers.

Correlated English Language Arts Academic Content Benchmarks

- *Formulate open-ended research questions suitable for inquiry and investigation and adjust questions as necessary while research is conducted.* (Research A, 11-12)
- *Use a variety of strategies to enhance listening comprehension.* (Communication: Oral and Visual A, 8-10; Communication: Oral and Visual A, 11-12)
- *Give presentations using a variety of delivery methods, visual displays and technology.* (Communication: Oral and Visual G, 8-10; Communication: Oral and Visual F, 11-12)
- *Select and use effective speaking strategies for a variety of audiences, situations and purposes.* (Communication C, 11-12)
- *Give persuasive presentations that structure ideas and arguments in a logical fashion, clarify and defend positions with relevant evidence and anticipate and address the audience's concerns.* (Communication: Oral and Visual D, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Construct convincing arguments based on analysis of data and interpretation of graphs.* (Data Analysis and Probability F, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Social Studies Academic Content Benchmarks

- *Analyze how issues may be viewed differently by various cultural groups.* (People in Societies A 11-12)
- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)
- *Work in groups to analyze an issue and make decisions.* (Social Studies Skills and Methods D, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	I
Media Arts	R	I	I

Competency 3.8: Analyze and evaluate business finances.
Descriptors:
3.8.1 Budget resources (e.g., capital, human, financial, time).
3.8.2 Manage assets for optimal utilization.
3.8.3 Manage risk of liabilities.

3.8.4 Evaluate credit uses and options.
3.8.5 Analyze investment options (e.g., buy, lease, finance, risk).
3.8.6 Interpret financial statements (e.g., balance sheet, profit/loss statement, cash flow statement).
3.8.7 Compare and contrast depreciation methods.
3.8.8 Determine cost of doing business.
3.8.9 Manage cash flow.

Correlated English Language Arts Academic Content Benchmark

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Translate information from one representation (words, table, graph or equation) to another representation of a relation or function.* (Patterns, Functions and Algebra C, 8-10)
- *Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.* (Patterns, Functions and Algebra D, 8-10)
- *Construct convincing arguments based on analysis of data and interpretation of graphs.* (Data Analysis and Probability F, 8-10)
- *Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.* (Data Analysis and Probability A, 11-12)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Social Studies Academic Content Benchmark

- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	I

Competency 3.9: Explain the major measures used to manage and improve performance.
Descriptors:
3.9.1 Describe the measures for financial performance (e.g., profitability, cost reduction, asset utilization).
3.9.2 Describe the measures for market performance (e.g., customer, sales/service growth).
3.9.3 Describe the measures for service and internal operations performance (e.g., customer satisfaction, service quality, cycle time).
3.9.4 Describe performance measures related to health, safety and environmental compliance (e.g., audit findings, emissions, lost time accidents).
3.9.5 Benchmark performance against competitors and the general industry.

Correlated English Language Arts Academic Content Benchmark

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.* (Patterns, Functions and Algebra D, 8-10)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Social Studies Academic Content Benchmark

- *Identify factors which inhibit or spur economic growth and cause expansions or recessions.* (Economics B, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 3.10: Demonstrate the efficient use of technology.
Descriptors:
3.10.1 Operate office technology (e.g., email, fax, phones, personal information managers).
3.10.2 Create documents using a computer (e.g., text document, spreadsheet, database).
3.10.3 Access and conduct research using the Internet.
3.10.4 Access client/customer/product information from an electronic database.
3.10.5 Create documents using graphics and publishing software.
3.10.6 Perform calculations and analysis on data.

Correlated English Language Arts Academic Content Benchmarks

- *Apply reading comprehension strategies to understand grade-appropriate text.* (Reading Process A, 8-10; Reading Process A, 11-12)
- *Produce functional documents that report, organize and convey information and ideas accurately, foresee readers' problems or misunderstandings and that include formatting techniques that are user friendly.* (Writing Applications C, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.* (Data Analysis and Probability A, 11-12)
- *Use descriptive statistics to analyze and summarize data, including measures of center, dispersion, correlation and variability.* (Data Analysis and Probability B, 11-12)

Unit 4: Health and Safety

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 4.1: **Maintain general safety in accordance with established regulations, health standards and best practices.**

Descriptors:

4.1.1 Identify and select personal protective equipment (e.g., hearing protection, respirators, eye protection).
4.1.2 Identify potential hazards (e.g., hair, jewelry, clothing) and corrective measures.
4.1.3 Select and implement procedures for protection from falls (e.g., harnesses, scaffolding, ladders, nets).
4.1.4 Identify dangerous electrical situations that necessitate disconnecting switches and using lock-out/tag-out procedures.
4.1.5 Identify signs and symbols that indicate the location of emergency exits and fixtures (e.g., flush showers, eye wash fountains, fire alarms).
4.1.6 Maintain work areas in accordance with standards for cleanliness and safety.
4.1.7 Describe how to operate fire extinguishers and match their use to classes of fires.
4.1.8 Describe symptoms of exposure to health-threatening environments (e.g., air contamination, noise, vibrations, harshness).
4.1.9 Identify the safety issues related to working "on location" (e.g., dangerous wildlife, terrain, environment, violence).

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Use appropriate self-monitoring strategies for comprehension.* (Reading Process C, 8-10; Reading Process C, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 4.2: **Demonstrate ergonomic practices associated with the arts and communication industry.**

Descriptors:

4.2.1 Demonstrate appropriate body mechanics to prevent repetitive motion and stress injuries.
4.2.2 Demonstrate appropriate body mechanics in lifting and moving heavy objects.

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	I
Media Arts	R	I	I

Competency 4.3: **Identify state, federal and local worker safety, health and environmental regulations in relation to arts and communications.**

Descriptors:

4.3.1 Recognize critical safety issues and practices identified by the Occupational Safety and Health Act (OSHA).
4.3.2 Recognize Bureau of Workers' Compensation (BWC) regulations.
4.3.3 Recognize Environmental Protection Agency (EPA) regulations.

Correlated English Language Arts Academic Content Benchmarks

- *Use context clues and text structures to determine the meaning of new vocabulary.* (Acquisition of Vocabulary A, 8-10)
- *Use appropriate self-monitoring strategies for comprehension.* (Reading Process C, 8-10; Reading Process C, 11-12)

Correlated Social Studies Academic Content Benchmark

- *Evaluate, take and defend positions about issues concerning the alignment of the characteristics of American democracy with realities in the United States today.* (Government A, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	P	R
Media Arts	R	I	I

Competency 4.4: **Handle hazardous materials in accordance with government regulations and health standards.**

Descriptors:

4.4.1 Describe precautions required when using toxic or flammable materials.
4.4.2 Identify types of hazardous materials and storage procedures.
4.4.3 Interpret container label precautions.
4.4.4 Interpret material safety data sheets (MSDS).
4.4.5 Dispose of hazardous materials in accordance with government regulations.

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Demonstrate comprehension of print and electronic text by responding to questions (e.g., literal, inferential, evaluative and synthesizing).* (Reading Process B, 8-10; Reading Process B, 11-12)

Correlated Social Studies Academic Content Benchmark

- *Evaluate, take and defend positions about issues concerning the alignment of the characteristics of American democracy with realities in the United States today.* (Government A, 11-12)

Unit 5: Legal and Ethical Aspects

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 5.1: **Explain the laws and regulations governing information gathering and media production.**

Descriptors:

5.1.1 Specify copyright laws designed to protect publications, performances and artistic creations.
5.1.2 Identify steps for securing permission to use copyrighted materials.
5.1.3 Explain how credit is given for use of copyrighted materials.
5.1.4 Define what original content is and when credit does not need to be given.

5.1.5 Identify consequences if formal permission is not secured.
5.1.6 Identify the process by which a creator obtains a copyright.
5.1.7 Identify components of the First Amendment, Federal Communications Commission (FCC) regulations, Freedom of Information Act and state statutes as they pertain to work in arts and communications.
5.1.8 Identify legal responsibilities covered under libel and privacy laws.

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Apply reading comprehension strategies to understand grade-appropriate text.* (Reading Process A, 8-10; Reading Process A, 11-12)

Correlated Social Studies Academic Content Benchmarks

- *Evaluate, take and defend positions about issues concerning the alignment of the characteristics of American democracy with realities in the United States today.* (Government A, 11-12)
- *Explain how the U. S. Constitution has evolved including its philosophical foundations, amendments, and court interpretations.* (Government B, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 5.2: Identify the influence of media, arts and performances on society.
Descriptors:
5.2.1 Describe the degree of influence the visual design and imaging, media and performing arts have on individuals and society.
5.2.2 Identify political and societal events and actions instigated by media, print and the performing arts.
5.2.3 Reference workplace behaviors to professional codes of ethics (e.g., Society of Professional Journalism).
5.2.4 Assess the implications of ethical and unethical behavior (e.g., plagiarism, confidentiality, use of anonymous sources).

Correlated English Language Arts Academic Content Benchmarks

- *Apply reading comprehension strategies to understand grade-appropriate text.* (Reading Process A, 8-10; Reading Process A, 11-12)
- *Organize information from various resources and select appropriate sources to support central ideas, concepts and themes.* (Research C, 8-10)

Correlated Social Studies Academic Content Benchmarks

- *Use historical interpretations to explain current events.* (History A, 11-12)
- *Explain the role of diverse cultural institutions in shaping American society.* (People in Societies C, 11-12)
- *Evaluate various means for citizens to take action on a particular issue.* (Citizenship Rights and Responsibilities A, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	I
Media Arts	R	I	I

Competency 5.3: Describe government regulations and codes.
Descriptors:
5.3.1 Identify the process for obtaining local, county and state permits for building structures, sets and communication regulations.
5.3.2 Identify legal responsibilities specified by labor, employment and tax laws.
5.3.3 Describe the interrelationships among local, state and national codes.

Correlated English Language Arts Academic Content Benchmark

- *Demonstrate comprehension of print and electronic text by responding to questions (e.g., literal, inferential, evaluative and synthesizing).* (Reading Process B, 8-10; Reading Process B, 11-12)

Correlated Social Studies Academic Content Benchmark

- *Evaluate, take and defend positions about issues concerning the alignment of the characteristics of American democracy with realities in the United States today.* (Government A, 11-12)

Unit 6: Visual Design

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 6.1: Analyze the elements and principles of visual art forms.
Descriptors:
6.1.1 Apply critical thinking skills to evaluate works of art.
6.1.2 Identify art elements, including line, color, shape and texture in various media.
6.1.3 Identify use of primary, secondary and complementary colors in various media.
6.1.4 Define tint, shade, hue and value in relation to color theory.
6.1.5 Identify standard geometric shapes used in construction and design layout.
6.1.6 Compare samples of work that use contrast, unity and emphasis.

Correlated Mathematics Academic Content Benchmarks

- *Formally define geometric figures.* (Geometry and Spatial Sense A, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 6.2: Analyze the communicative effects of art elements.
Descriptors:

6.2.1 Identify the effects communicated by various types of lines, including straight, curved, horizontal, vertical and diagonal.
6.2.2 Identify messages or meanings that colors communicate in various cultures.
6.2.3 Compare asymmetrical and symmetrical images communicating balance.
6.2.4 Compare repetition and pattern in fabric and other applications that communicate rhythm.
6.2.5 Examine use of contrasting or unusual proportion to communicate ideas in various artworks.

Correlated Mathematics Academic Content Benchmarks

- *Describe and apply the properties of similar and congruent figures; and justify conjectures involving similarity and congruence.* (Geometry and Spatial Sense B, 8-10)
- *Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.* (Geometry and Spatial Sense C, 8-10)

Correlated Social Studies Academic Content Benchmark

- *Explain how the character and meaning of a place reflect a society's economics, politics, social values, ideology and culture.* (Geography A, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Performing Arts	R	I	R
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 6.3: Critique various elements of design.
Descriptors:
6.3.1 Define the principles of design (e.g., emphasis, unity, balance, proportion, rhythm).
6.3.2 Create simple and complex compositions emphasizing mastery.
6.3.3 Design compositions that demonstrate competence in the use of positive and negative space, dominance, sub dominance and subordinates, formal balance, unity, repetition and informal balance.
6.3.4 Assess compositions that are a value study, a texture study, a design in contrast and continuous tone designs in high and low key.

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.* (Acquisition of Vocabulary D, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	I

Competency 6.4: Explain color theory and the use of color processes.
Descriptors:
6.4.1 Explain fundamental color perception theory (e.g., reflection, frequencies, metamerism, electromagnetic spectrum, incident light, refraction factors).

6.4.2 Analyze color space (e.g., Munsell's design relationship between chroma, value and hue).
6.4.3 Describe color models.
6.4.4 Analyze gamut variations.
6.4.5 Compare and contrast additive and subtractive color theory (e.g., red, green, blue [RGB], cyan, magenta, yellow, black [CMYK]).

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Vocabulary F, 8-10; Vocabulary E, 11-12)
- *Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.* (Vocabulary D, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Use algebraic representations, such as tables, graphs, expressions, functions and inequalities, to model and solve problem situations.* (Patterns, Functions and Algebra D, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Correlated Science Academic Content Benchmarks

- *Describe the identifiable physical properties of substances (e.g., color, hardness, conductivity, density, concentration and ductility). Explain how changes in these properties can occur without changing the chemical nature of the substance.* (Physical Sciences C, 9-10)
- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	I

Competency 6.5: Assess art elements and principles of two-dimensional forms.
Descriptors:
6.5.1 Apply elements of art, including line, color, shape and texture.
6.5.2 Render a skeletal image with muscle mass.
6.5.3 Demonstrate drawing in one-point, two-point and multi-point perspective.
6.5.4 Create work by applying color using pencils, markers, airbrush, dry media, water-based media, oil-based media or software.
6.5.5 Create work that demonstrates shape, volume, depth and dimension.
6.5.6 Create actual and implied texture.
6.5.7 Prepare print surface and print medium.
6.5.8 Create forms using elements and using principles of design.

Correlated Mathematics Academic Content Benchmark

- *Draw and construct representations of two- and three-dimensional geometric objects using a variety of tools, such as straightedge, compass and technology.* (Geometry and Spatial Sense E, 8-10)

Correlated Science Academic Content Benchmarks

- *Describe the identifiable physical properties of substances (e.g., color, hardness, conductivity, density, concentration and ductility). Explain how changes in these properties can occur without changing the chemical nature of the substance.* (Physical Sciences C, 9-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	I

Competency 6.6: Analyze art elements and principles of three-dimensional forms.
Descriptors:
6.6.1 Apply elements of art, including line, color, shape and texture.
6.6.2 Discuss the use of symmetry or asymmetry and geometric shape.
6.6.3 Analyze techniques that produce various texture in media (e.g., clay, wax, wood. metal).
6.6.4 Assess the characteristics of mediums (e.g., design, construction, use, maintenance, care of product).

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 6.7: Demonstrate basic art studio skills.
Descriptors:
6.7.1 Perform basic measurement functions.
6.7.2 Use and maintain drawing instruments.
6.7.3 Perform basic mechanical drawing skills.
6.7.4 Perform basic cutting functions using standard cutting devices.
6.7.5 Adhere/bond various media.

Correlated Mathematics Academic Content Benchmarks

- *Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.* (Measurement E, 8-10)
- *Draw and construct representations of two- and three-dimensional geometric objects using a variety of tools, such as straightedge, compass and technology.* (Geometry and Spatial Sense E, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 6.8: Analyze Web page parameters and usage.
Descriptors:
6.8.1 Differentiate between a client and a server.
6.8.2 Explain the role of browsers in reading files on the World Wide Web.
6.8.3 Identify how different browsers affect the look of a Web page.
6.8.4 Compare and contrast the features and functions of software editors available for designing Web pages.

6.8.5 Explain how bandwidths affect data transmission.
6.8.6 Compare the advantages and disadvantages of running an in-house server vs. using a service provider.

Correlated Mathematics Academic Content Benchmark

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Correlated Social Studies Academic Content Benchmark

- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)

Unit 7: Digital Media Design

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 7.1: Assess multimedia applications of software and hardware for the purposes of visual communications.

Descriptors:
7.1.1 Examine industrial standard tools, capabilities and interface elements.
7.1.2 Create and import media and place on timeline.
7.1.3 Export media in the appropriate format for delivery.
7.1.4 Select software to match the project.
7.1.5 Recognize how processor speed, Random Access Memory (RAM), monitor resolution and media storage affect development and use of multimedia projects.

Correlated Mathematics Academic Content Benchmarks

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)
- *Apply mathematical modeling to workplace and consumer situations, including problem formulation, identification of a mathematical model, interpretation of solution within the model, and validation to original problem situation.* (Mathematical Processes J, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 7.2: Examine and apply visual style guidelines and design layouts.

Descriptors:
7.2.1 Integrate special effects techniques with digital photography imagery.
7.2.2 Describe how the technical limitations of the medium affect content and style.
7.2.3 Define color-editing capabilities.
7.2.4 Enhance images.
7.2.5 Design within an established style guide.

Correlated English Language Arts Academic Content Benchmark

- *Apply reading comprehension strategies to understand grade-appropriate text.* (Reading Process A, 8-10; Reading Process A, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 7.3: Examine interactive multimedia products.
Descriptors:
7.3.1 Identify the media elements to be used (e.g., sound, video, graphics, text, animation).
7.3.2 Identify characteristics of interactive media presentations.
7.3.3 Identify value scripts and storyboards to communicate ideas.
7.3.4 Identify media elements used to produce interactive multimedia.

Correlated English Language Arts Academic Content Benchmark

- *Analyze the techniques used by speakers and media to influence an audience, and evaluate the effect this has on the credibility of a speaker or media message.* (Communication: Oral and Visual B, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 7.4: Analyze the effects of interactive multimedia on graphic design.
Descriptors:
7.4.1 Identify the media elements (e.g., sound, video, graphics, text, animation).
7.4.2 Identify characteristics of interactive media presentations.
7.4.3 Analyze the elements of theme.

Correlated English Language Arts Academic Content Benchmark

- *Analyze the techniques used by speakers and media to influence an audience, and evaluate the effect this has on the credibility of a speaker or media message.* (Communication: Oral and Visual B, 8-10)

Unit 8: Layout

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	P	R
Media Arts	E	I	P

Competency 8.1: Create visual layouts.
Descriptors:
8.1.1 Identify the basic principles of design (e.g., unity, contrast, page proportion, balance).

8.1.2 Compare and contrast thumbnail and rough sketches and discuss their importance.
8.1.3 Create and analyze a comprehensive layout.
8.1.4 Create single-color and multi-color layouts using images and various impositions and formats.
8.1.5 Utilize color theory in design.
8.1.6 Change contrast using tint screens and shading techniques.

Correlated Science Academic Content Benchmarks

- *Describe the identifiable physical properties of substances (e.g., color, hardness, conductivity, density, concentration and ductility). Explain how changes in these properties can occur without changing the chemical nature of the substance.* (Physical Sciences C, 9-10)
- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	P	R
Media Arts	E	I	P

Competency 8.2: Assess typographical elements.
Descriptors:
8.2.1 Identify typography fundamentals (e.g., kerning, typefaces, leading, readability).
8.2.2 Describe the differences between various font types (e.g., True Type, PostScript).
8.2.3 Explain the point system of measurement and its application.
8.2.4 Evaluate copy fitting requirements.
8.2.5 Compare and contrast font management applications.
8.2.6 Describe typography's effects on message delivery and aesthetics.

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.* (Acquisition of Vocabulary D, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Apply various measurement scales to describe phenomena and solve problems.* (Measurement B, 11-12)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	P

Competency 8.3: Utilize desktop publishing systems to design layouts.
Descriptors:
8.3.1 Demonstrate file management operations.
8.3.2 Compare and contrast page layout programs.

8.3.3 Demonstrate raster and vector applications.
8.3.4 Utilize the elements of layout (e.g., color, font, text graphics, frames, headings).
8.3.5 Convert resolution factors for desired output.
8.3.6 Embed color profiling.
8.3.7 Explain Red, Green, Blue (RGB) versus Cyan, Magenta, Yellow, Black (CMYK) workflow.
8.3.8 Calibrate a computer monitor.
8.3.9 Use a file compression utility for file transfer or storage.
8.3.10 Demonstrate repurposing files for multiple applications.

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.* (Geometry and Spatial Sense C, 8-10)
- *Draw and construct representations of two- and three-dimensional geometric objects using a variety of tools, such as straightedge, compass and technology.* (Geometry and Spatial Sense E, 8-10)

Correlated Science Academic Content Benchmarks

- *Describe the identifiable physical properties of substances (e.g., color, hardness, conductivity, density, concentration and ductility). Explain how changes in these properties can occur without changing the chemical nature of the substance.* (Physical Sciences C, 9-10)
- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Unit 9: Prepress and Image Generation

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	P

Competency 9.1: Demonstrate image generation operations.
Descriptors:
9.1.1 Describe file formats (e.g., Tag Image File Format [TIFF], Joint Photographic Experts Group [JPEG], Portable Document Format [PDF]).
9.1.2 Apply color management and color models.
9.1.3 Manage output factors (e.g., resolution, file management, device specific).
9.1.4 Utilize register marks, color bars, page information, etc.
9.1.5 Analyze the relationship between emulsions and exposure.

Correlated Mathematics Academic Content Benchmark

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)

Correlated Science Academic Content Benchmark

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 9.2: Preflight files.
Descriptors:
9.2.1 Proofread layout.
9.2.2 Examine page format (e.g., columns, text wrap).
9.2.3 Ensure embedded fonts.
9.2.4 Check links to graphic elements.
9.2.5 Examine file format for export.
9.2.6 Adjust trapping for correct color overlap.

Correlated English Language Arts Academic Content Benchmark

- *Apply editing strategies to eliminate slang and improve conventions.* (Writing Processes D, 11-12)

Correlated Mathematics Academic Content Benchmark

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 9.3: Analyze image carrier generation.
Descriptors:
9.3.1 Compare and contrast image carrier generation methods (e.g., computer to plate, film based, screen, flexography).
9.3.2 Demonstrate making an image carrier.
9.3.3 Analyze image carrier materials.
9.3.4 Describe page description languages (e.g., PostScript, common printer language).
9.3.5 Utilize raster image processor (RIP) software.

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 9.4: Analyze color proofs for prepress operations.
Descriptors:
9.4.1 Identify color shift, dot gain, trapping and gray balance.
9.4.2 Identify color correction factors.
9.4.3 Identify and analyze quality control devices (e.g., densitometer, spectrophotometer).

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.* (Acquisition of Vocabulary D, 11-12)

Correlated Mathematics Academic Content Benchmark

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Correlated Science Academic Content Benchmark

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Unit 10: Imaging Technologies

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 10.1: Set up substrate and image control systems for conventional printing and digital printing.

Descriptors:

10.1.1 Explain fundamental color perception theory (e.g., reflection, frequencies, metamerism, electromagnetic spectrum, incident light, refraction factors).
10.1.2 Describe transport pathways.
10.1.3 Analyze color matching specifications (e.g., Pantone system).
10.1.4 Maintain conductivity and pH levels for conventional printing.
10.1.5 Maintain image density and coverage.
10.1.6 Preserve image carrier.
10.1.7 Set up and adjust register systems.
10.1.8 Compare and contrast image transfer methods.
10.1.9 Analyze drying methods (e.g., heat, oxidation, Ultraviolet-UV, additives, infrared).
10.1.10 Apply variable data techniques (e.g., four color, two color, one color).

Correlated English Language Arts Academic Content Benchmarks

- *Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.* (Acquisition of Vocabulary D, 11-12)
- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)

Correlated Mathematics Academic Content Benchmark

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Correlated Science Academic Content Benchmark

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 10.2: Create printed images according to the customer's signed proof.
Descriptors:
10.2.1 Compare and contrast color density between proof and press sheet
10.2.2 Interpret color bars.
10.2.3 Analyze the effects of single-color and multiple-color output on various substrates.
10.2.4 Analyze the effects of process color output on various substrates.
10.2.5 Analyze and maintain print quality.
10.2.6 Create and evaluate the copy (e.g., registration, color density).

Correlated Mathematics Academic Content Benchmark

- *Translate information from one representation (words, table, graph or equation) to another representation of a relation or function.* (Patterns, Functions and Algebra C, 8-10)

Unit 11: Screen Printing

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	R
Media Arts	N/A		

Competency 11.1: Examine screen printing operations.
Descriptors:
11.1.1 Identify the basic functions of a screen printing system
11.1.2 Identify substrates used in screen printing.
11.1.3 Describe the factors that determine the quality of the impression (e.g., angle, pressure, speed, composition).
11.1.4 Describe innovations to screen printing operations (e.g., automatic presses, drying systems, curable ink technologies).

Correlated Mathematics Academic Content Benchmark

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)

Correlated Science Academic Content Benchmarks

- *Describe the identifiable physical properties of substances (e.g., color, hardness, conductivity, density, concentration and ductility). Explain how changes in these properties can occur without changing the chemical nature of the substance.* (Physical Sciences C, 9-10)
- *Explain that science and technology are interdependent; each drives the other.* (Science and Technology B, 9-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	R
Media Arts	N/A		

Competency 11.2: Print final product.
Descriptors:
11.2.1 Analyze image carrier materials.
11.2.2 Create screen print.
11.2.3 Compare and contrast drying methods (e.g., heat, oxidation, ultraviolet [UV], additives, infrared).
11.2.4 Describe the importance of reclaiming screens.
11.2.5 Identify disposal procedures for reclaiming waste materials.

Correlated Science Academic Content Benchmark

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Unit 12: Post Image Transfer

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	P	R
Media Arts	N/A		

Competency 12.1: Evaluate post image transfer finishing methods.
Descriptors:
12.1.1 Identify post image transfer finishing requirements.
12.1.2 Describe and identify inline-finishing systems.
12.1.3 Describe and identify offline-finishing systems.
12.1.4 Identify finishing calculation requirements (e.g., diagrams, formulas, dummies).

Correlated Mathematics Academic Content Benchmark

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	N/A		

Competency 12.2: Identify specifications for finishing techniques.
Descriptors:
12.2.1 Explain specifications for folding and utilizing imposition dummies.
12.2.2 Identify tolerances for folding.
12.2.3 Explain specifications for scoring and perforating.
12.2.4 Identify tolerances for drilling/die cutting requirements.
12.2.5 Identify requirements for saddle and flat stitching.

12.2.6 Identify requirements for perfect binding.
12.2.7 Identify requirements for padding.
12.2.8 Identify requirements for specialty finishing techniques (e.g., thermography, General Binding Corporation [GBC] binding, wire/spiral binding).
12.2.9 Interpret cutting strategies and estimates.

Correlated English Language Arts Academic Content Benchmarks

- *Apply knowledge of roots, affixes and phrases to aid understanding of content area vocabulary.* (Acquisition of Vocabulary D, 11-12)
- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)

Correlated Mathematics Academic Content Benchmark

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)

Unit 13: Acquire Moving and Still Images

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	P	R

Competency 13.1: Apply principles of design and composition.
Descriptors:
13.1.1 Explain the use of texture, color, shape and balance.
13.1.2 Demonstrate the importance of compositional techniques including "rule of thirds," "crossing the line (180 degree rule)," framing and aspect ratio.
13.1.3 Describe the importance of continuity (e.g., actions of the actors, placement of props, costuming, lighting).
13.1.4 Demonstrate the use of camera angles (e.g., the impact of camera position, relationship between the camera and the subject).
13.1.5 Describe techniques for perspective (i.e., creating the illusion of depth).

Correlated Mathematics Academic Content Benchmarks

- *Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.* (Geometry and Spatial Sense C, 8-10)
- *Draw and construct representations of two- and three-dimensional geometric objects using a variety of tools, such as straightedge, compass and technology.* (Geometry and Spatial Sense E, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	P
Media Arts	E	I	P

Competency 13.2: Analyze lighting requirements.

Descriptors:
13.2.1 Apply the principles of light (e.g., color, temperature).
13.2.2 Select and place lighting equipment for various lighting effects.
13.2.3 Manipulate light (e.g., light direction, gels, strobes, filters, scrims).
13.2.4 Compare and contrast lighting used for various productions.
13.2.5 Demonstrate lighting techniques (e.g., three point lighting, bounce lighting, on-camera lighting).
13.2.6 Measure light levels.
13.2.7 Describe the characteristics of light (e.g., hard light, soft light, incident light).

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.* (Measurement E, 8-10)

Correlated Science Academic Content Benchmark

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	P

Competency 13.3: Demonstrate scanning techniques and procedures.
Descriptors:
13.3.1 Describe the scanning process.
13.3.2 Describe the relationship between lines per inch (LPI) and dots per inch (DPI).
13.3.3 Identify the relationship between resolution and file size.
13.3.4 Manipulate input functions and calibration (e.g., descreening, gama, resolution).
13.3.5 Demonstrate saving images in various modes, resolutions and formats.

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.* (Measurement E, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 13.4: Calibrate equipment.
Descriptors:
13.4.1 Describe the effects of light on color and image control.
13.4.2 Calibrate for monitoring equipment (e.g., vectorscopes, waveform monitors, preview and program monitors).

13.4.3 Calibrate a camera (e.g., white balance, f/stop, iris, camera control unit).
13.4.4 Calibrate photographer's printers.

Correlated Mathematics Academic Content Benchmark

- *Apply various measurement scales to describe phenomena and solve problems.* (Measurement B, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	R	I	P

Competency 13.5: Organize a video or photo shoot.
Descriptors:
13.5.1 Analyze the elements, function and physical layout of the location.
13.5.2 Demonstrate production design (e.g., visualization, set design, blocking).
13.5.3 Apply principles for staging multiple subjects.
13.5.4 Support a production with graphics, scenery, set pieces and prop design.

Correlated Mathematics Academic Content Benchmark

- *Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.* (Geometry and Spatial Sense C, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	R
Media Arts	E	P	R

Competency 13.6: Explain the history and evolution of image acquisition.
Descriptors:
13.6.1 Compare and contrast formats.
13.6.2 Distinguish between analog and digital video formats.
13.6.3 Compare and contrast the basic operating systems used to deliver the basic formats.
13.6.4 Describe historic and marketplace developments related to image capture.

Correlated Social Studies Academic Content Benchmarks

- *Use historical interpretations to explain current issues.* (History B, 11-12)
- *Analyze how scarcity of productive resources affects supply, demand, inflation and economic choices.* (Economics A, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	P
Media Arts	E	P	R

Competency 13.7: Acquire images.
Descriptors:
13.7.1 Compare and contrast methods of image capture.
13.7.2 Select media.

13.7.3 Determine production format to match intended end use.
13.7.4 Compare and contrast filter types.
13.7.5 Frame and maintain picture composition.
13.7.6 Focus and adjust images.
13.7.7 Manage exposure, depth of field and compression of space.
13.7.8 Import, store and retrieve images.
13.7.9 Identify atypical capturing situations (e.g., underwater shots, macro shots).

Correlated Mathematics Academic Content Benchmarks

- *Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.* (Measurement E, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	R	I	P
Media Arts	E	P	R

Competency 13.8: Demonstrate techniques specific to acquiring images with video/film.
Descriptors:
13.8.1 Demonstrate camera control (e.g., pan, tilt, zoom, dolly).
13.8.2 Apply single- and multi-camera production techniques.
13.8.3 Demonstrate camera motion control equipment (e.g., cranes, dollies, tripods).
13.8.4 Apply techniques for slow-motion and fast-motion.
13.8.5 Integrate image capture with the post production process.

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)
- *Recognize and apply angle relationships in situations involving intersecting lines, perpendicular lines and parallel lines.* (Geometry and Spatial Sense C, 8-10)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 13.9: Demonstrate post-capture image manipulation techniques.
Descriptors:
13.9.1 Demonstrate color balancing techniques.
13.9.2 Demonstrate sizing/cropping techniques.
13.9.3 Demonstrate image enhancement and digital retouching techniques.
13.9.4 Demonstrate digital file management techniques.

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)

- *Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.* (Measurement E, 8-10)

Unit 14: Audio Production

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	N/A		
Media Arts	E	P	R

Competency 14.1: Explain the science of sound.
Descriptors:
14.1.1 Explain how the acoustics affect the sound we hear.
14.1.2 Define the properties of sound.
14.1.3 Explain the transduction of sound (i.e., how sound energy is converted into electrical energy, resistance, balanced vs. unbalanced lines).
14.1.4 Compare and contrast the difference between measured and perceived sound.

Correlated Mathematics Academic Content Benchmark

- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Correlated Science Academic Content Benchmark

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	I
Media Arts	E	P	R

Competency 14.2: Demonstrate the processes and principles of capturing and recording audio.
Descriptors:
14.2.1 Distinguish between audio formats.
14.2.2 Trace the process of audio recording and processing.
14.2.3 Compare and contrast microphone properties with their intended use (e.g., handheld, condenser, wireless, dynamic).
14.2.4 Position microphones according to their directional characteristics.
14.2.5 Identify external devices and the hardware needed to capture and record audio.
14.2.6 Select storage media that corresponds to editing requirements.

Correlated Mathematics Academic Content Benchmarks

- *Estimate and compute various attributes, including length, angle measure, area, surface area and volume, to a specified level of precision.* (Measurement E, 8-10)
- *Apply mathematical knowledge and skills routinely in other content areas and practical situations.* (Mathematical Processes B, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	I	I
Media Arts	R	I	P

Competency 14.3: Apply principles of manipulating audio.
Descriptors:
14.3.1 Apply the principles of compression and limiting.
14.3.2 Apply the principles of buffering.
14.3.3 Demonstrate audio synchronization with other audio or video.
14.3.4 Differentiate between linear and non-linear transfers.

Correlated Mathematics Academic Content Benchmarks

- *Estimate, compute and solve problems involving real numbers, including ratio, proportion and percent, and explain solutions.* (Number, Number Sense and Operations G, 8-10)

Correlated Science Academic Content Benchmarks

- *Demonstrate that waves (e.g., sound, seismic, water and light) have energy and waves can transfer energy when they interact with matter.* (Physical Sciences G, 9-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	N/A		
Media Arts	R	I	P

Competency 14.4: Enhance an audio track with sound effects.
Descriptors:
14.4.1 Identify the types of sound effects (e.g., foley, ambient sound).
14.4.2 Match sound with the desired effect.
14.4.3 Incorporate sound effects into a recording or live performance (e.g., ambient/incident sound, foley sounds, voice-over, music).

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	N/A		
Media Arts	R	I	P

Competency 14.5: Apply audio dynamics by reinforcing, mixing and equalizing sound.
Descriptors:
14.5.1 Reinforce sound to match the needs of the environment (e.g., acoustics, room size).
14.5.2 Select and place audio amplifiers, speakers and monitors for planned effect.
14.5.3 Apply mixing techniques that maintain quality of product (e.g., virtual mix, compatible mix for television, music and effects mix).
14.5.4 Apply techniques for equalizing sound.

Unit 15: Audio and Visual Editing

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	N/A		
Media Arts	E	P	R

Competency 15.1: Identify the functions and equipment for editing.
Descriptors:
15.1.1 Describe the editing process for audio and visual productions.
15.1.2 Describe linear and nonlinear editing systems and online and offline editing systems.
15.1.3 Compare and contrast digital editing systems.

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	N/A		
Media Arts	E	I	P

Competency 15.2: Edit an audio and visual product.
Descriptors:
15.2.1 Identify the need to edit audio and visual products (e.g., communication of the message, continuity, forming a convincing message, viewpoint).
15.2.2 Capture media for editing.
15.2.3 Organize clips (e.g., file management, file names, storage areas, back-up files).
15.2.4 Demonstrate editing techniques (e.g., transitions, cutting points, order of shots, continuity editing).
15.2.5 Demonstrate special effects for video (e.g., filters, keying, image control).
15.2.6 Determine audio needs (e.g., filtering, ambient sound, sound effects).
15.2.7 Synchronize audio tracks with video tracks and other audio tracks.
15.2.8 Analyze and adjust video and audio files (e.g., exposure, white balance, audio level).
15.2.9 Create graphics for audio-visual products (e.g., titles, still images, music/sound).
15.2.10 Export final product (e.g., print to video, DVD, video file).

Correlated English Language Arts Academic Content Benchmarks

- *Apply reading comprehension strategies to understand grade-appropriate text.* (Reading Process A, 8-10; Reading Process A, 11-12)
- *Use appropriate self-monitoring strategies for comprehension.* (Reading Process C, 8-10; Reading Process C, 11-12)

Correlated Mathematics Academic Content Benchmark

- *Write and solve real-world, multi-step problems involving money, elapsed time and temperature, and verify reasonableness of solutions.* (Measurement F, 8-10)

Unit 16: Writing and Communication

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 16.1: **Deliver formal and informal presentations that demonstrate organization and delivery skill.**

Descriptors:

16.1.1 Demonstrate use of context appropriate grammar, diction and sentence structure.
16.1.2 Communicate main ideas and supporting facts to achieve purpose of communication.
16.1.3 Use appropriate technology to enhance clarity and persuasiveness.
16.1.4 Use proper organization and structure to achieve coherence.
16.1.5 Use technical terms, references and quoted material properly.
16.1.6 Engage an audience using appropriate vocal variety and gestures.

Correlated English Language Arts Academic Content Benchmarks

- *Use style guides to produce oral and written reports that give proper credit for sources (e.g., words, ideas, images and information) and include an acceptable format for source acknowledgement.* (Research D, 8-10; Research D, 11-12))
- *Demonstrate an understanding of effective speaking strategies by selecting appropriate language and adjusting presentation techniques.* (Communication: Oral and Visual D, 8-10)
- *Give informational presentations that present ideas in a logical sequence, include relevant facts and details from multiple sources and use a consistent organizational structure.* (Communication: Oral and Visual E, 8-10)
- *Give presentations using a variety of delivery methods, visual displays and technology.* (Communication: Oral and Visual G, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 16.2: **Apply active listening skills to obtain and clarify information provided in oral communications.**

Descriptors:

16.2.1 Identify and apply active listening techniques one-to-one and in team/group meetings.
16.2.2 Interpret verbal cues and behaviors to enhance communication.
16.2.3 Interpret nonverbal cues and behaviors to enhance communication.
16.2.4 Paraphrase and repeat information to confirm understanding.
16.2.5 Record and summarize information in written notes.
16.2.6 Generate questions to seek or confirm understanding.

Correlated English Language Arts Academic Content Benchmarks

- *Use a variety of strategies to enhance listening comprehension.* (Communication: Oral and Visual A, 8-10; Communication: Oral and Visual A, 11-12)
- *Evaluate the content and purpose of a presentation by analyzing the language and delivery choices made by a speaker.* (Communication: Oral and Visual C, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	R	P	R
Media Arts	E	P	R

Competency 16.3: Write coherent and focused documents.
Descriptors:

16.3.1 Use various note-taking techniques to summarize main ideas.
16.3.2 Structure ideas and arguments in an organized manner, which are supported by relevant documentation and/or examples.
16.3.3 Write messages using language that is appropriate for the intended audience and purpose.
16.3.4 Use correct spelling, grammar, capitalization and punctuation.
16.3.5 Identify positions from relevant research and resources.
16.3.6 Calculate and interpret descriptive statistics to communicate and support predictions and conclusions.
16.3.7 Utilize tables, charts and graphs to clarify textual explanations and support arguments.

Correlated English Language Arts Academic Content Benchmarks

- *Use a variety of strategies to revise content, organization and style, and to improve word choice, sentence variety, clarity and consistency of writing.* (Writing Processes C, 11-12)
- *Apply editing strategies to eliminate slang and improve conventions.* (Writing Processes D, 11-12)
- *Prepare writing for publication that follows an appropriate format and uses a variety of techniques to enhance the final product.* (Writing Processes F, 11-12)
- *Use documented textual evidence to justify interpretations of literature or to support a research topic.* (Writing Applications D, 8-10)
- *Produce informational essays or reports that establish a clear and distinctive perspective on the subject, include relevant perspectives, take into account the validity and reliability of sources and provide a clear sense of closure.* (Writing Applications D, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Construct convincing arguments based on analysis of data and interpretation of graphs.* (Data Analysis and Probability F, 8-10)
- *Create and analyze tabular and graphical displays of data using appropriate tools, including spreadsheets and graphing calculators.* (Data Analysis and Probability A, 11-12)
- *Use descriptive statistics to analyze and summarize data, including measures of center, dispersion, correlation and variability.* (Data Analysis and Probability B, 11-12)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Science Academic Content Benchmark

- *Participate in and apply the processes of scientific investigation to create models and to design, conduct, evaluate and communicate the results of these investigations.* (Scientific Inquiry A, 9-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 16.4: Use appropriate grammar and spelling.
Descriptors:
16.4.1 Use proper sentence structure.
16.4.2 Use appropriate punctuation.
16.4.3 Verify spelling through research and computer applications.
16.4.4 Describe when and how to use direct, indirect and partial quotes with proper attribution.

Correlated English Language Arts Academic Content Benchmarks

- *Apply editing strategies to eliminate slang and improve conventions.* (Writing Processes D, 11-12)
- *Use style guides to produce oral and written reports that give proper credit for sources (e.g., words, ideas, images and information) and include an acceptable format for source acknowledgement.* (Research D, 8-10; Research D, 11-12)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	P	R
Media Arts	E	P	R

Competency 16.5: Use visual imagery to support communication.
Descriptors:
16.5.1 Explain how visual imagery supports the development of stories.
16.5.2 Cite examples of when visual imagery and captions become the whole story.
16.5.3 Describe instances where visual imagery is not necessary.

Correlated English Language Arts Academic Content Benchmark

- *Analyze whether graphics supplement textual information and promote the author's purpose.* (Reading Applications: Informational, Technical and Persuasive Text C, 8-10)

Pathway	BIL	EDU: 12	EDU: AD
Visual Design and Imaging	E	I	P
Media Arts	E	I	P

Competency 16.6: Match a product to the audience.
Descriptors:
16.6.1 Identify the existing and target audiences.
16.6.2 Explain how audience demographics impact pre-production planning.
16.6.3 Examine audience response (e.g., ratings, demographics, surveys).

Correlated English Language Arts Academic Content Benchmarks

- *Formulate open-ended research questions suitable for investigation and adjust questions as necessary while research is conducted.* (Research A, 8-10)

- *Formulate open-ended research questions suitable for inquiry and investigation and adjust questions as necessary while research is conducted.* (Research A, 11-12)
- *Evaluate the usefulness and credibility of data and sources and synthesize information from multiple sources.* (Research C, 11-12)

Correlated Mathematics Academic Content Benchmarks

- *Construct convincing arguments based on analysis of data and interpretation of graphs.* (Data Analysis and Probability F, 8-10)
- *Locate and interpret mathematical information accurately, and communicate ideas, processes and solutions in a complete and easily understood manner.* (Mathematical Processes H, 8-10)

Correlated Social Studies Academic Content Benchmarks

- *Analyze how issues may be viewed differently by various cultural groups.* (People in Societies A, 11-12)
- *Critique data and information to determine the adequacy of support for conclusions.* (Social Studies Skills and Methods B, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	N/A		
Media Arts	E	I	P

Competency 16.7: Obtain information to use in writing a fact-based story.
Descriptors:

16.7.1 Explain the characteristics of a potential fact-based story (e.g., timeliness, effect, proximity).
16.7.2 Identify potential sources for a story's background (e.g., community calendar of events, police and fire communications, wire services, verifiable Internet sources, news services, interviews).
16.7.3 Describe considerations for setting up an interview (e.g., who, what, when, where, why and how questions).
16.7.4 Arrange and interview a source.
16.7.5 Define off-the-record information.
16.7.6 Identify research strategies, sources and rights to public records.
16.7.7 Check information for validity.

Correlated English Language Arts Academic Content Benchmarks

- *Formulate writing ideas, and identify a topic appropriate to the purpose and audience.* (Writing Processes A, 8-10; Writing Processes A, 11-12)
- *Compile, organize and evaluate information, take notes and summarize findings.* (Research B, 11-12)
- *Use a variety of strategies to enhance listening comprehension.* (Communication: Oral and Visual A, 8-10; Communication: Oral and Visual A, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	N/A		
Media Arts	E	I	P

Competency 16.8: Develop a fact based story.
Descriptors:

16.8.1 Describe the importance of being concise and focusing on the central point of the story.
16.8.2 Remain objective and use strong verbs.
16.8.3 Identify language to avoid (e.g., adjectives, adverbs, slang, jargon, euphemisms).
16.8.4 Explain how "who, what, when, where, why and how" can be structured into leads.
16.8.5 Describe guidelines for effective leads (e.g., concise, unusual, localized, strong action verbs).
16.8.6 Recognize common lead errors (e.g., agenda leads, label leads, lists, exaggerations).
16.8.7 Compare and contrast body styles (e.g., inverted-pyramid, hourglass, focus, narrative).
16.8.8 Illustrate examples of transition words and their function.
16.8.9 Describe specialized stories (e.g., brights, roundups, sidebars).
16.8.10 Describe types of feature stories (e.g., personality, historical, adventure, medical).
16.8.11 Describe public affairs reporting (e.g., crime, accidents, local government, courts).

Correlated English Language Arts Academic Content Benchmarks

- *Use multiple resources to enhance comprehension of vocabulary.* (Acquisition of Vocabulary F, 8-10; Acquisition of Vocabulary E, 11-12)
- *Use revision strategies to improve the style, variety of sentence structure, clarity of the controlling idea, logic, effectiveness of word choice and transitions between paragraphs, passages or ideas.* (Writing Processes C, 8-10)
- *Produce informational essays or reports that establish a clear and distinctive perspective on the subject, include relevant perspectives, take into account the validity and reliability of sources and provide a clear sense of closure.* (Writing Applications D, 11-12)

Pathway	**BIL**	**EDU: 12**	**EDU: AD**
Visual Design and Imaging	N/A		
Media Arts	E	I	P

Competency 16.9: Develop scripts/libretti for communication.
Descriptors:

16.9.1 Identify purposes of the script/libretto.
16.9.2 Identify the types of scripts/libretto.
16.9.3 Identify script elements and techniques.
16.9.4 Describe storyboarding technique.
16.9.5 Edit scripts/libretti (e.g., spelling, grammar, peer review, client and/or artistic approval).
16.9.6 Write for the ease of the performer or speaker and the context of the presentation (e.g., phonetic spelling, hyphenate, spell-out numbers, words rather than abbreviations).

Correlated English Language Arts Academic Content Benchmarks

- *Analyze the use of a genre to express a theme or topic* (Reading Applications: Literary Text E, 8-10)
- *Apply tools to judge the quality of writing.* (Writing Processes E, 8-10; Writing Processes E, 11-12)
- *Prepare writing for publication that follows an appropriate format and uses a variety of techniques to enhance the final product.* (Writing Processes F, 11-12)

Technology Standards

Standard 1: Nature of Technology

Students develop an understanding of technology, its characteristics, scope, core concepts* and relationships between technologies and other fields.

Benchmark A: Synthesize information, evaluate and make decisions about technologies.

Benchmark B: Apply technological knowledge in decision-making.

Benchmark C: Examine the synergy between and among technologies and other fields of study when solving technological problems.

Standard 2: Technology and Society Interaction

Students recognize interactions among society, the environment and technology, and understand technology's relationship with history. Consideration of these concepts forms a foundation for engaging in responsible and ethical use of technology.

Benchmark A: Interpret and practice responsible citizenship relative to technology.

Benchmark B: Demonstrate the relationship among people, technology and the environment.

Benchmark C: Interpret and evaluate the influence of technology throughout history, and predict its impact on the future.

Benchmark D: Analyze ethical and legal technology issues and formulate solutions and strategies that foster responsible technology usage.

Benchmark E: Forecast the impact of technological products and systems.

Standard 3: Technology for Productivity Applications

Students learn the operations of technology through the usage of technology and productivity tools.

Benchmark A: Integrate conceptual knowledge of technology systems in determining practical applications for learning and technical problem-solving.

Benchmark B: Identify, select and apply appropriate technology tools and resources to produce creative works and to construct technology-enhanced models.

Standard 4: Technology and Communication Applications

Students use an array of technologies and apply design concepts to communicate with multiple audiences, acquire and disseminate information and enhance learning.

Benchmark A: Apply appropriate communication design principles in published and presented projects.

Benchmark B: Create, publish and present information, utilizing formats appropriate to the content and audience.

Benchmark C: Identify communication needs, select appropriate communication tools and design collaborative interactive projects and activities to communicate with others, incorporating emerging technologies.

Standard 5: Technology and Information Literacy

Students engage in information literacy strategies, use the Internet, technology tools and resources, and apply information-management skills to answer questions and expand knowledge.

Benchmark A: Determine and apply an evaluative process to all information sources chosen for a project.

Benchmark B: Apply a research process model to conduct research and meet information needs.

Benchmark C: Formulate advanced search strategies, demonstrating an understanding of the strengths and limitations of the Internet, and evaluate the quality and appropriate use of Internet resources.

Benchmark D: Evaluate choices of electronic resources and determine their strengths and limitations.

Standard 6: Design

Students apply a number of problem-solving strategies demonstrating the nature of design, the role of engineering and the role of assessment.

Benchmark A: Identify and produce a product or system using a design process, evaluate the final solution and communicate the findings.

Benchmark B: Recognize the role of teamwork in engineering design and of prototyping in the design process.

Benchmark C: Understand and apply research, development and experimentation to problem-solving.

Standard 7: Designed World

Students understand how the physical, informational and bio-related technological systems of the designed world are brought about by the design process. Critical to this will be students' understanding of their role in the designed world: its processes, products, standards, services, history, future, issues and career connections.

Benchmark A: Classify, demonstrate, examine, and appraise energy and power technologies.

Benchmark B: Classify, demonstrate, examine and appraise transportation technologies.

Benchmark C: Classify, demonstrate, examine and appraise manufacturing technologies.

Benchmark D: Classify, demonstrate, examine and appraise construction technologies.

Benchmark E: Classify, demonstrate, examine and appraise information and communication technologies

Benchmark F: Classify, demonstrate, examine and appraise medical technologies.

Benchmark G: Classify, demonstrate, examine and appraise agricultural and related biotechnologies.

Performance Measures/Student Assessment/Instructional Strategies

Assessments/Evaluations

- Observations
- Demonstrations
- Portfolios
- Standardized Tests
- Class Assignment
- Quizzes/Tests/Exams
- Web Exam/Certification

Instructional Strategies

- Teacher-Directed & Student-Centered Activities
- Case Study Problem Solving
- Cooperative Learning
- Project-Based Learning
- Career-Based Learning (Internships/Shadowing/Placement)
- Community-Based Learning (CTSOs and Other)
- Exploratory Learning
- Independent Research
- Team Teaching

Content Specific Strategies