

Scientific Illustration Overview

Content Area: **Art**
Course(s): **SCIENTIFIC ILLUSTRATION AND EXPRESSION**
Time Period:
Length: **N/A**
Status: **Published**

Course Overview

This quarter elective will strengthen students' abilities to scientifically interpret the visual aspects of their investigations and more vividly and expressively communicate their findings to others while at the same time giving them the opportunity to artistically use scientific concepts, materials and observations in their art-making activities.

NJ Student Learning Standards		NJ Student Learning Standards		
NJ Student Learning Standards1. Visual and Performing Arts	P	5. Science	S	9. Career Education and Consumer/Family/ Life Skills
2. Health and Physical Education		6. Social Studies		
3. Language Arts Literacy		7. World Languages		
4. Mathematics		8. Technology Literacy		

Textbooks and other resources

Drawing paper, drawing pencils, drawing boards, pen and ink, charcoal, graphite sticks, tortillons, fadeless paper, construction paper, specialty paper, erasers, watercolor paints, brushes, oil pastels, soft pastels, rulers, triangles, compasses, white poster board, black poster board

Magnifying glasses, microscopes, science specimens

Standards

COURSE BENCHMARK OBJECTIVES

Students will consider the worlds of science and art and elaborate on their observations and knowledge.

(1.4.12.B.2) (M)

Students will recognize the external world as a resource for visually stimulating subject matter. (1.4.12.B.2) (M)

Students will draw from Life Sciences, Earth Science, physical science, astronomy, and Environmental Science as well as aesthetics, art production and critique. (1.4.12.A.2) (M)

Students will visually communicate scientific concepts. (1.3.12.D.3) (M)

Students will be introduced to styles and techniques using various art materials and related media. (1.3.12.D.2) (M)

COURSE SCOPE AND SEQUENCE CHART

Sequential Unit Description:	Associated CPI's to be Achieved	Marking Period Guide	Other Pacing Guide References	Proficiency (Summative) Assessments
Unit 1 Nature Journaling	1.4.12.B.2 (M)	1	8 days	Production of sketches and drawings, critique sessions, class discussions, classroom interaction
By interpreting visual aspects of scientific investigation students react personally to the physical world	1.1.12.D.2 (M) 5.1.12.D.2 (D)			
Unit 2 Observational Drawing	1.4.12.B.2 (M)	1	10 days	Production of Final Project, critique sessions, class discussions, classroom interaction
Students will develop skills of observation by being asked to carefully note changes in color, shape and pattern and accurately observe and notice small details in a range of elements i.e. weather, microscopy, forensics, etc.	1.1.12.D.2 (M) 5.1.12.D.2 (D) 5.3.12.E.2(D)			
Unit 3 Visualizing Information	1.4.12.B.2 (M)	1	8 days	Production of Final Project, critique sessions, class discussions, classroom interaction
-	1.1.12.D.2 (M)			
Students will be able to note significant similarities and differences due to varying conditions, record and collect visual resources, analyze changes and identify patterns	1.1.12.D.1 (M) 5.1.12.D.2 (D)			
Unit 4 Interpreting Scientific/Natural Processes	1.4.12.B.2 (M)	1	16 days	Production of Final Project, critique sessions,

Students will be able to create art that explores their own beliefs, their own reasoning and their own theories	1.1.12.D.2 (M)	class discussions, classroom interaction
	1.1.12.D.2 (M)	
	5.1.12.D.2 (D)	

Grading and Evaluation Guidelines

GRADING PROCEDURES

Assessment is determined by evaluating three area of student involvement: production, perception/reflection, and approach to work.

Production is evaluated by looking at drafts and final work. Factors to be considered are:

- Craftsmanship- student is in basic control of basic techniques and principles
- Pursuit- student develops work over time, returns to a problem or theme from a variety of angles
- Invention- Student solves problem in a creative manner, experiments and takes risks, sets own problem to solve.
- Expression/Point of view- Student is engaged in more than technique, but also trying to make a personal statement

Perception/Reflection is determined from student comments in critique sessions, class discussion or other activities. Factors considered are:

- Awareness of physical properties and qualities of materials
- Ability to assess own work and work of others
- Ability to use criticisms and suggestions
- Ability to articulate artistic goals

Approach to work is assessed by observing student in classroom interaction and is based upon:

- Engagement- works hard and shows interest
- Ability to work independently and collaboratively as appropriate
- Ability to use cultural resources- uses books, museums, tools, other people as appropriate.

In terms of proficiency level the East Brunswick grades equate to:

A Excellent Advanced Proficient

B	Good	Above Proficient
C	Fair	Proficient
D	Poor	Minimally proficient
F	Failing	Partially Proficient

COURSE EVALUATION

In Scientific Illustration, the goal is that a minimum of 95% of all pupils will achieve at least minimum proficiency (D or better) relative to the NJSL set for this course. The department will review student achievement at all levels of proficiency relative to marking period grades, and if necessary, the individual components and assignments comprising these grades. Student achievement will further be analyzed to compare the achievement of the total enrollment vs. sub-groups to determine course areas requiring greater support or modification. As a result of the analysis, decisions will be made concerning modifications to course content and/or instructional methodology.

Other Details

1267 - Scientific Illustration (East Brunswick High School)

Projected Number of Students	School #’s	Course Level	Course Length	Grade Level	Credits	Min. Per Week	Elective/ Required	Initial Course Adopted
32	050	A	Q	10-12	1.25	210	E	12/21/06