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To: Persons with Responsibility for Implementing *Design and Drawing for Production*

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This syllabus, *Design and Drawing for Production* (DDP) has been widely used by students throughout New York State as an introductory course to the design process. In earlier editions this document was used as a guide to help students achieve the Regents goals and Commissioners Regulations in both visual arts and occupational education.

With the adoption of the Learning Standards by the Regents, this syllabus plays an important role towards meeting these standards as well. This course provides opportunities in the areas of design and drawing through creative thinking, decision-making and problem-solving experiences. These transferable skills play an important role in helping students achieve the higher standards expected of them. Strategies of design and drawing appropriate now and in the future are emphasized. Although there are tremendous changes taking place in the design area pertaining to the use of computers, this course should provide students with an opportunity to express themselves and display their talents in a variety of ways. Content of the course should drive instruction, not the computer. A shift from the conventional learning methods to this design problem approach is the basis for this syllabus.

The *Design and Drawing for Production* syllabus may be used to provide instruction to any student to satisfy the commencement level Art/Music requirement. Either Art Education or Technology Education teachers can provide instruction. It may be used as part of the Technology Education curriculum or as part of the Art Education curriculum.

Students pursuing an approved Technology Education sequence will receive Technology Education credit while also satisfying the commencement level Art/Music requirement. All students not pursuing an approved Technology Education sequence will earn credit in Art Education while also satisfying the commencement level Art/Music requirement. To fulfill this requirement, the course of study must utilize the State developed DDP syllabus. Courses of study such as Computer Aided Design (CAD) or Introduction to Engineering Design (IED) may not be substituted for DDP, and do not fulfill the Art/Music unit requirement.

For questions or comments regarding this syllabus, please contact either:

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***Addendum To  
Design and Drawing for Production (DDP) Syllabus  
when used to satisfy the Art/Music Credit Requirement***

The course, Design and Drawing for Production may be used by any student to satisfy the Art/Music credit requirement if the following criteria are met.

- Addresses aspects of both the Visual Arts\* and Technology standards
- Be commencement level in content and focus
- A full year course for use in this requirement
- Taught by a certified Art or Technology teacher or team taught
- Content focused on critical thinking and creative problem solving skills using the design process
- Computers may be introduced as a tool of the process but not driving delivery of the content
- Available for use by students in an Art or Technology sequence
- The existing State developed syllabus, *Design and Drawing for Production* should be used as a starting framework for instructional approach and context

\*All four of the Arts Standards for Visual Arts under the General Education heading at the commencement level must be incorporated and documented to satisfy this requirement. A matrix indicating where the appropriate standard(s) should be addressed is listed below for clarification. The Technology standard key ideas are also referenced to facilitate alignment and context for instruction.

<b>DDP Constants</b>	<b>Visual Arts Standards Addressed</b> (Numbers refer to standard)	<b>Technology Standard 5 Key Ideas Addressed</b> (Numbers refer to Key Idea)
<b>Drawing Area</b>	<b>1</b>	<b>1, 2, 3</b>
<b>Design Activity</b>	<b>1, 2</b>	<b>1,2,3,4,5,6,7</b>
<b>Research and Critical Analysis</b>	<b>1, 3, 4</b>	<b>1,2,7</b>
<b>Historical Reference</b>	<b>1, 2, 4</b>	<b>5</b>
<b>Skills</b>	<b>1, 2</b>	<b>1,2,6</b>
<b>Linkage</b>	<b>2, 3</b>	<b>2,4,6</b>
<b>Evaluation</b>	<b>1, 2, 3, 4</b>	<b>1,2,6,7</b>

Some examples of student activities that address the standards within the constants of the Design and Drawing for Production syllabus follow. Districts are encouraged to develop a variety of different examples to demonstrate student achievement of the standards.

## Student Task Examples

### **DDP Constant- Design Activity**

Specific criteria for the successful design and drawing requires a statement, offering guidance for the problem solver as well as considerations toward evaluation.

Visual Arts Std. 1, 2, Technology Std. 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7

- Students select a process or medium for their intended work of art and describe their reasons for that selection.
- Students select appropriate tools, materials and processes to manufacture a product (chosen on the basis of market research) that appeals to high school students.

### **DDP Constant- Research and Critical Analysis**

Analysis of the problem and its ramifications towards environmental, societal and cultural impacts.

Visual Arts Std. 1, 3, 4, Technology Std. 5.1, 5.2, 5.7

- Students select a style of art from the 20<sup>th</sup> century, study the characteristics of that style, research one artist who painted in that style and make a work of art using that style but expressing the students' point of view or idea.
- Students search the internet for web sites dealing with renewable energy and sustainable living and research the development and design of an energy efficient home.
- Students organize and implement an innovative project, based on market research, that involves design, production, testing, marketing, and sales of a product or a service.

### **DDP Constant- Historical Reference**

Historical precedents and futuring must be mentioned in lecture, discussion or activities.

Visual Arts Std. 1, 2, 4, Technology Std. 5.5

- Students develop an idea for a work of art, research the various ways in which the idea has been expressed by the artists and at other times, select the appropriate medium or technique for that work and complete the work.
- Students compare qualitatively and quantitatively the performance of a contemporary manufactured product, such as a household appliance, to the comparable device or system 50-100 years ago, and present results graphically, orally and in writing.

### **DDP Constant- Skills**

Competency in the conventions of drawing would cover the skills required to express one's ideas visually. Drawing conventions, uses of materials and professional conduct are also stressed.

Visual Arts Std. 1, 2, Technology Std. 5.1, 5.2, 5.6

- Students use one medium or technique in more than two works to indicate their skill with that medium or technique.
- Students produce a computer-generated design in which they use their understanding of composition, color, line, space.
- Students design and model a portable emergency shelter for a homeless person that could be carried by one person and be heated by the body heat of that person to a life-sustaining temperature when the outside temperature is 20°F.

- Students use a range of high- tech composite or synthetic materials to make a model of a product and explain their choice of material.

### **DDP Constant- Drawing Area**

The six major technical drawing areas; Orthographic, Pictorial, Sections, Auxiliaries, Revolutions, Transitions and Developments.

Visual Arts Std. 1, Technology Std. 5.1, 5.2, 5.3

- Students develop an idea for a work of art, research the various ways in which the idea has been expressed by the artists and at other times, select the appropriate medium or technique for that work and complete the work.
- Students develop plans, diagrams and working drawings for the construction of a computer-controlled marble sorting system that simulates how parts on an assembly line are sorted by color.

### **DDP Constant- Linkage**

Application of the design to the real world by linking to mass production methods is essential. The factors of the various resources, ecological and environmental impacts are considered.

Visual Arts Std. 2, 3, Technology Std. 5.2, 5.4, 5.6

- Students interview a professional artist about what that artist does, his/her preparation, the organization of his/her business.
- Students discuss the point of view of a critic in a local newspaper who has reviewed a local exhibition.
- Students describe how the flow, processing and monitoring of materials is controlled in a manufacturing plant and information-processing systems provide inventory, tracking and quality control data.
- Students identify new or emerging technologies and use a futuring technique to predict what might be the second and third order impacts.

### **DDP Constant- Evaluation**

Criteria specific to the quality of the design solution as well as use of materials and technique are to be evaluated along with the appropriate standards areas.

Visual Arts Std. 1, 2, 3, 4, Technology Std. 5.1, 5.2, 5.6, 5.7

- Students write a review of a student exhibition.
- Students analyze the way in which a work of art by Leon Golub expresses a political point of view.
- Students design a procedure to test the properties of synthetic and composite materials.
- Students draw a labeled system diagram which explains the performance of a system, and includes several subsystems and multiple feedback loops.