

Fundamental Drawing

For Chinese College Students

(taught in English)

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PROJECT TOPIC

Fundamental drawing

Domain

Art (studio art)

Learning Challenge

The learning challenge in practicing foundation art are drawing perspective, drawing composition, drawing light and shadow, color theory (color wheel, chroma, color temperature)

Project Target

drawing perspective, drawing composition, drawing light and shadow.

Learners

The course's earners are college-level Chinese students having little to none experience in studio drawing but have a passion for quick sketching, storyboarding visual design, or fine art. They are expected to have procedural knowledge of how to use a pencil or a pen to draw on a paper surface. Students may be able to depict the silhouette of a simply formed still life object. Declarative knowledge of identifying light and shadow on a given sculpture form in a simple shape. Students are expected to explain how perspective works on 3-dimensions space projects to a 2-dimensional surface. Students are expected to clarify the definitions of perspective, negative space, and light effect. Students ideally have had experience in making powerpoint presentations using different colors, attempting to create a composition, and using images.

Prerequisite

- Know:
 - Students are expected to know how to draw basic shapes prior to class.
 - I have experience in an English teaching environment and feel confident taking courses taught in English.
 - Prior knowledge to art history or theory is a plus but not required

- Do:
 - Have completed 2-3 drawings of still life items (shouldn't be a cartoon or animate).
 - Students are expected to know how to draw basic shapes prior to class.
 - Prior experience of studio art or photography is a plus but not required
- Be:
 - Students are expected to think critically and some level of self-reflection skills.
 - Students are expected to think critically and some level of self-reflection skills.
 - Students are expected to have a strong interest in art and creativity works.

Real Life Transfer

Communication is important, communication with a visual image can add a degree of clarity on top of the words. By learning these basic skills in drawing, students may further their art and design practice on quick sketches, illustration, design, and storyboard drawings.

Maximize Continuity of Goals

If you want to pursue a professional career, knowing how to draw can boost conversation in meetings. Communicating ideas with quick sketches or storyboards can better illustrate your concepts to your co-workers and clients. Besides, the knowledge of composing and manipulating lights can further extend to the visual design of your powerpoint and report. If you want to pursue a career in the arts industry, this is the very basic knowledge of any field of art in general. The skill of composing, managing light, and perspective can be used in photography, illustration, graphic design, film, and so on.

Initial Resources Available

- Experience:
 - I have over 10 years of experience in studio art and was an art student for 4 years in college. Then I practiced art for another year when working in the fine art industry.
- Practitioner consult:
 - Teacher Ren, Liu (teachers with 2-5 years of experience teaching college-level Chinese students)

- Assessment design
 - Instructional design
- Online courses:
 - Lynda drawing foundations
 - Rhode Island School of Design division of graduate studies, Syllabus, Drawing -- goals, an example of setting goals of a drawing course; components that might be included in a foundation drawing course
- Established standards:
 1. Objectives: a guided drawing seminar, Instructor: Nancy Frieze, Professor -- all, an example course syllabus
 2. College Board Research - Arts and Common Core - final report1 -- goals, evaluation standards in the field of art.
 3. College Board Research - College Expectations Report -- goals, the expected level of development from a college education.
 4. College Board Research - International Standards_0 -- context and goals, what are the different standards in Art education between the U.S. and China.
 5. Maryland Institute College of Art faculty_handbook -- all, an art college's guideline for instructors coming up with the learning objectives, instructional methods, assessment methods, and evaluation methods.
 6. DoDEA College and Career Ready Standards for Arts (CCRSA)
 7. Perry and Piaget: Theoretical Framework for Effective College Course Development -- goals and context, which Perry and Piaget stages should be put on focus in college (undergraduate) education

CONTEXT CONSIDERATIONS

Who?

General college level (all grades for university and freshman level for art colleges) students who received their education below and including high school in China, are fluent in English as a first or second language and interested in learning studio art for future approach in the art field or career development.

Community values

Under the assumption that my student receives an education is mainly in China. Their background should be categorized into three social classes. The expected students who take the course in a general university are from all three listed below, while the courses offered in an art college are expecting to accommodate students from middle to higher classes. The targeted learners are from all three social classes.

The lower class doesn't value art. So, students coming from this social background may likely to suffer unsupportive out of the class environment and have disadvantages acquiring knowledge outside of the lecture. The middle class sees art as an extra skill or an elegant habit that should be built on top of excellent academic performance on another more practical field of study. Students coming from this social background may put more effort into the other subject matters that they and their social group value more than this course. They also may encounter difficulties finding resources out of school. The higher-class values art education as it fosters aesthetic and taste. Students coming from this class are privileged in the emotional and out, of course, academic support. Because of their social status, they have more exposure to high-end artworks and designs. They also have tons of resources for new learning.

Norms

Visual design with poorly defined hierarchy and color palette are commonly seen in public areas. People appreciate figurative art.

What to accomplish

- Know:

- Drawing composition:
 - Being presented by a drawing of still life objects, the student is able to identify the composition structure, negative space, and path of eye movement.
- Drawing perspective:
 - Being presented with a drawing of a plaster cast in simple geometric shapes, the student is able to identify how the cube is different than a from one view from a different perspective nor the student is able to explain why some of the edges are shorter than the actual object's measurements.
- Drawing light and shadow:
 - Being presented as a plaster cast in simple geometric shapes under one light source against patternless back and foregrounds with different colors, the student is able to point out the darkest dark and the brightest light areas, nor is he/she able to explain why there appears to be like such.
- Do:
 - Drawing composition:
 - Being presented with four simply shaped still life objects and drawing materials, the student is able to compose and draw the composition center to the drawing surface covering more than $\frac{2}{3}$ of the space of the blank paper. No object is cut off by the paper's edges. Drawing perspective:
 - Being presented with a plaster cast in simple geometric shapes, the student is able to make a drawing representing the correct foreshortening of the object (edges of the cube drawn does not vanish at one point). Drawing light and shadow:
 - Being presented with a plaster cast in simple geometric shapes under one light source against the patternless back and foregrounds with different colors, the student can draw the cube with a correct representation of light and shadow (instead draws only the outlines).
- Be:
 - Drawing composition:
 - The student can self-reflect and reason why their composition is aesthetically appealing.
 - Being assigned to draw a composition from several simply shaped still life items, the student is interested in making several

compositions with the items and extend the practice to compose with other found objects.

- Drawing perspective:
 - Students are curious on exploring different visual effects that observing from different perspectives can cause
- Drawing light and shadow:
 - Be curious to explore lighting effects

Where

In the school of art. Foundation art course. In the section before 'learn drawing tools' and 'life drawing studio sections' (drawing still life objects with complicated plans or textures and gesture drawing referencing nude models).

When

The course is provided at the beginning of freshman year for students majoring in art or attending an art school and offered throughout the four years of undergrad for general majors in a university.

How will the learning experiences relate to other parts of the learners' program within the grade level or across grade levels

The course is at the very beginning of all studio art courses. It provides a foundation for studio art, visual design, photography, media art, and another general fine art.

Learner Characteristics as a Baseline Profile

Developmental Level	The student is able to fluently speak, read, write, and comprehend English as the only language of instruction.
	The student is able to behave in a collaborative context, respect other individuals, and contribute to the group with thoughts.
	The student has some degree of metacognitive skill. ¹

¹Berger, Kathleen Stassen. *The Developing Person: through Childhood and Adolescence*. Worth Publishing, 2015.

	The student is able to use formal codes inside classroom. ²
	The student is able to concentrate on the task at hand and ignore distractions. ³
	The student is fully developed cognitively that they can memorize new information in their working memory and control process information. ⁴
	The student is able to think abstractly and reason about hypothetical problems. ⁵
	Students are able to use deductive logic and reasoning from a general principle to specific information. ⁶
	Ideally, the student is capable of formal thinking, critical reasoning, and abstract concept managing.
	Students are able to handle classroom tools and drawing materials properly that meets the safety standards.
Prior Experience	Performing/ producing ⁷ : can depict the shape of objects with low accuracy.
	Appreciation/critique ⁸ : students can express critical feedback to their peers' artworks, but they don't know the dos and don'ts of giving criticism.
	Integration/ exploration: students can poorly integrating art practiced in class into individual projects and explore beyond the course content. ⁹
	Students are able to draw a real-life object with a pencil or a pen on a drawing surface with inaccurate shape, no composition, or light representation of the light.
	Students can draw rough lines with a pencil or a pen to draw the outline of objects, but cannot depict the objects close enough to its appearance in real life.
	Made a PowerPoint using composition skills

² Berger, Kathleen Stassen. *The Developing Person: through Childhood and Adolescence*. Worth Publishing, 2015.

³ Berger, Kathleen Stassen. *The Developing Person: through Childhood and Adolescence*. Worth Publishing, 2015.

⁴ Berger, Kathleen Stassen. *The Developing Person: through Childhood and Adolescence*. Worth Publishing, 2015.

⁵ Piaget's theory of Formal Operational Stage

⁶ Piaget's theory of Formal Operational Stage

⁷ DoDEA College and Career Ready Standards for Arts (CCRSA) and Chinese Standard of art education in visual art

⁸ DoDEA College and Career Ready Standards for Arts (CCRSA)

⁹ Chinese Standard of art education in visual art

	Made a visual design (drawing, PowerPoint, or poster) using color
	Draw cartoon or anime characters. -- negative effect on learning new knowledge
Individual Differences	Some students have more advanced skills from self-practices (individual art projects and drawing animates).
	Some students may come from a family background that values function overlook (impacts their aesthetic).
	Students may not have all the art supplies required for the class.
	Some students tend to be disruptive in class, especially during an activity session.
	Some students have a strong personal objective of specific topic or standards.
	Students may have a strong personal objective of specific topic or standards.
	Particular students are more talented in integration level.
	Students' physical abilities may vary in using drawing materials to apply lines and shade onto a drawing surface.
	Student's ability to accept criticism may vary.
	Student's ability to critique may vary.
	Student's ability to convert 3D objects to 2D may vary.

GOALS

Established Standards

Related standards are referenced from commonly adopted Chinese college level art standards. There also are some global college level art development standards included.

Conceptual	C1	Understanding media, techniques, and processes ¹⁰
Procedural	P1	Performing/ producing
	P2	Applying media, techniques, and processes. ¹¹
	P3	Refine and complete artistic work. ¹²
	P4	Synthesize and relate knowledge and personal experiences to make art. ¹³
	P5	Integration/ exploration: integrating art practiced in class into individual projects and explore beyond the course.
Disposition	D1	Making connections between visual arts and other disciplines. ¹⁴

Meta-Conceptual	MC1	Reflecting upon and assessing the characteristics and merits of their work and the work of others (Chinese Standard of art education in visual art).
Meta-procedural	MP1	Responding: Appreciation/critique ¹⁵
	MP2	Reflecting upon and assessing the characteristics and merits of their work and the work of others. ¹⁶
Meta-disposition	MD1	Relating artistic ideas and work with personal meaning and external context (Chinese Standard of art education in visual art).

Goal Specification / Task Analysis

The goals are set to align with the standards as the assigned number is standard number dot standard related goal number.

¹⁰ Chinese Standard of art education in visual art, *College Board Research - International Standards*, 2013

¹¹ Chinese Standard of art education in visual art, *College Board Research - International Standards*, 2013

¹² Chinese Standard of art education in visual art, *College Board Research - International Standards*, 2013

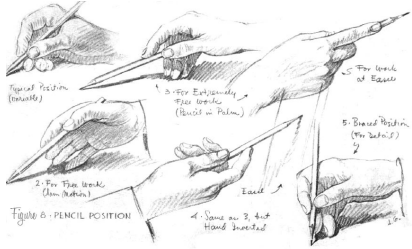
¹³ *College Board Research - Arts and Common Core*

¹⁴ Chinese Standard of art education in visual art, *College Board Research - International Standards*, 2013

¹⁵ *DoDEA College and Career Ready Standards for Arts (CCRSA)*

¹⁶ Chinese Standard of art education in visual art, *College Board Research - International Standards*, 2013

Conceptual	C1.1		The student is able to define what different drawing materials are used for (paper -- a drawing surface, eraser -- for erasing areas that are shaded darker than they actually are and for making the highlights, graphite -- for drawing the outlines and creating shades, tissue paper or finger -- for smudging and blending the intersection of different shades, charcoal -- tips for making outlines and sides for quick shading a relatively large area).
	Drawing composition	C1.2	The student is able to recall the definition of composition as being an arrangement of elements of the artwork that unites the elements into one whole.
		C1.3	The student is able to recall the definition of negative space as the space around and between the subject(s) of an image.
		C1.4	The student is able to recall the definition of eye-movement as the way a viewer's eye moves through a work of art.
		C1.5	Given a drawing of a still life, the student is able to fill out or point out the area of negative spaces as the spaces around and between the subject(s) in the drawing.
	Drawing perspective	C1.6	The student is able to recall the definition of perspective, that it is an art technique for creating an illusion of three-dimensions (depth and space) on a two-dimensional (flat) surface.
		C1.7	The student is able to identify the vanishing point on a given image.
		C1.8	The student is able to identify the approximate proportion of foreshortening in a given set of still life objects viewing from her/his viewpoint.

	Drawing light and shadow	C1.9	The student is able to distinguish the borderlines of the light and the dark on a white colored cube, ball, and cylinder by observing how light shifts to shadow (white -> gray -> black) on each of the plains and considering how the positioning of the source of the light may cause the shift of light to dark.
Procedural Skills	P1.1		The student is able to complete a drawing with complete composition, proportion, and light and shadow.
	P2.1		The student is able to hold the graphite pencil to draw straight lines and parallel lines in one of the variable ways. 
	P3.1		The student is able to improve their composition, perspective, drawing after each critique section.
	P4.1		The student is able to adapt a way of using the drawing tools based on their preference and make drawing that reflects their aesthetics.
	P5.1		Integration/ exploration: Student is able to integrating art practiced in class into individual projects and explore beyond the course content. ¹⁷
	P5.2		The student is able to use the procedural knowledge of composition, perspective, and light and shadow into other creative projects.
	Drawing composition	P5.3	The student is able to implement the making of composition into their photography, visual design, painting, illustration, etc. practices.
		P2.2	Given drawing materials and several simply shaped still life objects, the student is able to draw a complete composition, that has an appropriate

¹⁷ Chinese Standard of art education in visual art

			spatial relationship between the objects and creates a fluent viewer's eye movement, using the silhouettes of the objects.
	Drawing perspective	P2.3	Given drawing materials and several simply shaped still life objects, the student is able to depict the foreshortening correctly for all the objects in the composition.
		P5.4	The student is able to leverage perspective to make an image or design with a more dimension indication (depth).
	Drawing light and shadow	P2.4	Given drawing materials, several simply shaped still life objects, and a single light source, the student is able to draw a gradient of shifting lightness with graphite pencils, wooden charcoals, an eraser, and a piece of drawing paper. The outcome should show the objects under the same light source with salient areas with the lightest light and darkest dark.
Dispositions	D1.1		Be driven to project the knowledge of composition, perspective, light and shadow into their projects of other art related or even non-directly related classes.
	D1.2		Be driven in exploring different compositions, perspectives, and light and shadow.
	D1.3		Be driven to self-assigns creative projects using the knowledge of composition, perspective, and light and shadow.

Meta-conceptual	MC1.1		The student is able to self-evaluate their understandings of the conceptual knowledge by observing from real life objects.
	Drawing light and shadow	MC1.2	The student is able to self-reflect their identified borderlines of light and dark, lightest light plain, and darkest dark plain using the knowledge of light source. (e.g. There is a light source on the top right, hence the top right plain should be the lightest and the opposite plain is the darkest.)
Meta-procedural	MP1.1		The student is able to critique their own work and their peers' works involving appreciation, areas

		that they think needs improvement on, and an elaboration the reason why on their peers' artworks.
	MP2.1	The student is able to critique their own work and be selective when accepting the received comments.
	MP2.2	The student is able to evaluate others' works based on the merits and characteristics.
	MP2.3	The student is able to reflect on drawing with different ways of holding the graphite and adapt the one they favor.
	MP2.4	When creating a drawing of a still life, the student is able to evaluate and select the set-up of still life from various ways to compose, set angle, and set lighting.
	MP2.5	When creating a drawing of a still life, the student is able to select a personal favored drawing method by selecting and evaluating various ones.
Meta-disposition	MD1.1	Students be driven to self-reflect on the quality, rationales, and implication of their own drawings and know to critically accept the criticism.
	MD1.2	Students are driven to self-reflect their interest in exploring different compositions, perspectives, and light and shadow.
	MD1.3	Students are driven to self-assess how much creative projects they assign themselves to use the knowledge of composition, perspective, and light and shadow.

ASSESSMENT DESIGN

Overview of Assessment Evidence

The approach of the assessment is to provide immediate feedback to the students as they learn and practice in the studio sessions (assessment feedback for student's metacognitive development). Because the course is a studio art course, the instructor has the advantage of collecting plenty of observed evidence on student's learning. Students are asked to bring more free end subject homework and practiced drawing in class. Critiques are held for both two tasks. In this way, the classroom is set to be a safety-critical environment that allows the students to experiment and learn from their failures. Critique sections help the students to develop an in-depth understanding of the conceptual and procedural knowledge from conversations about each other's' works, while they learn the metacognitive skills of assessing their work. Moreover, the students are asked to submit images of their work, and the sequence of the drawing throughout the course will be evaluated as a summative assessment.¹⁸

Criteria

The criteria is made based on the standards to which the goals align.

	Standards		Goal #	Criteria
Conceptual Knowledge	C1	Understanding media, techniques, and processes (Chinese Standard of art education in visual art).	C1.1, C1.2, C1.3, C1.4, C1.5, C1.6, C1.7, C1.8, C1.9	Accurate Explanation
	MC1	Reflecting upon and assessing the characteristics and merits of their work and the work of others (Chinese Standard of art education in visual art).	MC1.1, MC1.2	Open empathy, Reflective
Procedural Knowledge	P1	Performing/ producing	P1.1	Accurate Application
	P2	Applying media, techniques, and processes (Chinese Standard of art education in visual art).	P2.1, P2.2, P2.3, P2.4	Efficient Application

¹⁸ Big idea: different assessment methods to facilitate design.

	P3	Refine and complete artistic work (Chinese Standard of art education in visual art).	P3.1	Efficient Application
	P4	Synthesize and relate knowledge and personal experiences to make art. (National Core Arts Standards Artistic Processes and Anchor Standards)	P4.1	Receptive Empathy, Credible Perspective
	P5	Integration/ exploration: integrating art practiced in class into individual projects and explore beyond the course content (Chinese Standard of art education in visual art).	P5.1, P5.2, P5.3	Adaptive Application, Individual Perspective
	MP1	Responding: Appreciation/critique (DoDEA CCRSA) -- give critiques	MP1.1	Insightful Interpretation, Justified Explanation, Empathy Reflective
	MP2	Reflecting upon and assessing the characteristics and merits of their work and the work of others (Chinese Standard of art education in visual art).	MP2.1, MP2.2, MP2.3, MP2.4, MP2.5	Open empathy, Reflective
Disposition	D1	Making connections between the visual arts and other disciplines (Chinese Standard of art education in visual art).	D1.1, D1.2, D1.3	Open Empathy, unique connection, Interpretation
	MD1	Relating artistic ideas and work with personal meaning and external context (Chinese Standard of art education in visual art).	MD1.1	Open Empathy, Adaptive Application, Insightful connection

Performance Tasks¹⁹

A general performance task design, including ways of collecting evidence of learning, is designed as follows.

Course critiques (2.5 hr studio class twice a week)

- Critique section 1: 30 mins on the homework in the beginning of the class. After each class, the instructor will take notes of the student's participation and assign participation grade.
- Critique section 2: 30 mins on the in class drawing before the end of the class
- Evidence:
 - Verbal evidence: students feedback on their peers' work during the critique session.

Take home tasks (5-10 hrs of work each week)

- The students are asked to make a drawing of four day-to-day objects at your household.
- Evidence:
 - a. Visual evidence:
 - i. Student's documentation of their drawing in progress for each in-class and out of class assignment.
 - ii. A one paragraph minimum feedback in which the student is asked to reflect on the merits and the areas to improve on their drawing approach after each class.

In class drawing sessions (total 1hr = 2.5hr - 1hr critique - 0.5hr lecture)

- Task type 1: Quick 10 mins line drawing of plaster cast in simple geometric shapes to explore (composition changed by the instructor in every 10 mins and students circle the plaster casts set up to explore different perspectives). The in class drawing after each session.
- Task type 2: Students take turns to work on their peers' drawings: students posit in a circle around the still life set up and switch their sits every 10 mins for 3 runs to work on their peers' drawing completing two collaborative drawings in total. The in class drawing after each session.
- Task type 3: Two class periods line drawing for composition and perspective. Teacher will assess the in class drawing after each session.
- Evidence:
 - a. Verbal evidence: Student's feedback when the teacher circle around and give instructions during studio drawing sessions.
 - b. Visual evidence:
 - i. Student's documentation of their drawing in progress for each in-class and out of class assignment.

¹⁹ Big idea: assessments should be aligned with goals.

- ii. Student's documentation of their final drawings.²⁰
- iii. Observable student's working process.

Final project

- Take home task: For the final assignment the student is asked to use found objects to make a sculpture, paint it in white and bring the sculpture to class. Teacher will assess the students' sculptures and stated rationales.
- In class drawing sessions: For the final in studio session, students will draw their own white sculptures.
- Evidence:
 - a. Visual evidence:
 - i. Student's documentation of their drawing in progress for each in-class and out of class assignment.
 - ii. Student's documentation of their final drawings.²¹
 - iii. Observable student's working process.
 - b. Verbal evidence:
 - i. Student's feedback when the teacher circle around and give instructions during studio drawing sessions.
 - ii. students feedback on their peers' work during the critique session.

Quiz

In class quiz on the terminologies and basic concepts.

Specific Assessments

In specific, there are three types of performance tasks written in context to the entire curriculum as well as detailed strategies of how instructors may collect and facilitate the collection of learning evidence.

Performance task for Drawing Perspective

Two class periods line drawing in class practice with a set of still life items with fixed composition and lighting. The student perspective. Students will document²² their drawing after each of the two studio drawing session using the proper method of documentation (high-resolution camera and under good light setting to capture the details and lightness of the drawing as it looks in real life. Tips: lighting is useful when the untouched paper surface is white, and detail is captured when thin cross-hatching pencil lines show). Students are expected to submit the documentation of their drawings (the homework and in-class assignment) at the end of each of the two classes. Students' improvement from the first-in-class assignment to the last one.

Context (see full unit plan in section instructional design):

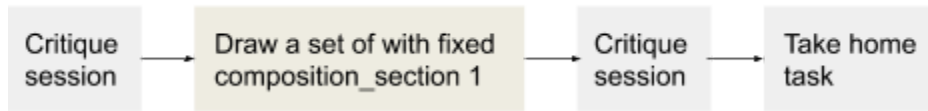
²⁰ Big idea: use technology to align assessment with goals.

²¹ Big idea: use technology to align assessment with goals.

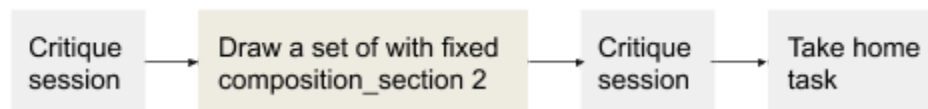
²² Big idea: use technology to align assessment with goals.

- At this assessment stage, the students are expected to already do multiple separate assignments for drawing composition and perspective.
- The majority of the student's ability to apply the knowledge of composition and perspective is expected to be efficient.

Unit 4



Unit 5



Assessment Triangle

Goals	Prompts	Evidence	
		Student Say	Student Do
C1.1, P2.1, P4.1	The teacher says: "Use auxiliary lines to help you posit the objects and depict their shapes."	"I lightly draw these lines here to define the borders of the objects."	Students apply straight and smooth lines with graphite and lightly draw auxiliary lines to guide their drawings.
C1.5, C1.6	The teacher says: "Think of negative space and how much negative space would you prefer that your drawing has."	Students may tell the teacher of their rationale for composing.	Students draw the still life onto their paper so that there is a balance of the objects and negative space (no more than $\frac{2}{3}$ of the blank paper). Students position the still life items on the center of the paper.
C1.8, C1.9	The teacher says: "Remember to use the vanishing point and lines to assist for the foreshortening."	"The borderlines of the objects should follow the radiated lines from the vanishing point."	Students define a vanishing point and draw the borderlines of the objects following the radius of the point.
P1.1, P5.2, P2.2, P2.3	The teacher says: "Remember, the	"I plan to draw the rough lines for the first class	Present a well finished drawing with all of the still

	drawing is for two class periods, and you are expected to present a complete drawing at the end of the next class."	and move onto refining details for the next class." "I chose this composition because it creates a smooth eye movement for the viewers." "This angle presents an interesting view that some of the objects are facing me, and some are not."	life objects by the end of the second session.
D1.2	The teacher says: "Try to find a drawing station with an interesting viewpoint."		Circle around the setup and then chose a station.
D1.3	The teacher says: "You may practice with different still life objects for your homework assignments."	"I practiced with this composition in the last homework assignment."	Students bring in homework drawings with different compositions and perspective than the in-class drawing.
MC1.1	"Try to identify the negative space and the vanishing point when you are observing the objects." "Think of how those two may help you draw."	"I see the negative space, and so I depict it in my drawing." The foreshortening doesn't seem right to me because they do not vanish at on point."	Students add and remove lines on their drawings.
MP2.1, MD1.1	Teacher says at the end of the first class: "Think about the criticisms you received today, and how would you reflect on your next class's work? Remember, you don't need to take all of the feedback. Think for yourself, how you might improve according to what you learned in the class."	During the inclass practice session students may say: "I chose to erase here and change there because of what I have realized from taking a step back of my drawing, seeing my work next to other peers' works, or what my peers said in the critique session."	Students revise their drawings in the second session on the feedback they accept — students making changes to their drawing after staring at their drawing for a long pause.

MP2.3, MP2.5	The teacher asks during the practice session: “Why do you choose to hold your graphite in this way?” “How can you keep the drawing clean when using the auxiliary lines?”	“I hold my graphite like this because I can draw straighter and smoother lines.” “I chose to draw very light and short lines first so that the drawing looks neat.”	Students using different lengths and weight lines when drawing.
MP2.5	The teacher asks during the practice session: “Why do you choose this viewpoint?”	“I have circled around the still life and think that this angle is the most interesting, because....”	Students circle around, near, and far the still life and chose a drawing station.

Grading Rubric

Relevant Goals	Excellent (1 pts)	Adequate (0.5 pts)	Poor (0 pts)
C1.1, P2.1, P4.1	Able to use the drawing tools excellently that they have control over the straightness, smoothness, and weight of the drawn lines.	Able to use the drawing tools well that they can draw straight lines with the drawing tools.	Cannot draw a straight line with one stroke.
C1.5, C1.6	Able to identify the area of negative space accurately.	Able to identify the area of negative space semi accurately.	Not able to identify the area of negative space.
C1.8, C1.9	Able to identify a vanishing point when drawing a set of still life and use the vanishing point to help depiction of accurate foreshortening.	Able to identify a vanishing point when drawing a set of still life and use the vanishing point to help depiction of foreshortening.	Cannot identify vanishing point and cannot draw accurate perspective of a set of still life.
P1.1, P5.2, P2.2, P2.3	Given drawing materials and several simply shaped still life objects, the student is able to draw a	Given drawing materials and several simply shaped still life objects, the student is able to draw a roughly	Cannot finish a complete drawing.

	complete composition, that has an appropriate spatial relationship between the objects and creates a fluent viewer's eye movement, using the silhouettes of the objects.	completed composition, that has a spatial relationship between the objects and creates a fluent viewer's eye movement, using the silhouettes of the objects.	
D1.2	Explore fully different angles of the set of still life before settling down on a station.	Roughly walk through different stations and settle down.	Not explore different perspective at all.
D1.3	Explores various composition and perspectives different to the inclass set.	Explores some composition and perspectives different to the inclass set.	Draw similar composition and perspective to the inclass set.
MC1.1	Able to correct their understanding of negative space and foreshortening by observing the still life.	Makes an effort to observe the still life and reflect on the conceptual knowledge of negative space and foreshortening.	Cannot relate the definition of negative space and foreshortening to the actual objects.
MP2.1, MD1.1	Self evaluate on the take home summary and provide reasons for accepting the criticisms.	Self evaluate on the take home summary and accept the criticism that matches with the self-evaluation.	Does not self-assess and takes in or reject all of the criticisms.
MP2.3, MP2.5	Students make justifications of why choosing one drawing method other another one.	Students choosing one drawing method other another one for ease.	Students chose to use one method because the teacher taught so.
MP2.5	When creating a drawing of a still life, the student is able to select a personal favored drawing method by selecting	When creating a drawing of a still life, the student is able to rank their favored drawing method by selecting and	When creating a drawing of a still life, the student cannot decide which method works best for them.

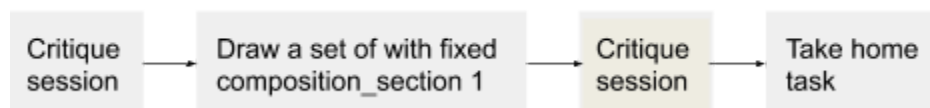
	and evaluating various ones.	evaluating various ones.	
		Total :	10 points

Critique session for Drawing Perspective

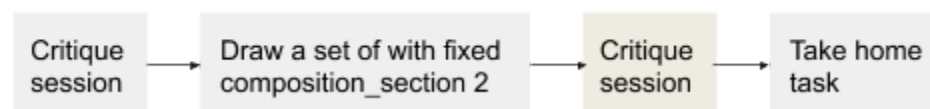
After each in-class practice session, students are asked to post their drawings onto the classroom wall, observe, and critique each other's works. The critique session will run with the entire class. The instructor will initiate the topic of the critique sessions, and students are supposed to actively engage and contribute thoughts related to the instructor's prompt. Due to the short duration, the instructor will select the drawings that most saliently address the dos and don'ts when drawing a composition. Each selected drawing is allowed for 10 mins, and the entire session will cover three pieces minimum.

Context (see unit plan in instructional design):

Unit 4



Unit 5



Assessment Triangle

Goals	Prompts	Evidence	
		Student Do	Student Say
C1.1, P2.1, P4.1, MP2.3, MP2.5	"Any thoughts on the use of tools? "I see this drawing has very smooth line, whose work is this?" Can you share how you achieve this line quality?" "how many ways have you guys of holding graphite	Student's drawing consists of smooth and straight lines showing great control of the tools. There are different line weights in the drawing, indicating well adaptation on using the tools. The neat layout of lines and	"I have tried using graphite with this, this, and this way. I find out that buy holding it like this, my lower arm will form an axis for applying more dynamic lines." "I found that using my little finger as a support on the paper, I can draw more stably." "Holding

	have you guys tried to practice with? And how are they different?" "I see this drawing is made with unique strokes of pencil lines. Is this a personal aesthetical choice?" "How do you guys think of the line quality of this drawing?"	clean erasing shows students can use various tools for their purpose of usage.	the graphite like this allows me to draw longer lines." "I found that when I hold my graphite like so and draw lines like so, the image appears to me to look better. This is because ..." "It is very good, I figure that it is hard for me to draw a straight line holding the graphite like so."
C1.2, C1.3, C1.4 C1.5,	"What do you guys think of the composition of this drawing? Is the spatial relationship look pleasant? Why?"	Student's drawing shows a nicely captured composition, generates a sense of space with some of the objects on the foreground, some on the middle grounds, and others on the background. The objects are at the center of the drawing surface with a size that nothing goes over the borders while there is no more than $\frac{3}{4}$ negative space.	"The position of the still lifes looks really good in this painting, because there is an adequate amount of space around and between the objects to create a kind of smooth eye movement."
C1.7, C1.8, P2.2, MC1.1	"How does the shape in this drawing looks? Does it look right? How do we evaluate the correctness of foreshortening? Does it look like the still life?"	There are erasing makes of students correcting shapes while they are drawing. There is light auxiliary line that students used to help them finding the vanishing points and its radius lines.	"The border lines of the objects in this drawing looks a bit off. I think the vanishing point should be over here from her/his perspective, so it seems like the lines are not radiating from the point."
P3.1	"Any thoughts before we move on the the next student?"		"Yeah, I agree with she/he, I will change this to this."
P5.1, P5.2, P5.3, D1.1,	" This is an interesting/ good compositional choice, how did you decide on this?" "You raised a very		"After the first class, I practiced with composing and took photos of some found objects. This is my most favorite composition from all

D1.2, D1.3	interesting point, have you done any study on the composition back home?"		of the studies." "Yes, I did many researches and found that..."
P2.3	"How does the foreshortening look in this painting? Is there anything odd about this object drawn over here?"	The student is able to depict the foreshortening correctly for all the objects in the composition in his/her drawing.	"Yeah, the foreshortening is off. The line does not follow the radiated lines from the vanishing point as the other lines do."
MP1.1, MP2.1, MP2.2			"Yes, I agree. Seeing other people's work and step back from my own, I do see the problem."

Grading Rubric

	Relevant Goals	Excellent (1 pts)	Adequate (0.5 pts)	Poor (0 pts)
Critique provider	C1.1, P2.1, P4.1, MP2.3, MP2.5	The student states that he/ she has been practicing with using several drawing strategies and settled with a favorite way of using the tools. Moreover, students can provide some degree of justification for their preferred drawing methods.	The student states that he/ she has been practicing using different drawing strategies and found ways that they most easily adapt to.	Students state that they cannot apply the tools well and did not make an effort to try different strategies of device using.
	C1.2, C1.3, C1.4 C1.5,	Student is able to use the terminologies in a critique session and pointing them to what they meant to define.	Student is able to use the definition of the terminologies in a critique session and pointing them to what they meant to define.	Student is able to use the terminologies in a critique session and pointing them to what they are not meant to define.

	C1.7, C1.8, P2.2, MC1.1	Student is able to use the terminologies in a critique session and pointing them to what they meant to define.	Student is able to use the definition of the terminologies in a critique session and pointing them to what they meant to define.	Student is able to use the terminologies in a critique session and pointing them to what they are not meant to define.
	P5.1, P5.2, P5.3, D1.1, D1.2, D1.3	Student indicates that he/she has applied the knowledge learned in class outside of homework. Or he/she did extra exploration into different composition and perspective.	Students indicates that he/she has applied the knowledge learned in class for another project. Or he/she did exploration into different composition and perspective for the homework assignment.	When being asked about out of class practice, student indicates that he/she rarely apply the knowledge learned on other projects. Or he/she went straight forward to finish the homework with no study on different composition and perspectives.
	P2.3	The student clearly elaborates with the terminologies used for perspective and correctly describes his/her peer's drawing.	The student correctly describes the perspective depiction of his/her peer's drawing.	The student incorrectly describes the perspective depiction of his/her peer's drawing.
	C1.2, C1.3, C1.4 C1.5,	Student is able to use the terminologies in a critique session and pointing them to what they meant to define.	Student is able to use the definition of the terminologies in a critique session and pointing them to what they meant to define.	Student is able to use the terminologies in a critique session and pointing them to what they are not meant to define.
Critique receiver	C1.1, P2.1, P4.1, MP2.3, MP2.5	Student's work shows smooth line quality which is evident of well adaptation of the tools. Moreover, student states that he/ she has been practicing with using	Student's work shows fine line quality which is evident of well adaptation of the tools. Moreover, student states that he/ she has experimented with many techniques.	Student's work shows poor line quality which is evident of well adaptation of the tools. Moreover, student states that he/ she has not yet experimented with different techniques.

		several drawing strategies and settled with a favorite way of using the tools. Moreover, students can provide some degree of justification for their preferred drawing methods.		
	P3.1	Student indicates how they addresses the prior critique's feedback in his/her second week of in-class practice by pointing out the areas of improvement.	Student indicates how they addresses the prior critique's feedback in his/her second week of in-class practice.	Student indicates that he/she did not reflect much on the critique feedback and did not think that he/she should make improvements based on the reasonable ones.
	P5.1, P5.2, P5.3, D1.1, D1.2, D1.3	Student indicates that he/she has applied the knowledge learned in class outside of homework. Or he/she did extra exploration into different composition and perspective.	Student indicates that he/she has applied the knowledge learned in class for another project. Or he/she did exploration into different composition and perspective for the homework assignment.	When being asked about out of class practice, student indicates that he/she rarely apply the knowledge learned on other projects. Or he/she went straight forward to finish the homework with no study on different composition and perspectives.
	P2.3	The student's drawing shows a correctly depicted foreshortening of the objects. The student is able to justify his/her self clearly with terminologies used for perspective on his/her drawing	The student correctly describes most of the foreshortening affects and can justify their drawing rationale.	The student incorrectly draw incorrect foreshortening in his/her drawing and provide incorrect justification on their drawing rationale.

		rationale.		
	MP1.1, MP2.1, MP2.2	Student is able to reply to criticisms or justify their own drawing decisions with firm reasoning.	Student is able to reply to criticisms or justify their own drawing decisions with reasoning.	Students disagree or agree to criticisms with no reason.
			Total:	11 points

Quiz for the Drawing Composition unit

Context

The quiz is given to students during the second week of the terminology lecture. This is to test student's memorization of factual knowledge and understanding of their proper application. By memorizing and understanding this factual knowledge, students will be able to practice being mindful of them and have a mutual understanding when communicating in a critique session.

Assessment Triangle

Goals	Questions	Evidence
		Student Do
C1.3	What is negative space? A. the space on the back side of the paper B. the space around the subject(s) C. the area that the subject(s) covers D. the space around and between the subject(s) of an image.	Answer D
C1.4	What is eye movement? A. the way a viewer's eye moves through a work of art. B. the way an artist's eye moves on the subject(s) when drawing	Answer A
C1.2, C1.3, C1.4, C1.5, C1.6	Please draw a good and a bad example of still life and then explain why with the terminologies we learned in class.	Good example: still life in the center, no objects completely overlapping

	Draw two boxes/ rectangles You will draw an example of a good and bad still life, one in each:  GOOD STILL LIFE Why? A. B. C.  BAD STILL LIFE Why? A. B. C.	with each other, and have a special relationship. Bad example: everything opposite to the good examples. Students explain: The composition is at the center of the drawing surface, the eye movement is smooth, there is an adequate amount of negative space, and so on....
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Grading Rubric

Relevant Goals	Excellent (1 pts)	Adequate (0.5 pts)	Poor (0 pts)
C1.3	The student is able to recall the definition of negative space as the space around and between the subject(s) of an image.		The student is unable to recall the definition of negative space as the space around and between the subject(s) of an image.
C1.4	The student is able to recall the definition of eye-movement as the way a viewer's eye moves through a work of art.		The student is able to recall the definition of eye-movement as the way a viewer's eye moves through a work of art.
C1.2, C1.3, C1.4, C1.5, C1.6	Student is able to draw good and bad composition with firm and correct explanation of why using the terminology of composition, eye-movement, and negative space.	Student is able to draw good and bad composition with reasonable and correct explanation of why using one of the terminologies of composition, eye-movement, and negative space.	Student does not draw clear good and bad compositions and provides unreasonable explanation using none of the terminologies.
		Total:	3 points

INSTRUCTIONAL DESIGN

General Description

The instructions are designed to incorporate methods that maximize active learning²³. Students are prompt at the beginning of each unit of the learning outcomes. Students will have opportunities to give and receive feedback from their peers and the instruction in both verbal and observational forms. The general pattern of the instructional activities is present the big idea, guided discovery through practice, group critique for self-assessment, and guided practice again. By doing so, students will have multiple opportunities to develop a deeper understanding and metacognitive skills by experimenting in a safe environment.

UbD Framing

Big Ideas	Enduring Understanding	Essential Question	Standards (Goals)
Understand	Concepts of composition, perspective, and light and shadow are the basis of visual art.	What are the available materials? What are they best used for?	C1.1, MC1.1
		How does an image compose? How are the items portrayed posit?	C1.2, C1.3, C1.4, C1.5, C1.6
		Why are some of the outlines looking shorter than they are? Why are the shapes of drawn objects looking different than they are?	C1.7, C1.8, C1.9
		How is one surface of the drawn item seeming to consist of multiple shades?	C1.10, MC1.2
Apply	Practice makes perfect.	Based on the critique and other students' works. How can I improve on the next practice?	P3.1

²³ "Students **learn more** when they are **actively engaged** in the classroom than they do in a passive lecture environment." -- Measuring actual learning versus feeling of learning in response to being actively engaged in the classroom, Louis Deslauriersa,1, Logan S. McCartya,b, Kelly Millerc, Kristina Callaghana, and Greg Kestina

		Which drawing tool do I like to use the most? Why?	P2.1, P4.1, MP2.3
		How can I use the skills in other projects?	P5.1, P5.2
		How should I arrange the still life items, so the audiences' eyes can move around my drawing smoothly?	P5.3, P2.2
		How should I transfer three-dimensional items onto a flat surface?	P2.3, P5.4
		How does the position of a light source change the appearance of the drawing object's surface?	P2.4
Appreciate	Appreciate your own and other people's artworks.	Why does a fellow student choose the composition, perspective, and light source? What's appreciative of the choice, and what's not? Where is different from my work? What can I learn from she/he?	MP1.1, MP2.1, MP2.2
Create	Create by applying the mastered skills.	How would you depict a set of objects different than other people do? What emotion does still life elicit? What message does the drawing convey? How to apply my unique touch to other projects?	D1, MD1.1

UbD Learning Plan

General Classroom Climate

- Physical Environment²⁴:
 - Studio space with an abundance amount of natural light source
 - Studio lights
 - Stools
 - Easels
 - Projector

²⁴ Big idea: create ideal learning environment.

- White walls
- Model stand
- Sink
- Tall tables
- Clip light
- Cognitive Environment (tools and resources):
 - The students are provided with a photo gallery of famous still life drawings as well as a set of example drawings from previous students
 - Students are provided with a list of recommended art institutes to visit on their own
- Social Environment:
 - Students show respect to each other that they only critique on the drawings.
 - Students follow the instructions of the instructor.

Established Daily / Weekly Routines

- Overall routines:
 - 30 mins critique session at the beginning of each class
 - (30 mins lecture on the new concept)
 - 1-1.5 hr in-class working session
 - 30 mins critique session at the end of the class
- Class norms:
 - Students participate in each critique session by contributing thoughts on their peer's drawings.
 - Students keep the studio clean by cleaning up their working space after each class.
 - Students perform safely in the studio by applying the material as instructed
 - No spray fixative in studio
 - Not leaving paper next to the studio lights

Unit Sequence

- Lesson Content:
 - Drawing composition
 - Drawing perspective
 - Drawing light and shadow
 - Final project
- Format and Timing:
 - 10 units with 2.5hrs each

- total 25 hrs (I wanted to shrink this to 10hrs but need to sacrifice my lesson content is I do so.)
- Aspects of the learning²⁵:
 - Direct instruction: ④
 - Guided discovery²⁶: ⑥
 - Open exploration²⁷: ⑤
 - Coaching: ③

Content	Unit	Critique	Lecture	Task	Critique	HW
Drawing Composition	1	None (submit a pre-course drawing of found objects ²⁸)	④ Lecture on tools and composition: C1.1, C1.2, C1.3, C1.4, C1.5 ④ Lecture on the class norms and rubrics.	③ Practice arranging plaster sculptures and 4-5 make line drawings with different drawing tools: P2.1, P4.1	⑥ Hang the favorite drawing for class critique ²⁹ : MC1.1, MP1.1, MP2.1, MP2.2	P2.2
	2	Quiz: C1.1, C1.2, C1.3, C1.4, C1.5	None	⑤ Practice arranging still lifes and make line 4-5 drawings: P3.1, MC1.1, MP2.5	⑥ MP1.1, MP2.1, MP2.2, MD 1.1	P2.2, (P5.3), P3.1, MP2.5
Drawing Perspective	3	⑥ MP1.1, MP2.1, MP2.2, MD 1.1	④ Lecture on perspective terminologies, vanishing point, and foreshortening : C1.7, C1.8, C1.9	③ Draw plaster's sculptures individually: P2.3, P2.3, MP2.5	⑦ MP1.1, MP2.1, MP2.2, MD 1.1	P2.3, P3.1, MP2.5
	4	⑥ MP1.1, MP2.1,	None	⑤ Draw a set of still life with	⑥ MP1.1,	P2.3, P3.1, MP2.5

²⁵ Big idea: apply different and efficient instruction methods

²⁶ Big idea: provide targeted feedback; employ instructional strategies to facilitate transfer

²⁷ Big idea: create ideal learning environment.

²⁸ Big idea: activate students' accurate prior knowledge

²⁹ Big idea: providing targeting feedback is critical for learning.

		MP2.2, MD 1.1		fixed composition: P3.1, P2.3, MP2.5	MP2.1, MP2.2, MD 1.1	
	5	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	None	Ⓔ (Performance task_3b) Draw a set of still life with fixed composition: P3.1, P2.3, MP2.5	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	P2.3, P3.1, MP2.5
Drawing light and shadow	6	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	Ⓓ Lecture demo on drawing light and shadow: C1.10	Ⓒ Draw plaster's sculptures individually: P2.4	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	P2.4, P3.1, MP2.5
	7	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	None	Ⓔ Draw a plaster cube, a ball, and a cylinder: P2.4, MC1.2, MP2.5	Ⓒ MC1.2, MP1.1, MP2.1, MP2.2, MD 1.1	P2.4, P3.1, P5.1, P5.2, D1.2, MP2.5
	8	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	Ⓓ Lecture on the final project.	Ⓔ (Performance task_3b) Draw a set of still life with fixed composition: P2.4, MC1.2, MP2.4, MP2.5	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	Make sculpture with white surface: D1.1, D1.2, MP2.5
Final Project	9	None	None	Ⓔ Drawing HW_8 session 1: P5.1, P5.2, P5.4, MP2.5	Ⓒ MP1.1, MP2.1, MP2.2, MD 1.1	None (document all drawings ³⁰)
	10	Ⓒ MP1.1, MP2.1, MP2.2, MD	None	Ⓔ Drawing HW_8 session 2: P3.1, P5.1,	Ⓒ MP1.1, MP2.1,	Submit all images of drawings ³¹ .

³⁰ Big idea: use technology to align instruction with goals.

³¹ Big idea: use technology to align instruction with goals.

		1.1		P5.2, P5.4, D1.2, MP2.5	MP2.2, MD 1.1	
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Unit 8 Plan

Overall procedure

Content	Unit	Critique	Lecture	Task	Critique	HW
Drawing light and shadow	8	Ⓕ Critique on the previous unit's homework MP1.1, MP2.1, MP2.2, MD 1.1	Ⓓ Lecture on the final project.	Ⓔ (Performance task_3b) Draw a set of still life with fixed composition: P2.4, MC1.2, MP2.4, MP2.5	Ⓕ MP1.1, MP2.1, MP2.2, MD 1.1	Make sculpture with white surface: D1.1, D1.2, MP2.5

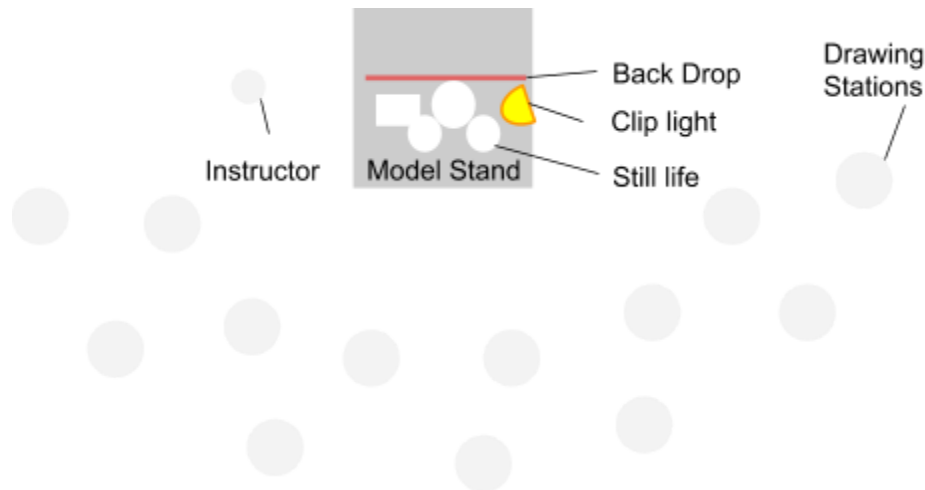
Detailed flow

Materials (instructional note to be given to the students at the end of Unit 7):

- HW: pick several items from your household and complete 4-5 drawings of the items.
 - Set up your items as any still you like, but make sure to include a foreground plane and a background plane.
 - Pick any objects you like, but you should draw them to be as accurate as possible
 - Photograph the drawings under proper lighting and submit the jpeg images in a zip file to the instructor through the online portal.
 - Pick your favorite one and bring the drawing to the next class for a critique session.
- For the next class, please bring:
 - Homework
 - a set of sharpened graphite. The set should include at least two 1B, two 2B, and one 3B.
 - Eraser x 1
 - Kneaded Eraser x 1
 - Utility knife (for sharpening the graphite) x 1
 - Willow charcoal x multiple
 - Compressed charcoal x multiple

- Drawing paper 22" x 30" x 2
- Newsprint pad
- Drawing clip board x 1
- Anything else you want to use for drawing

Classroom setup:



- For instructor: Set up still life items on the model stand
- For students: come into the classroom and be instructed by the instructors to set up their drawing stations circle halfway around the model stand with easels, stools, and tables. Set up their drawing tools on the table, hang their homework on the clipped drawing board on the easel, and face the easel toward the center of the classroom (where the model stand is). Grab a stool and sit in the center for the critique session begins.

Critique sessions (30 mins x 2):

- Instructor:
 - The instructor will run through at least three drawings in the 30 mins time limit. Each drawing will receive 10 mins of critiquing. During the critique session, the instructor may provide guided instructions (hints) if the students do not discuss the key points. In the three selected drawings, one should embody the most salient problems, one should be an example of good work, and the rest can be any drawings that students volunteer to be critiqued on.



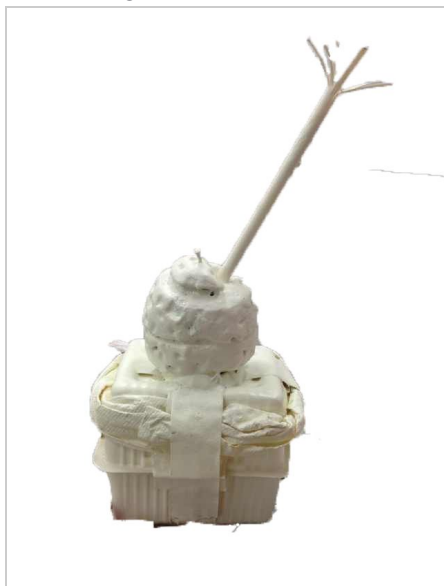
- Start: Pick the one with the most significant misunderstanding of the goals and say "Let's start with this drawing, how do you guys think regarding its composition, perspective, and light and shadow?"
 - The instructor may also ask the drawing owner, "Are there any areas you

deliberately improved on?" "anything you noticed after seeing the classes' works?"

- 3 mins: If students do not address the critical improvable points of the drawing in 3 mins, the instructor further hints the students by saying, "How does this borderline look to you guys?" "Why does it look like this?" "How many light sources would you guys say that the set up has?" "Are there any areas that stand out to you?"
- 7 mins: Instructor says the feedback if none of the critique givers address the critical issues at 7mins
- 10 mins: Move onto the next drawing at 10mins.

Lecture on the final project (HW):

- Instructor say:
 - "For the final project, you will be making a sculpture and drawing your sculpture. For this class's homework, you will be making a sculpture with any found materials you like and then paint it into white. Bring the sculpture to the next class so you can draw it during the working session, and we will be drawing it for two classes. You will be graded on the fineness of the sculpture that it should be painted in white without any company labels sticking out or so. Try to be creative and do not bring in something ready-made. For the in-class session, you will be evaluated on your choice of composition, perspective, and lighting. Last but not least, you will also be graded on your skills in depicting the sculpture accurately."
- Instructor do:
 - Show, for example, student work from the previous class and say, "This is a student's work from the previous class. She made this with potato, duct tape, plastic takeout box, a straw, and paper. As you can see, everything is painted white. She used spray paint, but you should never use it indoors. You could also use acrylic or anything that says and covers the material's original color. As you can see in her sculpture, all of the materials are not in their original forms, and they are either reshaped or cut up. Use your imagination and bring something with a degree of refinement to the next class."



In-class drawing session:

- Instructor say:
 - “Now, let’s turn your easels around and set up for today’s in-class practice. You will have one and a half hours on this set of still life. Plan your time well and try not to focus on the details in the early stage of the drawing. You are expected to show the class a finished drawing consisting of a full composition of the objects, correct foreshortening, and light and shadow. As I am talking about these requirements, you may start your drawing, and I will walk around the classroom to check on your progress.”
- Students start drawing
- Instructor do:
 - Notify the student who goes into drawing foreshortening and light and shadow before having all the still life objects laid out on the drawing surfaces. "Maybe you want to lay everything out before starting to figure out their perspectives and shadows."
 - Notify the student who is using very dark solid auxiliary lines. "These dark lines may make your drawing look chaotic, try to apply lines with less force."
 - Assist the student who is struggling by providing scaffolding
 - Ask students for their drawing plan. "So I see you are making a lot of progress, how do you plan to draw this?"
 - Ask students whose drawing clearly improve a lot. "Great improvement, anything you have done after class?"
 - After class, the teacher will write a summary for each student he/she talked to, and the class critiqued on. Additional notes can be for students who are not participating, fail behind on the learning, have a major misconception, and apparent violation of the class norms. Note their misunderstanding, improvement, and performance overall.
 - The instructor will give the each student a 2 points grade after class,
 - 1 pt for participation in the practice session
 - 1 pt for participation in the critique session
 - 1 extra pt for great improvement and deliberate practice

WHERE TO elements

Where & Why?	Ⓔ P2.4, MC1.2, MP2.4, MP2.5 Ⓔ MP1.1, MP2.1, MP2.2, MD 1.1³² Today you will be assigned to draw a set of still life posits on the model stand. You should complete two drawings of still lifes by the end of the course. We will run two 40 mins sessions and two 20 mins critique sessions at the end of each drawing session. For each drawing session, you should switch seats every 10 mins counterclockwise to work on your neighbor’s work. ³³By the end
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³² Big idea: when design instructions, it is important to put all elements into a whole.

³³ Big idea: the big plan for learning should be engaging and effective. / Active learning: learning from self discovery and comparing own approach with peer’s approach.

	of the unit, you will have a better grip on how to draw perspective, surface gradients different angles of viewpoints, and learn from each other's drawing approaches. ³⁴	
Hook	P2.4, MP2.2, MP2.4 Where does the same set of still life look different from different viewpoints? Why? How to address the difference in the drawing? How would you improve your neighbor's drawing? What will you do differently for the next round?	
Equip	Critical question: How to draw a set of still life from different angles of viewpoints?	
	Key terms	Explanations
	Auxiliary lines	Lines that set the frame and placement of the still life objects.
	Perspective	the art of drawing solid objects on a two-dimensional surface so as to give the right impression of their height, width, depth, and position in relation to each other when viewed from a particular point.
	What is foreshortening?	Foreshortening is the visual effect or optical illusion that causes an object or distance to appear shorter than it actually is because it is angled toward the viewer.
	Light and Shadow	A shadow is a dark (real image) area where light from a light source is blocked by an opaque object. It occupies all of the three-dimensional volume behind an object with light in front of it. The cross section of a shadow is a two-dimensional silhouette, or a reverse projection of the object blocking the light.
	Supporting question	Answers
	Does the size of the still lifes change from different viewpoints?	The still lifes tend to look narrower viewing from the side as compared to viewing from the front.
	How does the difference affect the length of each border line?	Vertical borders seem to remain the same, while the horizontal borders are shorter due to the foreshortening effect.

³⁴ Big idea: apply different and efficient instruction methods.

	How is the difference in viewpoints affect the gradient on each surface?	Viewing from the backside of the still lifes, students should observe the majority surface areas are in a darker shade, viewing from the front side, students should see the majority surface areas are in a bright lighter shade. However, considering from the bottom, there is a gentle gradient of shifting the light from light to dark.
	Main idea: The same set of still life objects appears to be very different in terms of its shapes and surface light gradient.	
	Use the Main idea: How should I address the difference and does how other people address it?	
	Real-world use: When depicting a subject matter artistically, which angle should the subject matter should I capture for the desired outcome, and how should I set the light against the subject matter? For example, taking a portrait, how should I set the lighting and decide the angle to achieve a sharp and slim look.	
Rethink/ Reflect/ Revise	The instructor will guide the students' gain a deeper understanding of the core idea in the critique session. He/ she will point out several example drawings of the students and ask the students to critique the changes made in the picture. Then he/she will conclude and address strategies to note in the next drawing session. Moreover, the instructor will walk around the studio and give feedback to students in the drawing sessions ³⁵ .	
Evaluate	Students are guided by self-evaluating in the critique sessions. Students self-evaluate by observing how other peers draw in addition to their original works. Students self-assess when switching to the neighbor's drawing.	
Tailor to Context & Learner Characteris tics	In the critique session, the teacher will select drawings representing different levels of skills and give specific prompts for student feedback in class. For students who are less adaptive on procedural skills the instructor will ask the class in providing helpful drawing strategies. For students who are less developed in abstract thinking, the instructor will demonstrate scaffolding individually during practice sessions. If there are many struggling, the instructor will demonstrate in the lecture session for the entire class.	
Organize to Optimize	Students practice on the exploration of different drawing approaches and are guided to organize the big idea structure in critique session.	

³⁵ Big idea: teach students to organize knowledge.

EVALUATION RESEARCH DESIGN

Research to Evaluate Educational Implementation

Fidelity check of teacher following the proposed instruction and assessment design

- Researcher check for whether the instructor follows the prompted lines
- Researcher check for whether the instructor follows the timeline
 - Timeline of each sessions
 - Time for each critique sessions
- Researcher check for whether the instructor circle around the classroom and talk to every student during the practice sessions
- Check for whether the instructor takes notes for every student of their performance in the critique session.
- Grades giving:
 - Check for whether the instructor keeps a short summary of the student's progress after every class
 - Check for whether the instructor assigns in class grades after every class
 - Check for whether the instructor assigns in class grades after every homework submission
 - Check for whether the instructor assigns in grades following the rubrics

Fidelity check of students participating in instruction and assessment as anticipated

Participation in critique sessions

- Students follow the prompts of the critique session and provide useful subjective feedback for the classmates.
 - E.g., students talk about the composition and use the terminologies addressing the writing things. Moreover, when a student gives criticism, he/ she provides a reason based on the lecture content.
- Students address the feedback taken on their next drawing.
 - This should be evident in student's class summary and in the teacher's notes
- Students participation is evaluated by students following the prompts in class.

Participation in lecture and practice session

- Students practice the lecture knowledge in their in class drawings and further in homework assignments. Researchers check for their progress made in submitted assignments and in class drawings.

- Students are mostly engaged in the lecture and practice. Researchers check for whether the students are actively working on their drawings or proactive on asking the instructor's help.
- Students practice the lecture content into their practice drawings. Researchers check the alignment of goals covered in the lecture and goals reflected on the student's performance.

Research to Evaluate Educational Impact

Research Experiment

- Active ingredient : In-person critique session
- Independent variables: In-person critique, Take home critique notes
- Dependent variables: Grades, student critique summary, instructor's notes of student's critique performance
- Covariates: student's aptitude, pro-longed practice session time, student's out of class exposure to art and art advice

The plan for research on the impact of this curriculum design will focus on the effectiveness of in-person critique vs. feedback notes for take-home written review. Hypothetically in-person critique sessions would help the feedback receivers gain a deeper understanding of receiving criticism and self-reflection skills than the take-home feedback. For the critique givers, in-person critique sessions should help them better understand to appreciate and give critique subjectively than the take-home feedback. The active engagement and guided conversation of the in-person critique sessions, in general, should help students raise more in-depth questions and reflect precisely on the targeted knowledge components. In-person critique sessions, which even though may not cover the whole class's works, can help students learn from listening and observing their peers critiquing. On the other side, take-home feedback allows students with an equal chance of practicing and receiving critique. Students receive more feedback than conversational critique sessions. Written feedback can reveal more thoughts of students who feel nervous about speaking out in front of the entire class. Written feedback is also a way to keep a record for the students and instructors that students often fail to memorize the conversation after class. However, written feedback may not be as in-depth, and knowledge targeting as in-person conversation can go. Moreover, there is difficulty in ensuring that students will read through the messages after school.

The research will be conducted with a class split in half with the duration of this designed curriculum. The class will be divided into group A and group B to test out which method of critiquing is more effective for students' learning of drawing and

critiquing. The different aptitudes of individual students and longer in-class practice time can be covariates of the research experiment. To eliminate the practice time covariate, we allow 30 mins in class for students receiving the take-home review method to write their feedback.

During the experiment, group A will receive instructions designed with in-person critique sessions as written in this curriculum. The students are assigned to submit a short one-paragraph summary of their critique insights and images of all their drawings. The instructor will also keep a brief record of the conversation in the critique session as he/she is guiding the topic to address the learning goals and keeping track of the time of each student's round. Group B will use the 30 mins, which is an equal amount of time to the in-person critique session, to write down feedback notes. The instructor will prompt the students of the topics to write about. The students are assigned to write down a short paragraph of feedback for at least 2/4 of the class's drawings. They will also submit a critique summary and drawing images as a part of their homework assignment. The result will be measured with a post and pre comparison of how insightful and close to the learning goals that the students' feedback is, drawing assignment grades, and insightfulness of the student's critique summary. Individual differences in aptitude, physical ability of using tools, abstract thinking of shapes, and exposure to art can be covariates that influence the end result of this experiment.