Lab Framework

Text: Ratios & Proportions

Unit number and title:

Short Description: Students will enlarge and transfer images using the grid method.

Developed by: Josh Everson

Contact Information: josh.everson@gmail.com

Date: 6/28/2011

Human Proportions & Scale Drawing

LAB PLAN

TEACHER: Teacher Prep/ Lesson Plan

Lab Objective	Students will create a scale drawing with a grid and conversion ratios.
Statement of pre-requisite skills needed	measuring, converting ratios, simple drawing or tracing
Vocabulary	scale, proportion, ratio, enlarge, graph, grid, centimeter, inch, fraction
Materials List	notecards, rulers, larger paper, pencils, erasers
State Standards addressed	
Math:	7.2.B
Reading:	
Writing:	
Leadership Skills	Peer evaluation, dispersement/collection of materials
SCAN Skills/Workplace Skills	
Set-up information	Each student is given a notecard, larger piece of drawing paper, and drawing utensils.
Lab organization	Independent work
Teacher Assessment of student learning	Image is drawn at a larger scale without distortion.
Summary of learning	Explain why realistic drawings of people rely on proper human proportions. Explain how the grid enlarges the drawing without distortion. 10min
Optional activities	-Create grids of more complicated ratios such as .75 inch : 4.25 inches. -Emphasize size differences of foreground, mid- ground, background. -Incorporate perspective drawing, vectors, rule of 3rds

	into drawing requirements.
Career Applications	Muralists, photographer, engineer, architect, construction, mechanic
Scoring	Competencies completed
LAB TITLE: Human Proportions & Scale Drawing	
STUDENT INSTRUCTIONS:	Most adults stand 6-8 heads tall. Practice drawing 8 equal boxes stacked vertically. The top box is filled with the head. Some heads are wider, some thinner. An egg shape is a good place to start.
Statement of problem addressed by lab	How can you draw a person with realistic proportions? How can you accurately enlarge a drawing to any size?
Grouping instructions and roles	None required, but possible.
Procedures	-On notecard, draw or trace adults and toddlers according to human proportions for age. 10min□□-Check with peer for accuracy. 2min□□-Draw a grid of 1 inch squares on the notecard. 2min□□-Lightly draw a grid of 4 inch squares on larger paper. 5min□□-Redraw the notecard onto larger paper by following the grids. 20min□□-Check with peer for accuracy. Make corrections. 2-10min
Outcome instructions	
Assessment instructions	

Lab Data Collection

Student: FORMTEXT _____ **Date:** FORMTEXT _____

Unit: FORMTEXT _____

Lab Title: FORMTEXT

Criteria: Write the problem/objective in statement form
FORMTEXT

Data Collection: Record the collected/given data
FORMTEXT

Calculations: Complete the given calculations to solve for an answer(s)
FORMTEXT

Summary Statement:
FORMTEXT

Other Assessment(s)
FORMTEXT

Washington Applied Math Council

https://wa-appliedmath.org/