

GRID composition

M A T H A N D P H O T O G R A P H Y

Objectives

CONTENT

Math: Students will understand ratio relationships through the use of a grid

FINE ARTS

Art: Students will develop technical skills in composition of a piece of art and understand value and hue.

Materials:

- Rulers
- Digital cameras or cell phones.
- At least one computer with basic photo editing software
- Printer
- Graphing paper
- Pencils
- Colored Pencils or Markers
- Large, plain white construction paper
- A variety of exemplar digital portraits

Pre-assessment:

All students will complete a grid with equal blocks in each segment. Students will be able to describe the relationship of each area of the grid to the whole piece using number relationships (ie: There are 8 blocks in quadrant one. The whole grid contains 24 blocks. Therefore, quadrant one is one third of the whole grid).

Engagement:

Students will examine photographs of various portraits and overlay grids on top of each photograph by using rulers to measure and draw the grid lines. They can begin with large grids, separating the portraits into 9ths and gradually add more grids until the grid contains 1 inch blocks. Students can examine how the value and hue of the colors vary within each block, as well as where the focal point of the photograph is in relationship to the grid.

Activity:

Students will each take a photograph of a peer in their class, choosing a focal point within the face to base their composition upon.

Transition:

Students will upload their images to the computer, edit them with basic photo editing software to adjust contrast and sharpness and to crop the image and then print the image.

Closure: Students will make overlay a new grid on top of their own image using the same steps as in the engagement piece. Students will then compare and contrast what their intended focal point was to what appears within the grid.

Assessment:

Math and Art:

Students will draw their portrait using the grid system. Using graph paper, students will replicate the grid overlay on their photograph onto the graph paper. Then, students will color and shade each block as it is shown on their photograph. Students will then assess their art for accuracy and precision.