SP713 Class of Jan. 4. 2010

Activity with sighting, estimating and recording relationships of size and position

In a group with one or two others, taking along some materials, go somewhere where you can look through a large space occupied by buildings or structures with regular repeating shapes (floor tiles, windows, columns, ceiling lights in the hallway). You will need some space to walk back from this view.

Set a picture frame in front of the scene you are interested and view the scene through the frame from many different positions of your head and body. Record what you see in words and sketches. Walk back and forth, side to side, and so on. What do you notice in how your location affects what appears in the framed space? How do the sizes of things show in the frame? Have someone else observe without taking the views you have. What does an onlooker notice about the different arrangements and what you describe seeing? Move the picture frame and do this again. Then, change roles (and, if you wish, scenes).

Discuss and invent an arrangement of viewer, picture frame, and observed space, so as to construct a diagram or sketch where features of the observed area have the positions and sizes that the viewer describes. You might give yourself the challenge of choosing a viewer position that is too far back from the frame for the viewer to reach. Work on establishing where to put in your diagram a few distinctive points of the observed area. You might choose to work on a feature that repeats into the distance, or something that is on the ground. You might work with something whose actual and drawn size you can measure and compare. Compare the appearance of something in a distant part of your view, with that of something that is nearer; perhaps there are features of the far and near that appear of similar size at the frame....

Consider the relationships among viewer, frame area, and observed area.

Consider another viewing of the same observed space that would report something about it that could not be found from the first construction. You might mark onto the same flat surface what is viewed from two different eye positions.

Find a doorway or window as a border to an observed space beyond. Put the picture frame and yourself at different positions with respect to that border frame and to something particular in the space. What do you notice about the relations among the object, the two viewing frames, and the viewer? How does the addition of the second border frame affect the range of viewer positions from which the object can be sighted?

Return to classroom by [Time]

Describe your viewings, relations, diagrams and means of construction.

Medieval drawing of someone looking through a tube at a star. [Great Court steps]

Explore looking with tubes as an instrument for the viewer; for the onlooker.

MIT OpenCourseWare
http://ocw.mit.edu

EC.050 Recreate Experiments from History: Inform the Future from the Past: Galileo January IAP 2010

For information about citing these materials or our Terms of Use, visit: http://ocw.mit.edu/terms.