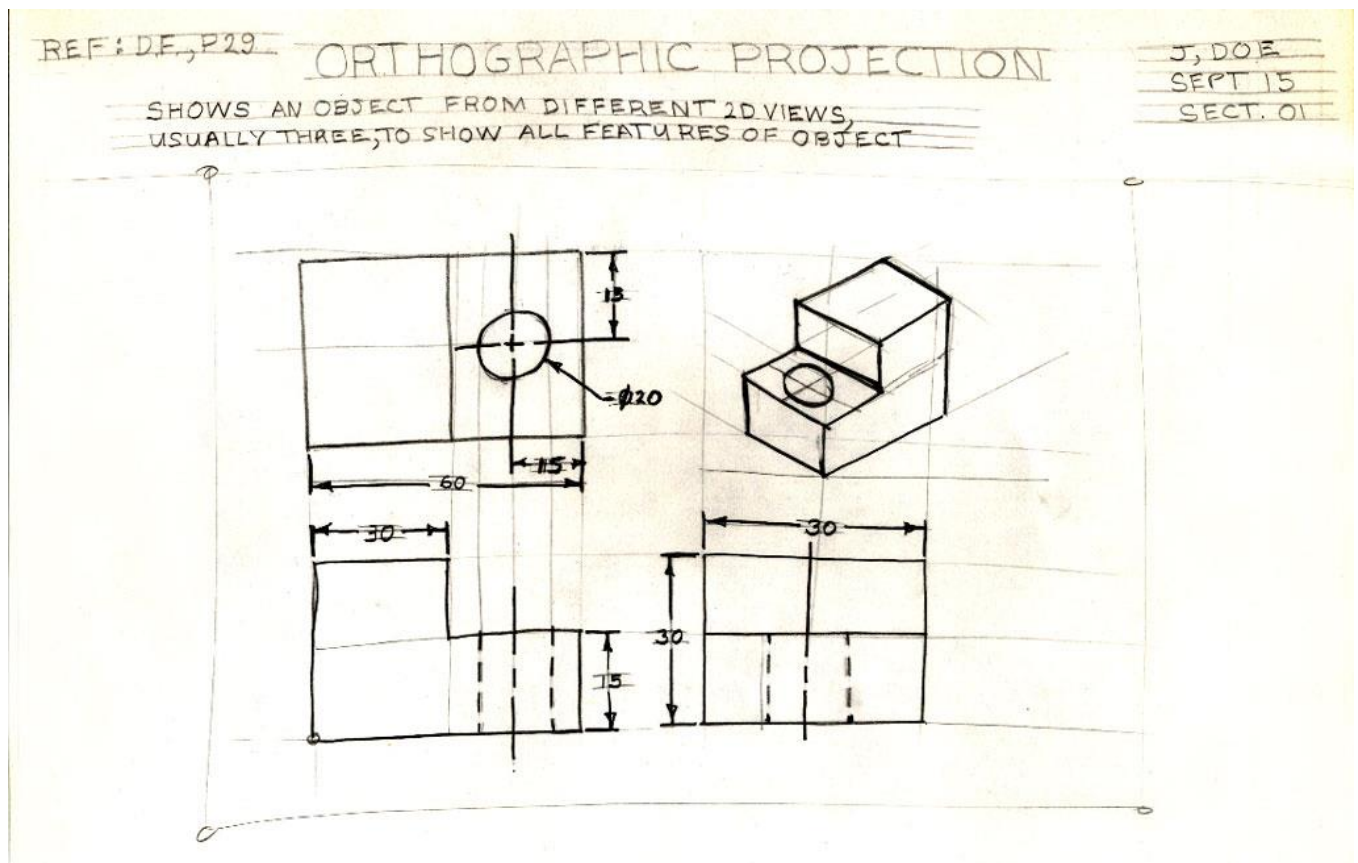## Orthographic Sketching Assessment

Below is the sample orthographic sketch everyone completed initially as a graphical note. Although this is a very simple object, the block stair, the basic sketching and orthographic principles used here can be applied to any object. Views are drawn with third angle projection standard with the front view selected using the three rules with non-cylindrical objects which states the view that:

1. Has the most detail
2. Shows its length across the page (layout usually in landscape format
3. Has the least amount of hidden lines

When sketching orthographic views of object, your work will be assessed on the following areas:

- **Sketching technique** - Freehand line work, straight, crisp, clean, smooth curves, conformed shapes, and accurate
- **Layout** - Construction, placement of views, spacing, blocking in views, and construction lines
- **Ortho views** - Front view selected based on the three rules, third angle projection view placement, appropriate scaling and features relative to each other
- **Line work** - Proper line characteristics, weight, and type, construction lines still present showing process
- **Dimensions** - Overall and detail, located inside drawing envelope, closest to feature, right amount of dimensions
- **Isometric view** - Correct 3D view at ~ 30°from base line showing most detail towards the viewer

Orthographic Sketching Rubric Chart (Assessment as Learning)

A Rubric is an assessment tool to assess your level of success and how to improve to be successful.

Criteria	Level 1 (50-59%) Limited Success	Level 2 (60-69%) Some Success	Level 3 (70-79%) Considerable Success	Level 4 (80-100%) High degree of Success
Sketching Technique Sketching technique should be done freehand with no mechanical means. Lines and shapes should be made with crisp, clean, smooth lines	• Few or no straight lines are straight, clean crisp and sharp • Few or no curves and circular lines are smooth, clean, and crisp • Few or no Shapes are conformed, neat, and accurate	• Some straight lines are straight, clean crisp and sharp • Some curves and circular lines are smooth, clean, and crisp • Some Shapes are conformed, neat, and accurate	• Most straight lines are straight, clean crisp and sharp • Most curves and circular lines are smooth, clean, and crisp • Most Shapes are conformed, neat, and accurate	• All straight lines are straight, clean crisp and sharp • All curves and circular lines are smooth, clean, and crisp • All Shapes are conformed, neat, and accurate
Layout Construction and placement of views, spacing, blocking out view locations, using construction lines are all part of making a great layout.	• None of the object views are not spaced out correctly • Ortho object views and features do not line up and are different sizes • Using the wrong page orientation • Page space not used effectively	• Some object views are not spaced out properly • Some ortho object views and features line up and/or are relative to each other • Using the wrong page orientation • Some of the page space is used	• Most of the object views are spaced out evenly on page • Most of the ortho object views and features line up and are relative to each other • Using page orientation properly • Most of the page space is used	• Object views are spaced out evenly on page • Ortho object views and features line up and are relative to each other • Using page orientation properly • Page space is used effectively
Ortho Views Front view must be correctly selected based on the three rules and other views must fall suit to third angle projection. Views should be the right scale, and features must be relative to each other.	• Incorrect front view was identified • Views are not in their proper location and do not show the correct view orientation • Very few, or no view features are shown • All views are not appropriately scaled and features difficult to see	• Incorrect front view was identified • Some views are in their proper location and/or do not show the correct view orientation • Some features are shown correctly • Some views are appropriately scaled and/or features difficult to see	• Correct front view was identified • Most views are in their proper location and show the correct view orientation • Most view features are shown correctly • Most views are appropriately scaled and show features clearly	• Correct front view was identified • Views are in their proper location and show the correct view orientation • All view features are shown correctly • All views are appropriately scaled and show features clearly
Line Work	• Very few or no construction lines shown	• Some construction lines shown	• Most construction lines show proper	• Construction lines show proper

Criteria	Level 1 (50-59%) Limited Success	Level 2 (60-69%) Some Success	Level 3 (70-79%) Considerable Success	Level 4 (80-100%) High degree of Success
Each line type has its own characteristic and weight. Construction lines are to be light and left to show how object was built/drawn. Object lines must be dark and thick to show object views.	• Few or no line types have been drawn correctly – object, hidden, dimension, construction • Line types do not show the relative/proper line weights	• Some line types have been drawn correctly –object, hidden, dimension, construction • Some line types show the relative/proper line weights	object build and layout process • Most line types needed, have been drawn correctly –object, hidden, dimension, construction • Most line types show the proper line weights	object build and layout process • All proper line types needed, have been drawn correctly –object, hidden, dimension, construction • Line types show the relative/proper line weights
Dimensions Include overall and detail dimensions of object with dimensions shown inside the envelope and located closest to that features shown detail. Number of dimensions to be limited to as few as possible, but enough that it could be built.	• Few or no overall dimensions present • Few or no detail dimensions present • Few or no Dimensions were placed and spaced correctly • Not enough or too many dimensions are shown • Few or no extension and dimension lines are spaced out and drawn properly • Dimension arrows are thick and too big	• Some overall dimensions present • Some detail dimensions present • Some dimensions were placed and spaced correctly • Not quite enough or a little too many dimensions are shown • Some extension and dimension lines are spaced out and drawn properly • Some dimension arrows are thin and neat	• Most overall dimensions present • Most detail dimensions present • Most dimensions were placed and spaced correctly • Almost the right amount of dimensions shown • Most extension and dimension lines are spaced out and drawn properly • Most dimension arrows are thin and neat	• All overall dimensions present • All detail dimensions present • All dimensions were placed and spaced correctly • Right amount of dimensions shown • All extension and dimension lines are spaced out and drawn properly • Dimension arrows are thin and neat
Isometric View Sketched view of object showing 3D view with 30° angles from base line and showing the most detail to the viewer.	• View chosen shows the least detail • Few or no lines are relatively 30 degrees or vertical • View and features are not scaled properly	• View chosen shows the some detail • Some lines are relatively 30 degrees or vertical • View and/or features are not scaled properly	• View chosen shows the most detail • Most lines are relatively 30 degrees or vertical • View and/or most of the features are scaled correctly	• View chosen shows the most detail • All lines are relatively 30 degrees or vertical • View and features are scaled correctly

Orthographic Sketching Self and Peer Rubric Record Sheet

Neatly print assessor name, date, and then fill in the appropriate levels 1, 2, 3, 4 based on rubric chart.

Name (First name, last initial of assessor)								
Date (month, day, year)								
Sketching Technique								
Freehand line work, straight, crisp, clean, smooth curves, conformed shapes, and accurate								
Layout								
Construction, placement of views, spacing, blocking in views, and construction lines								
Orthographic Views								
Front view selected based on the three rules, third angle projection view placement, appropriate scaling and features relative to each other								
Line Work								
Proper line characteristics, weight, and type, construction lines still present showing process								
Dimensions								
Overall and detail, located inside drawing envelope, closest to feature, right amount of dimensions								
Isometric Views								
Correct 3D view at ~ 30°from base line showing most detail towards the viewer								
Over-all totals for each assessment								