

N F P A
Fluid Power
⚡ACTION
Challenge

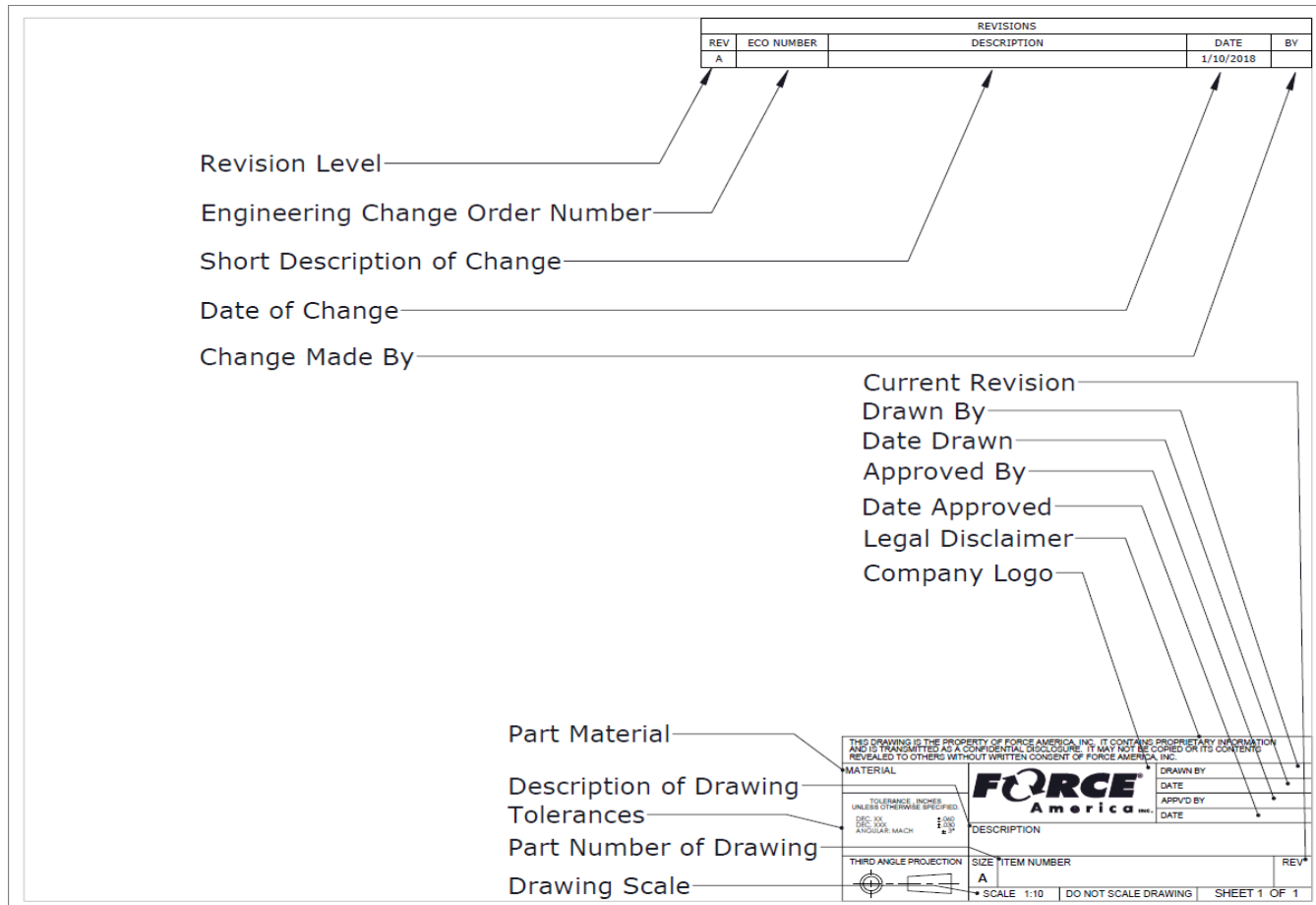
Orthographic and Isometric Lesson



Curriculum

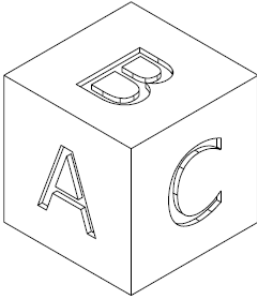
- Plot Frame Criteria and Purpose
- Orthographic view creation and methods
- Isometric view creation and methods
- Hidden lines and how they are used
- Practice exercises for both views

Plot Frame Criteria




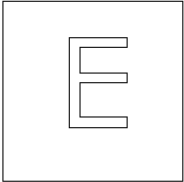
Orthographic Projection

REVISIONS				
REV	ECO NUMBER	DESCRIPTION	DATE	BY
A	ECO-XXXX	INITIAL RELEASE	1/9/2018	SA




TOP VIEW

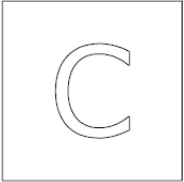





LEFT VIEW



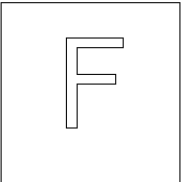
FRONT VIEW



RIGHT VIEW

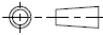


BACK VIEW



BOTTOM VIEW

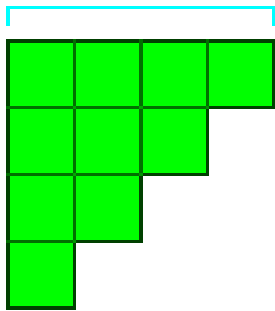
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TOLERANCE - INCHES UNLESS OTHERWISE SPECIFIED: DEC. XX ±.000 DEC. XXX ANGULAR MATCH		DATE 1/9/17
THIRD ANGLE PROJECTION 		APPVD BY DATE
DESCRIPTION LETTER BLOCK		REV A
SIZE ITEM NUMBER A ABC123		SCALE 1:2 DO NOT SCALE DRAWING SHEET 1 OF 1

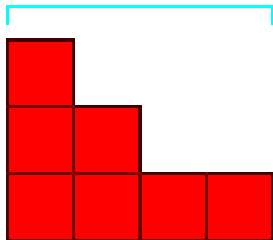
Orthographic View

Orthographic Projection

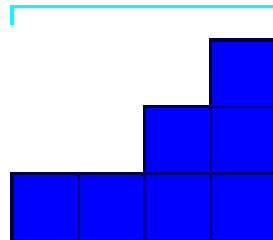
Top



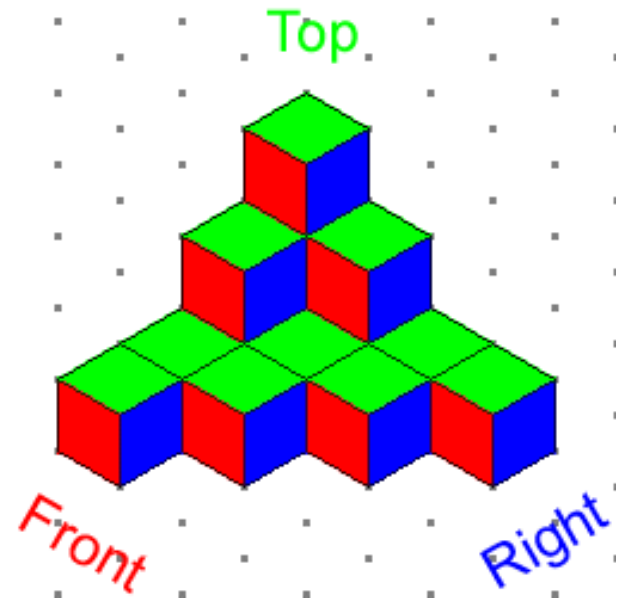
Front



Right



Isometric View



Orthographic Drawing

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TOP

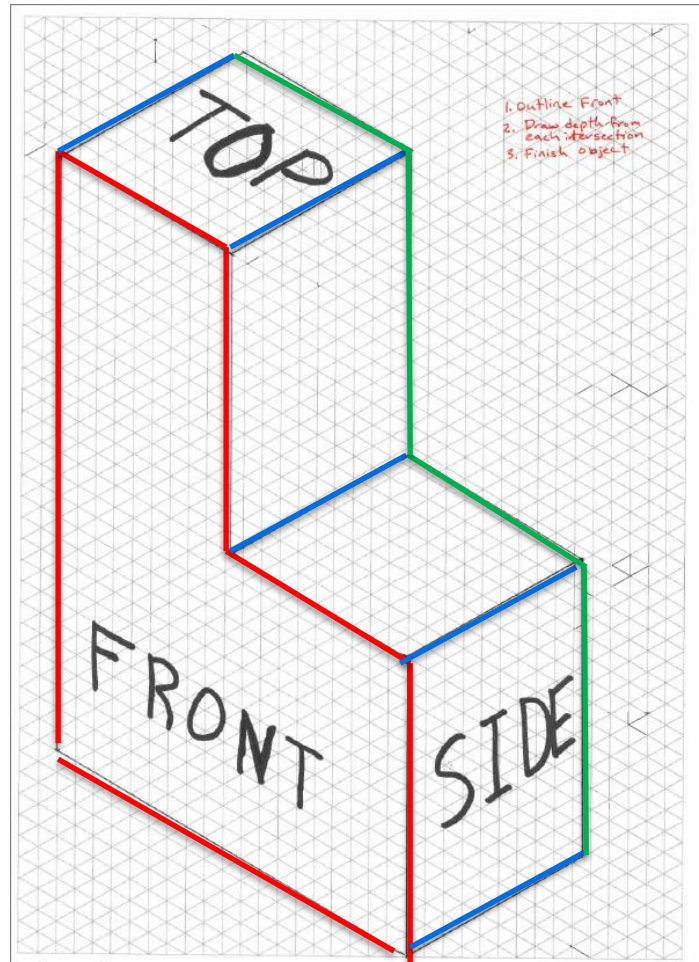
FRONT

SIDE

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MATERIAL WOOD	FORCE America INC.	DRAWN BY SAA
TOLERANCE: INCHES UNLESS OTHERWISE SPECIFIED: DEC. XX ±.00 AND/OR MMACH ±.01	DESCRIPTION STEP BLOCK	DATE 1/9/18
THIRD ANGLE PROJECTION	SIZE ITEM NUMBER A 123ABC	APPROVED BY DATE
	SCALE 1:2	DO NOT SCALE DRAWING
		SHEET 1 OF 1

Isometric View



Hidden Lines

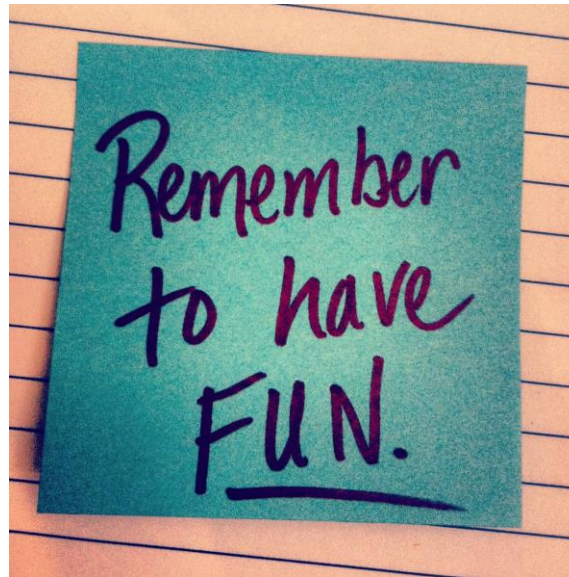
REVISIONS				
REV	ECO NUMBER	DESCRIPTION	DATE	BY
A	ECO-XXXX	INITIAL RELEASE	1/9/18	SA

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MATERIAL	WOOD	FORCE America inc.	DRAWN BY	SA
TOLERANCE INCHES UNLESS OTHERWISE SPECIFIED.	DEC. XX	DEC. XX	DATE	1/9/18
DEC. XX	DEC. XX	DEC. XX	APPR'D BY	
ANGLES MATCH	2	3	DATE	
DESCRIPTION				
STEP WITH HOLE				
THIRD ANGLE PROJECTION	SIZE	ITEM NUMBER	REV	
	A	ABC123	A	
	SCALE	1:2	DO NOT SCALE DRAWING	SHEET 1 OF 1

Recap

- Drawings should have enough defining information listed
- Orthographic projections shows 2D view of a specific side and should line up as if the item was being unfolded
- Isometric shows a 30 degree offset view
- Hidden lines are dashed lines in orthographic projections
- Teachers will have some additional opportunities to work on these items.

Ending Notes



Additional Problems:

<http://www.gr8lessons.com/files/Ortholso.pdf>

http://www.msamc.org/assets/unit05_8_orthographic_projection_exercises.pdf