

YTC CRITICAL THINKING RUBRIC MTT-254 Step Plug Project

	Advanced - 4	Competent - 3	Developing - 2	Elementary - 1	Score ____
Identify	Student is able to Analyze print and identifies correct machine to use for manufacturing project.	Minimal assistance required: analyzing part print; can determine proper machine to use for manufacturing project.	Needs constant assistance reading part print and selecting proper machine to use for manufacturing project.	Needs help to read part print; cannot identify correct machine to use for manufacturing project.	
Gather	Determines process & tools required; locates PRZ for program) calculates the proper machining parameters; accumulates proper gages to inspect project	Needs some assistance determining proper tooling to use for manufacturing project; Collects materials & proper gages. Calculates proper machining parameters.	Needs constant assistance with gathering proper tooling, material, calculating machining parameters, and collection of proper gages	Cannot determine proper tools or materials; cannot calculate machining parameters; unable to determine gages needed to inspect project	
Examine	Student appraises condition of all tools; examines machine/part set-up; verifies condition of machine. Concludes necessary substitutions.	Student requires minimal assistance in appraising condition of machine and part set-up. Verifies condition of machine following input. Concludes some necessary substitutions.	Needs constant assistance appraising condition of machine and part set-up. Does not conclude any necessary substitutions.	Disregards condition of tools; disregards machine/part set-up. Only verifies machine is turned ON.	
Formulate	Properly calculates & devises correct feeds and speeds in program; correctly plans & generates machine code to produce part.	Student needs minimal input with calculating speeds, and devising feeds in program; OR in planning and generating machine code to produce part.	Needs constant assistance calculating correct speeds and feeds; needs much assistance generating machine code to manufacture part	Calculates incorrect feeds & speeds; cannot generate machine code to produce part	
Apply	Executes upload of program correctly; Prepares & sets: Tool Length Offsets accurately; safely proves out program; accurately sets Program Reference Zero; runs part without incident.	Minimal assistance with 2 or less: 1)execution of loading program, 2)preparation & setting Tool Length Offsets, 3)testing program, 4)setting Program Reference Zero, 5)and running program	Student needs constant assistance with: 1)loading program, 2)setting the Tool Length Offsets, 3)testing program, 4) setting Program Reference Zero, 5)safely running part program	Cannot load program; ignores Tool Length Offsets; does not run program utilizing safe procedure	
Evaluate	Completely inspects & validates part per dimensional requirements; demonstrates improved process time; produces accurate FINISHED PART	Needs minimal assistance with inspection & validation of part per dimensional requirements; demonstrates ability to improve process time.	Needs constant assistance with inspection of the dimensional requirements of the part and improving the process time.	Fails to verify part dimensional integrity; is unaware of process cycle time	

