Projects / New Skills sheet

Project	New Skill
Indicator Post	Turning between centers • Using Tailstock • Center-drilling to depth Using the compound rest to cut angels • Turning a dead center with a shoulder • Cutting chamfers on parts.
TAP GUIDE	Drilling and reaming to depth Grooving and parting-off Fitment, assembly Integrate mill steps
Center drill holder	Offsetting the tailstock • Calculating the offset • How to move the tailstock • How to set up the dial indicator • How to read a dial indicator • How to indicate the taper • How to make adjustments.
Lathe Dog Post	Making threads • Where to find the thread information • How to create your OTW table • How to set a threading tool

Projects / New Skills sheet

	• Setting the lathe up for threading • Threading operations
Lathe Dog Bolts	Using a collet block
Mill Steps Stage 1	Setting Z or knee origin • Touching off with a rotating tool • Touching off with the paper method Facing with an indexable endmill • Holding the part in a vise on parallels • Making sure to have enough above the jaws • discuss axial cutting Side milling with a 4 flute solid body endmill • discuss radial cutting • conventional and climb cutting
Mill Steps Stage 2	Setting the X, table origin using the DRO • using an edgefinder - .100 offset Calculating the X location of the tool • how tool dia changes the DRO location • Rough and finish • How much to leave for finish

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Mill Steps Stage 3	Setting the Y origin using the DRO • Using the ½ button Moving to center of features Spot drilling • Calculating depth to create chamfers • Using the stop knob and quill lever Drilling holes • Changing the RPM • Using the quill hand wheel?
T-Nut	Setting the origin at center (choosing the location of the origin) Profiling a part (cutting 5 sides) • Calculating the positions of the part • Leaving material for finish • Using dovetail jaws (only for opp 1) • Cutting multiple features. • Flipping to finish your part Tapping on the mill • Using a spring-loaded tap guide • Hand tapping
1018 Jaw Top WS	Setting origin to top left and why • Calculating rough stock material off-set • Calculating the positions of the part Third opp

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Lathe Dog Body	Using a work stop Scribing lines with DRO and tool Scribing lines by hand Tilting the head • Milling with head tilted • Milling to a line Tramming the head • Using a dual dial indicator • Using a test indicator
Lathe Dog Long Body	Datum dimensions