

Rotation 2	CNC- Toy Design
	You have been hired with a design firm to design and manufacture a toy.
Problem	The client wants something unique, exciting, and engaging. Additionally they would like 1000 of them. In order to meet their demands for consistency and speed, you will have to use a computer numerical controlled (CNC) mill and/or lathe to machine your parts. In order to win their trust, they would like a working prototype in 4 days.
Constraints	You are limited by the capabilities of the machine, your design skills, time, the effort you are willing to expend, and the materials available to work with.
	Materials available are:
	Plywood (5 1/2" x 8 1/2"), 1/4" dowels, wood glue, rubber bands, clothes pins.
Support:	
	Use the "Toy Design" videos to learn more advanced capabilities of the computer aided manufacturing (CAM) software. (Feel free to revisit them if you get stuck on a process.)
	Be creative, at minimum (C- Grade level) your project should have a moving part and include both pocketing and profiling operations.
	Examples of past projects have included rubber band guns, penny launchers, realistic car designs, motorcycles, puzzles, as well as others.
	*While our mill can't automatically change tools, you could machine your blank more than once to get engraved designs using the engraving tool instead of the milling bit.
Closing:	After your project is machined, write a brief (1 paragraph) explanation of your product and how it is manufactured. The audience is your client and you need to educate them on your manufacturing process. (Use the technical language you've learned. I.e. CNC, CAM, pocketing, profiling, machining, mill, lathe, diameter, zeroing, etc.)
	****Your product as well as your explanation should be ready to go 4 days from now. *****