MODULES

PARENT BRIEFING

Module

CNC Manufacturing

- Learn about the history of manufacturing.
- Learn why tolerances and specifications are important to the manufacturing process.
- Learn about the machine movements and various speeds as they relate to the Z-Mill.
- Learn about the Cartesian coordinate system and how it relates to machine movement of the Z-Mill.

Session Focus

1. Safety and Operation
2. CNC Basics
3. Manual Milling
4. Advantages of CNC
5. Nameplate Milling
6. Graphic Milling
7. Z-Mill Challenge

Dear Parent,

As parents and teachers, we realize it can be hard to get a child to discuss what he or she is learning in school. We hope the information provided on this page will assist you in communicating with your child about what he or she is learning.

Your participation in the learning process is extremely important, as you are your child's best teacher.

For the next few days, your child will learn about the proper use and safety procedures for operating the Z-Mill, how tolerances and specifications are important to the manufacturing process, and to correctly measure and mill simple geometric shapes using the Z-Mill by completing the *CNC Manufacturing* Module.

Words students will learn in this Module include:

- Cartesian coordinate system
- computer-aided drafting (CAD)
- Industrial Revolution
- industry
- primary processes
- safety
- secondary processes

Questions for Discussion

During the course of this Module, your child will be assessed on key concepts and activities. You might want to discuss these concepts and activities with your child. He or she will be asked to:

- Demonstrate the proper procedure of setting up the Z-Mill machine, especially the z-axis setting. *(Students should show the proper placement of the milling material onto the worktable. They need to clearly demonstrate that the cutter tip should make contact, or touch, the milling material but does not puncture the surface of the material.)*
- List two advantages of computer control over manual control of the Z-Mill. *(The main points include the accuracy of the computer controlling the Z-Mill, the repetitive nature of the machine to produce multiple copies without becoming bored, and the greater efficiency.)*

Student: _____

Parent: _____

PITSCO EDUCATION