



SYNERGISTIC SYSTEMS

A DIVISION OF PITSCO, INC.

PARENT BRIEFING

Module

CNC Lathe

- Discover how coordinate points are used in CNC manufacturing.
- Explore the different kinds of CNC movements.
- Write a short CNC program.
- Learn about computer-aided manufacturing.
- Run a complex CNC program that includes taper and arc programming.

Session Focus

1 Introduction to CNC Lathe

2 CNC Lathe

3 CNC Programming

4 Using the CNC Lathe

5 CAM Software

6 G-Codes

7 Lathe Project 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.

For the next few days, your child will be learning about the proper use and safety of a CNC lathe, using a CAM program to design a product, and exploring the historical development of automation and CNC by completing the *CNC Lathe* Module. As your child's best teacher, your participation in the learning process is extremely important.

Words students will learn in this Module include:

- axis
- tolerance
- roughing cuts
- feed rate
- automation
- Cartesian coordinate system
- spindle speed
- rapid traverse

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 with your child.

He or she will be asked to:

- Describe the difference between roughing cuts and finishing cuts. (*Roughing cuts are used to cut away bulk material in order to be able to advance to finishing cuts. Finishing cuts are performed after all necessary roughing cuts are complete.*)
- Identify the various parts of the CNC lathe. (*Students should be able to identify the following parts: spindle, chuck, bed, and cutting tool.*)
- List three safety rules concerning the operation of the CNC lathe. (*Treat the lathe with extreme care. Students are responsible for their own behavior. Identify the location and explain proper use of the Emergency Stop button.*)



Instructor: _____