



***Mastercam*[®]/CNC**

High School Kit

**In-House
Solutions
INC.**

The Mastercam/CNC High School Kit

is a teacher resource designed to make teaching Mastercam and CNC Machining simple and easy for students of all levels.

The Kit includes the following 3 Components:

1. Mastercam/CNC Curriculum

The Mastercam CNC Curriculum Volume 2 is now available!

Volume 1 & 2 contain projects that can be made using Mastercam and a CNC Machine. Each project contains the following:

- Material List
- Part Drawing
- Mastercam Files
- Step-by-step instructions for designing and creating toolpaths in Mastercam
- Post Processors for the Techno CNC Machine along with installation instructions

2. Machining Instructions for Techno CNC Machine or Larken CNC Machine

Each set of instructions comes with:

- Fixturing Instructions
 - Workpiece and Tool Offset information
 - Instructions on setting up the Techno CNC Machine or Larken CNC Machine*
- * **Note:** only the Techno Instructions are available for Volume 2

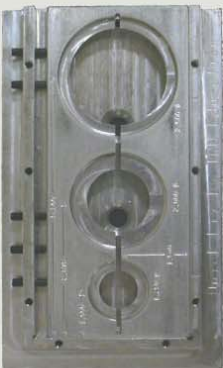
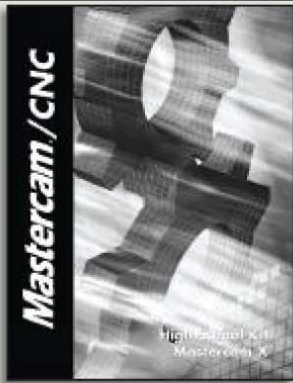
3. Quick Fix Fixture

The High School Kit includes the Quick Fix Fixture that holds most of the projects in the Curriculum.

The fixture includes:

Base Fixture plus hardware, Frame Card plus hardware, Medallion Card, the Odd Job Card and Hold-Downs.

Once the fixture has been mounted to the machine it never has to be removed and the work offset never has to be reset - - an excellent feature for busy classrooms with students doing a variety of projects. Complete instructions on mounting the fixture and work piece material are included in the curriculum.



Base & Medallion Card



Base & Odd Job Card

								USD	CND
Volume 1	Single Set:	CNC Curriculum & Machining Instructions	●	● ← or → ●				\$ 80.00	\$ 100.00
	Class Set:	CNC Curriculum & Machining Instructions Including Photocopy rights	●	● ← or → ●	●			\$ 495.00	\$ 600.00
	High School Kit:	CNC Curriculum & Machining Instructions Including Photocopy rights And Quick Fix Fixture	●	● ← or → ●	●	●		\$ 895.00	\$ 1100.00
Volume 2	Single Set:	CNC Curriculum & Machining Instructions	●	●	--			\$ 80.00	\$ 100.00
	Class Set:	CNC Curriculum & Machining Instructions Including Photocopy rights	●	●	--	●		\$ 495.00	\$ 600.00
	High School Kit:	CNC Curriculum & Machining Instructions Including Photocopy rights And Quick Fix Fixture	●	●	--	●	●	\$ 895.00	\$ 1100.00

Introducing Volume **2** of the Mastercam/CNC Curriculum with even more challenging projects!



Lithophane Project

The lithophane project is a great way to introduce students to CNC milling with Mastercam Art. The curriculum guides each step of the way; from geometry creation to the finished part.

Light Switch Plate

For this project, students will design a light switch plate and then create toolpaths to machine it on a CNC machine. Students will learn to use a number of 2D toolpaths including pocket, facing, contour and engraving.



Grade / Decision Maker

In this project, students learn to apply 2D toolpaths to create this infallible decision maker! The material for this project fits perfectly into the Quick Fix Fixture (available in the High School Kit) or it can be clamped directly to the machine table.

Trailer Hitch Receiver

This project lets students design their own backlit, custom engraved trailer hitch receiver. The step-by-step directions detail how to import a bitmap image and use the engraving toolpath to create the final product.



Photo Frame

This more challenging project details how to create a 3D wireframe drawing and machine it using both 2D and 3D toolpaths.

Sunglasses Case

The Sunglasses Case Project builds upon the fundamental 2D Mastercam functions by introducing solids. Students will learn to chamfer, fillet and toolpath a solid 3D part.



Mastercam/CNC Curriculum - Volume 1



Desk Set

This simple project is a great way to introduce students to Mastercam and CNC Milling. It is very inexpensive to make as it can be made with wood, plastic or a variety of metals. Students will learn drilling, pocketing and contouring in Mastercam. In addition, students will learn how to fixture the workpiece on a CNC Mill or CNC Router.

Jewel Box

This basic project helps build the foundation for using Mastercam and a CNC Milling Machine or CNC Router. Once the students have completed this project they are well on their way to create and machine other projects of their choice.



Art Part

Students will learn how to import picture files and machine them on plastic or wood. One example is to machine a photograph into white plastic which turns into a 3-dimensional photograph when held in front of a light.

Maze Game

Apply 2D Toolpaths to make a Maze Game. The curriculum will guide students through designing and cutting the Maze Game. The material for the Maze Game fits perfectly into the Quick Fix Fixture or clamps directly to the machine table.



Mastercam/CNC Curriculum Volume 1, continued



Medallion

Using the Quick Fix Fixture, students can machine unique designs on round pieces of plastic, aluminum or brass to make medals, coins, poker chips or whatever their imagination leads them to.

Belt Buckle

The belt buckle project can be used by students with a variety of skill levels - beginner to advanced. Mastercam files are included with this project to help students get started. Students can use existing designs or create their own.

Baseball Bat

For Schools that have CNC Lathes, this is a great introductory project to show students what is possible on the lathe. Once they learn how to create and machine a baseball bat, they will have the skills to create and machine many different lathe projects. **Note:** Machine Instructions are not available for this project.



Coin Trick

Design and create a cool magic trick that makes a coin disappear. A perfect project to teach pocketing, contouring and drilling in Mastercam. It also covers mechanical assembly and proper fit. The project is machined on a CNC Mill or Router and utilizes the Quick Fix Fixture.



Ant Mold

This is a great project to have students learn a variety of skills and knowledge. It incorporates Mastercam Art and can be used as an introduction to 3D modeling and design. It also can be used to make simple molds or forms out of wood, plastic, styrofoam or aluminum. Students also learn how to set up the Techno CNC Router.



Trophy

The Trophy project is a great lathe project that teaches students to utilize the face, rough and cutoff functions in Mastercam. Students learn general CNC Lathe principles as well as setting up a CNC Lathe. **Note:** Machine instructions are not available for this project at this time.

