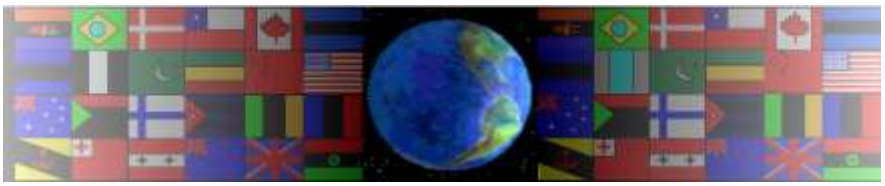
THE CNC MACHINE - INPUT, PROCESS AND OUTPUT

On behalf of The World Association of Technology Teachers

W.A.T.T.



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This exercise can be printed and used by teachers and students. It is recommended that you view the website (www.technologystudent.com) before attempting the design sheet .

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1. A CNC production facility needs three main pieces of equipment - a computer, an interface and a CNC (Computer Numerical Control Machine). Write notes alongside the subheadings, explaining their main functions.

Key words / phrases have been written underneath each subheading. These may help you write about the functions of each aspect of the CNC machine and associated equipment.

A COMPUTER:

CAD SOFTWARE DESIGN CONVERT COORDINATES

INTERFACE:

MODERN CNC MACHINES INTEGRATED INTERFACE DIGITAL SIGNALS

OLDER CNC MACHINES CONVERTS

CNC MACHINE:

COMPUTER NUMERICAL CONTROL CNC X, Y, Z HORIZONTAL

VERTICAL DEPTH

2. A systems chart / diagram can be used to explain the way products and technology work. Explain the meaning of the following:

INPUT:

PROCESS:

OUTPUT:

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The whole process of designing and making an item on the CNC machine can be split into three subsystems **INPUT-PROCESS-OUTPUT**. The diagram below shows a systems diagram of CNC work. How ever, it is incomplete. Complete the systems diagram, by adding missing drawings and text / information.

INPUT

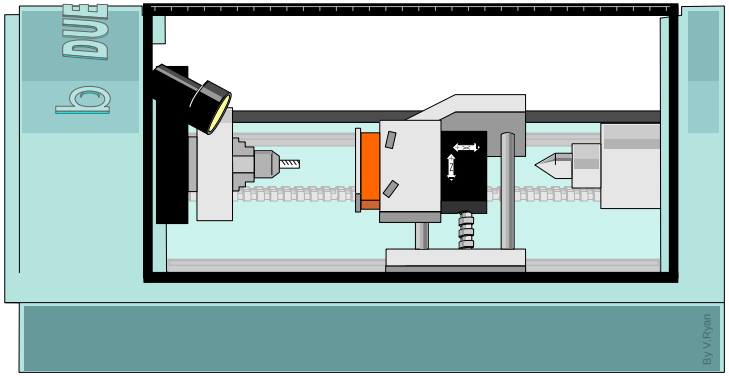
THE COMPUTER IS USED TO INPUT THE DESIGN. SOFTWARE SUCH AS TECH SOFT IS USED TO DRAW THE DESIGN. THE COMPUTER CONNECTS TO THE INTERFACE.

PROCESS

B INTERFACE

THE INTERFACE PROCESSES THE SIGNALS FROM THE COMPUTER TO A FORM THAT THE CNC MACHINE CAN USE. THE INTERFACE IS CONNECTED TO THE CNC MACHINE

OUTPUT



NAME: CNC - SYSTEMS DIAGRAM DATE: