



*A study guide for the film*  
**COMPUTERS: TOOLS FOR PEOPLE**

*Subject areas: Computer Literacy, Science,  
 Math, Social Studies*

*Level: i, JH, sh, a*

*Length: 24 minutes*

**CONTENT**

An overview of the uses of computers and the ways people direct them. Four kinds of uses are shown, each with several examples: file management, control of other machines, mathematical modeling, and support of creative work. Woven into the examples is the step-by-step development of applications, including research, flow-charting, programming and debugging. The film emphasizes the human responsibility for computer performance, and shows the satisfaction and delight of many different people using computers.

**OBJECTIVES**

*After seeing the film for the first time students will learn:*

- the importance of computers and the wide variety of their uses;
- four main categories of computer use and common examples of each;
- computers have their limits and can be wrong;
- computer results, good and bad, are determined by people;
- computers are useful because of their speed, large capacity, and adaptability;
- computer applications are developed through a series of steps;
- Two important steps are flow-charting and programming;
- people feel great satisfaction working with computers.

*After seeing the film for a second time students will learn:*

- the necessity of accurate data input (garbage in; garbage out);
- the need to debug programs;
- a computer language such as BASIC or LOGO is a code which controls specific functions;
- computer "decisions" are based on yes/no tests;
- the concept of a model based on mathematical description and manipulation.

**SUGGESTED DISCUSSION**

*Before the film*

Introduce and write preliminary definitions of common computer terms, such as computer, computer language, program, debug, flow chart, hardware, software, computer files, computer models.

List as many uses of the computer as possible. If the film is

being used as an introductory lesson, this initial list may be limited.

Discuss the computer's need for instructions (a program) to accomplish any task and the necessity for a person to design, write and enter that set of instructions into the computer.

Introduce, without answering, questions such as: Is the computer always right? Does a computer make decisions? Do you have to be a math whiz to use a computer?

*After the film*

Revise the definitions, based on information in the film. Add to the list of computer uses, making a list as varied and extensive as possible. When the list is as complete as possible, sort it into the four categories of use shown in the film.

Answer the questions introduced before seeing the film.

*Additional discussion might center on:*

- the attitude of the people in the film toward the computers they work with;
- how planning is done for computer applications;
- the necessity for good data;
- the function of the computer in each of the applications in the film;
- the characteristics of a programming language.

*Discussions in Social Studies classes might include considerations of:*

- the varied uses of data files;
- the positive and negative aspects of the use of data files;
- the use of computers for modeling in social situations, such as census data, election or budget forecasts and marketing surveys; and the crucial effect of assumptions built into the models;
- the effects of robotics and computer-controlled devices on people and their employment opportunities.

*Discussions in Science classes should include consideration of:*

- the role of the scientist in both planning and data gathering for each application;
- the uses of modeling in both natural and physical sciences;
- the importance of verification in refining the model.

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*Produced by Dimension Films*

**A Churchill Film**

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