

## Evolution of the Computer

**Abstract:** Students are to investigate and report on the evolution of the computer by examining the features and functions of CSIRAC during the 1950s and 1960s and the equivalent features and functions in today's computers.

**Prerequisites:** Students should be familiar with conducting research on the internet, in particular the effective use of a search engine link index to find valid information references.

**Resources Needed:** This activity requires access to the internet and is based on information in Museum Victoria's CSIRAC website. It would be appropriate for a teacher to provide some links obtained from a search based on the phrase "History of Computing Timeline". Students should have sufficient knowledge and skills to report their findings using a range of communication technologies such as a word processor, slideshow, webpage or interactive animation software.

### Activity:

#### 1. Functions of the Computer

- Students choose one item from the following list of programmes performed by CSIRAC: weather forecasting, calculation of mortgage repayments or playing digital music.
- Students describe how this function may have been performed prior to the advent of the computer.
- Students describe how this function might be performed today. What role does technology play?

#### 2. Performance Characteristics of the Computer

- Students choose three items from the following list of characteristics of the computer: physical size, data storage, input/output, personnel for operating, maintenance and programming, dangers and processing speed.
- Students compare these characteristics as they were in CSIRAC, and are currently in a desktop computer, by describing commonalities and differences.
- Students describe how these changing characteristics have impacted on the way we live, both positively and negatively.

#### 3. Reporting the findings

- Students shall construct one website. This might involve the entire class with each student or pair of students contributing a page. In this case, students need to negotiate page theme, content and style.

**Learning Outcomes:** The activity draws from the disciplines of science and humanities. It provides interdisciplinary challenges in thinking, information and communication and in design, creativity and technology. The development of the computer provides an authentic problem.

**Other benefits for students:** The activity provides a range of themes that might appeal to different learning styles and allows for the individual construction of knowledge about the development of the computer.

## Evolution of the Computer – Student Worksheet

### Functions of the Computer

CSIRAC performed many programmes including weather forecasting and the calculation of mortgage repayments.

Q1 Describe how one of these functions may have been performed prior to the advent of the computer.

Q2 Describe how this function might be performed today and what technology may be used.

### Performance Characteristics of the Computer

Characteristics of the computer include: physical size, data storage, input/output, personnel for operating, maintenance and programming, dangers and processing speed.

Q3 Compare and contrast three of these characteristics in CSIRAC and your desktop computer, by describing commonalities and differences.

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Q4 How have these changing characteristics impacted, both positively and negatively, on the way we live?

### Report on the Evolution of the Computer

Use your findings to create a website about CSIRAC and computers today with others in the class. You will need to negotiate page theme, content and style with your partner(s) before starting construction of the site.

On the reverse side of this sheet, work out a design outline and consider how you will evaluate the final website.