

## Control Technology

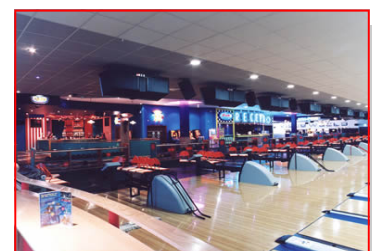


Bowlplex centres rely on ICT equipment for many areas of their business. It ensures everything runs smoothly and makes the bowling experience for their customers a good one. This equipment also helps the staff to carry out their jobs effectively, efficiently and, in some cases, safely.



1. Look around the Bowlplex centre. Can you see any examples of ICT being used to support this business? List them below:

2. Look at your list carefully and circle the ICT equipment that helps/benefits customers and underline the equipment that helps the staff. Some may be the same!
3. Can you identify any pieces of ICT equipment in the Bowlplex centre that require an *input* (cause) and have an *output* (effect)? Describe one of them in detail below:





## Control cont:

In early bowling 'alleys', the pinsetters or 'pinboys' were actually young boys paid to stand the pins up once they had been knocked down. It was a low paid, part-time job. They also had to clear knocked down pins and return the balls back to the bowlers.

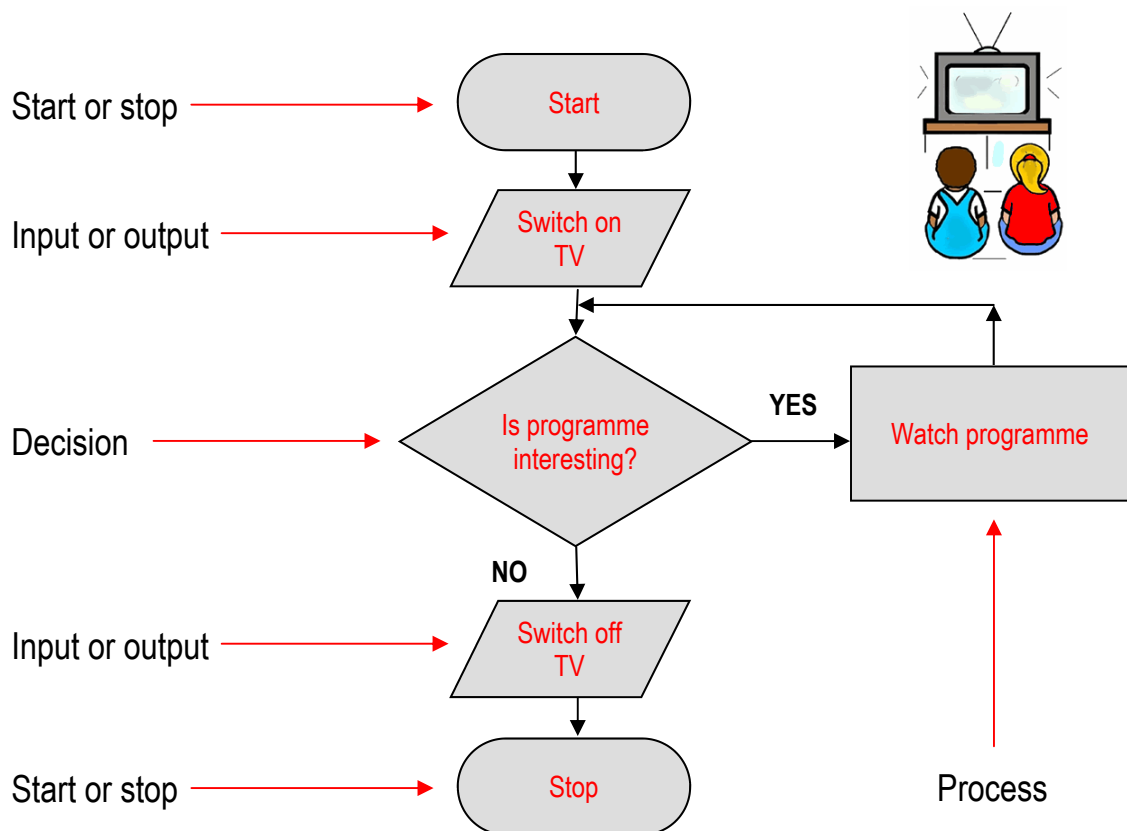


In 1936, a mechanical pinsetter was invented and therefore, the job of pinsetter was lost. As more and more sophisticated commercial pinsetting machines were designed, the machines were not only capable of resetting the pins, but also had an integrated electronic scoring system for the bowlers.



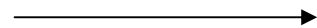
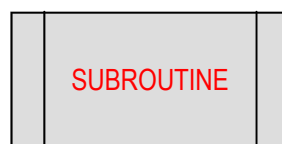
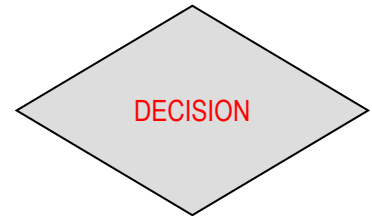
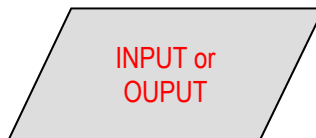
Like many machines in industry, the modern pinsetting machine at this Bowlplex centre needs to follow a set of instructions in order to work correctly and efficiently.

Here is a **flow chart** showing a simple sequence of instructions for watching television:





A flow chart can show very clearly, all the steps and procedures involved in building a set of instructions for a process. They are sometimes used to map out a design project or process. The following flow chart symbols are used to construct a flow chart:



4. Have a go at using the flow chart symbols to write a set of instructions. Start with a simple procedure such as making a cup of tea:



**Control cont:**

5. After your tour of the pinsetting machinery, can you create a flow chart to show how it works? You can work with a partner or in a small group if you wish.



Be prepared to present your chart to the rest of the class!

## **Control Technology**



### **National Curriculum Links**

ICT: Key Stage Three - 2b, 2d, 4b

### **QCA Links**

ICT: 6 'Control: input, process and output'



### **Learning Objectives**

Children will:

1. Recognise how ICT plays a major role in a business setting.
2. Observe and describe the ICT used within Bowlplex centres.
3. Can describe inputs that can cause an event to happen.
4. Be able to use flow chart symbols to graphically model the procedures within a pinsetting machine.

### **Activity**

Children to look for examples of ICT equipment within the Bowlplex centre and decide how each one benefits the customer and/or the staff. Then children are introduced to the use of a flow chart for graphically displaying a series of instructions. Demonstration and further explanation of the flow chart symbols may be required. Ultimately they must produce a flow chart to describe the process used by the pinsetting machine.

### **Resources Required**

- Supervised access & tour of the pinsetting machinery
- A bowling lane
- Child worksheets
- Pens/pencils

### **Important Vocabulary**

pin	pinsetter	instructions	input	output
process	data	flowchart	flow diagram	automated
sensor	decision	delay	mechanical	sequence