# 1 Natural and Man-Made Systems

Systems

## Task 1 – Definition of a System

Copy

A system is defined as 'a group of elements, working together to achieve some function'. Humans like to design and build man-made systems, but there are many examples of natural systems in the world as well.

## Task 2 – Natural and Man-Made Systems

Create a table of natural and man-made systems, using the examples in the box below. Remember to include the title. When you have finished, add a few of your own examples to each column.

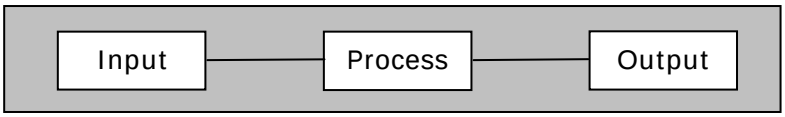
***digestive system*** ***education system*** ***water cycle*** ***metric system***

***railways*** ***electrical system*** ***immune system***

***nitrogen cycle*** ***binary system*** ***reproductive system*** ***computer system***

## Task 3 - Input, Process, Output

Systems generally have an input, a process and an output.




Write each term alongside its correct definition.

| | |
|---|---|
| a. Input | i. A set of actions or processes |
| b. Process | ii. Things taken from the system |
| c. Output | iii. Things put into the system |

## Task 4 - Identifying Inputs, Processes and Outputs

In each example below, identify the input, the process and the output.

a. The digestive system is designed to break down food into tiny molecules, and pass them into your blood. The food particles are cut up with chemical scissors called enzymes. This action of breaking down of food is called digestion.

b. The education system is designed to teach students the skills needed for modern life. Teachers, lessons and examinations are all part of the process that aims to turn an uneducated child into an educated teenager.

c. The railway uses timetables, computers and signalling to organise the movement of trains on the track. The trains take people to their destinations.

## Task 2 – Natural and Man-Made Systems

| Natural Systems | Man-Made Systems |
|---|---|
| digestive system<br>water cycle<br>immune system<br>nitrogen cycle<br>reproductive system | education system<br>metric system<br>railways<br>electrical system<br>binary system<br>computer system |

## Task 3 - Input, Process, Output

| | |
|---|---|
| a. Input | iii. Things put into the system |
| b. Process | i. A set of actions or processes |
| c. Output | ii. Things taken from the system |

## Task 4 - Identifying Inputs, Processes and Outputs

**a. Input** – food

**Process** – digestion (cutting up with chemical scissors called enzymes)

**Output** - tiny molecules in the blood

**b. Input** – uneducated children

**Process** – teaching, lessons and examinations

**Output** - educated teenagers

**c. Input** – trains and track

**Process** – timetables, computers and signalling

**Output** - taking people to their destinations



© ORB Education Visit http://www.orbeducation.com.au for the full, editable versions with solutions. 