In this lesson you will learn:
About input and output concepts.
Some examples of input and output devices.

**Jyoti** [holding a Marigold flower]: Moz, this flower from my garden is for you.

**Tejas** [holding a printout of a painting]: Moz, this painting from the computer is for you.

**Moz**: Thanks. The plant takes in the water and gives out flowers. Taking in is called **Input**. Giving out is called **Output**. Water is the input and flowers are the output for the plant. Can you give an example of input and output for a computer?

**Tejas**: When I draw using a mouse, the drawing actions are the input. When the computer prints the drawing, the **printout** is the output.

**Moz**: Correct. What did you use to give the command to print?

**Tejas**: The mouse. I clicked on the print icon.

**Moz**: The command given using the mouse is an input. So the mouse is an input device.

Input devices allow us to send information to the computer. Input to the computer is usually given by clicking the mouse or typing on the keyboard.
Moz: From which device did you get the output?
Jyoti: Printer! So the printer must be an output device.

Output devices allow us to receive information from the computer. Output from the computer may be printouts from the printer, sounds on the speaker, or images on the monitor.

Tejas: Whatever we type using the keyboard, appears on the monitor. So the keyboard is an input device and the monitor is an output device.
Moz: Right, the commands you type are the input and what you see on the monitor is the output.
Jyoti: When we paint using the computer, the painting can be seen on the monitor. So the paint actions that we do using the mouse are the input. The painting shown on the monitor is the output.
Moz: Yes. The mouse pointer, words, numbers, painting, and everything that is seen on the monitor are the output from the computer.

Moz [plays a song on the computer]: Now tell me what is the input and output?

Tejas: The song that we hear is the output.

Jyoti: We hear the songs from the speakers. So speakers are the output device.
Moz: Correct. What about the input?
Jyoti: You clicked on the song icon using the mouse. This clicking is the input.
Tejas: So the mouse is the input device.

Jyoti: During holidays, I saw a movie on the computer. The picture was on the monitor and the sound came through the speakers. That means, both the monitor and the speakers were giving the output at the same time!
Moz: You are right.
Moz disconnects the keyboard and asks Tejas to type his name on the keyboard.

Tejas: I don’t see my name on the monitor. The CPU is not able to receive the input as the keyboard is disconnected. So there is no output on the monitor.

Moz: Correct. Suppose the input or output device is not working, what should we do?

Tejas: Check if all the devices are connected properly to the CPU or not.

Moz: Good. So now you know that:
- Keyboard and Mouse are input devices.
- Monitor, Speakers and Printer are output devices.
- Any device has to be connected to the CPU in order to receive or send information.
- CPU controls all the connected input and output devices.

The CPU is neither an input nor an output device. It only takes the information given by the input devices and sends the result to the output devices.

Moz: What are the dos and don’ts when we use these devices?

Jyoti: Sit straight. Keep a distance from monitor.

Moz: Yes, and there are some more exercises that we should do. We will learn about these tomorrow.

Chin Chinaki...
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After you have studied this lesson, you will be able to:

- Identify input and output actions.
- Identify some input and output devices.

WORKSHEETS

1. Babu wants to attach all the parts to the computer but doesn't know the way. Can you guide him?

2. Underline the correct answer:

   a. Your eyes are input devices of your body.
      True / False.

   b. The computer uses an output device to show us something.
      True / False

   c. We use input devices to tell the computer what to do.
      True / False
3. The two baby kangaroos are lost. One can reach its mother following the path by hopping on the input devices of a computer. The other baby kangaroo can reach its mother by hopping on the output devices. Please help them to reach their mothers.

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<thead>
<tr>
<th>Input/Output Device</th>
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<tbody>
<tr>
<td><img src="image1" alt="Keyboard" /></td>
<td><img src="image2" alt="Speakers" /></td>
</tr>
<tr>
<td><img src="image3" alt="Monitor" /></td>
<td><img src="image4" alt="Mouse" /></td>
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<tr>
<td><img src="image5" alt="Printer" /></td>
<td><img src="image6" alt="Webcam" /></td>
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<td><img src="image7" alt="Input/Output Device" /></td>
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[Some activities to be done in the class by groups of students]

1. Play the magician hat game and identify the input and output in it. Find this game in GCompris under math activities.

2. Observe the weighing machine at the railway station. Note that when you put a coin, you get a ticket with your weight on it. What is the input and output for this activity?
3. Act out as Input/Output Devices: Have a fancy dress show where different students act as the different inputs required for growing a plant. Student showing input can be sun, water/clouds, soil and so on. Some students act as leaves, flowers and fruits to show the output.

Explore!
1. Observe a house/building being constructed and identify the input and output.
2. Which body parts can perform both input and output functions.
- Start the class by telling the students a story of how a fruit tree grows from a seed. Ask them what were the actions done to get the fruits. Water, sunshine are the inputs and the fruit is the output. Give more examples to clarify the concept of input and output. For instance, a vehicle driving on the road requires various inputs such as petrol. More examples can be given from other subjects as well.

- Revise the various computer parts. Ask them to identify what is the input and output device. Do not give the answer. Ask them more questions so that they can discover the right answer for themselves.

- Ask the class what would happen if the computer system did not have a monitor, a keyboard, a mouse, a speaker.

- Play a video. Turn off the monitor. Can you still hear the sound? What output is missing? Turn the monitor on again and detach the speakers. Can you see the video playing? Can you hear the sound? If there are built-in speakers, the students may hear the sound even if the speakers are unplugged. Show them where the built-in speakers are located.

- Discuss about the minimum output devices and input devices that we need to interact with the computer.

Further Reading:
(To teach different parts of a computer)
http://www.abcya.com/input_output.htm
http://www.eduplace.com/rdg/gen_act/g_start/computer.html