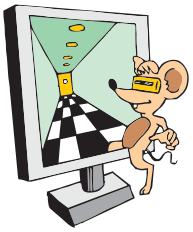
Virtual Reality



Computer technology can create a world that does/doesn't exist and make you believe that you can see, hear and touch it. This is called virtual reality. When you watch TV, it's as if you are looking through a window, but with virtual reality, you can actually feel that you are part of the picture itself.

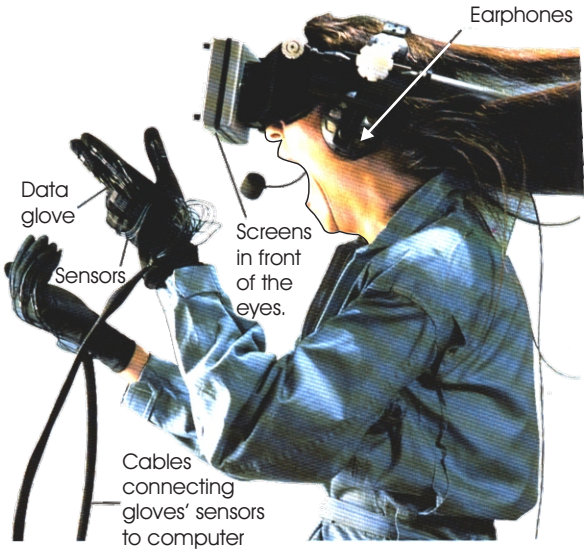
Headsets

In order to experience virtual reality, you may have to wear a headset with two screens in front of each eye. 3-D scenes are projected into these screens. Some headsets contain earphones with stereo sound as well.
Sensors in the headset pick up your head movements and convert this information into signals, which are sent to the computer. The computer responds by changing the image on the screens as you move your head.

Data gloves

It contains sensors, which detect the movements of your hand. If, for example, you were looking at the image of a room, you could stretch out and open a door. The graphics would change to show the door opening and pressure pads in the gloves would press down on your hand, so you would also <u>feel</u> as if you were turning a door handle.

Virtual reality headset



Example of Virtual Reality

Flight Simulator

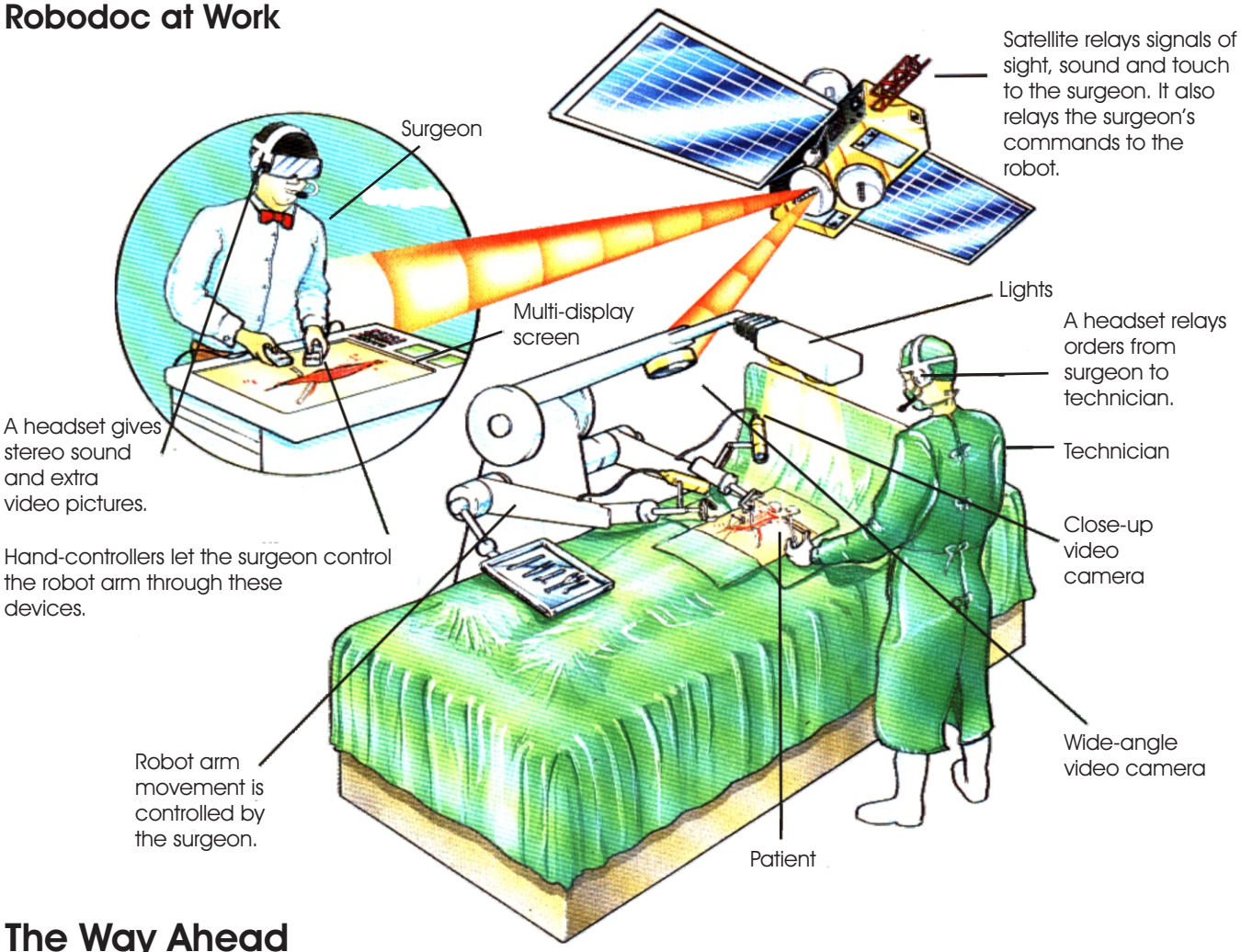
Flight simulators are virtual reality systems used for training pilots. A trainee sits in a "cockpit" and a virtual reality scene is projected into the wide screen. The controls inside the cockpit are linked to a computer which alters the view and tilts, and turns the cockpit as the trainee tries to "fly". It is so realistic that it feels as if you are in a real plane.

View from inside the Concept CAE flight simulator

RoboDoc

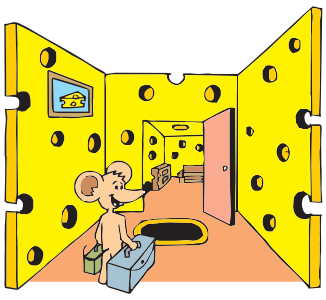
It is a virtual reality system being developed, which allows a surgeon in one part of the world to operate on a patient of thousand miles away. The surgeon is transmitted a life-size video display of the patient, via satellite. He holds hand-controllers that give him an impression of what the patient's body feels like. Then, the surgeon can perform the operation using the hand controls. His movements are sent back to the operating theater. There, a robot is programmed to follow the exact hand movements of the surgeon.

Robodoc at Work



The Way Ahead

Scientists are trying to find ways to create a virtual reality environment in which people can behave normally as they would in a real-life situation.



US scientists are investigating the possibility of scanning images directly into the retina (the back part of the human eye). This could mean that people would be able to see virtual reality images in the same way that they see normally.

Headsets and Data Gloves

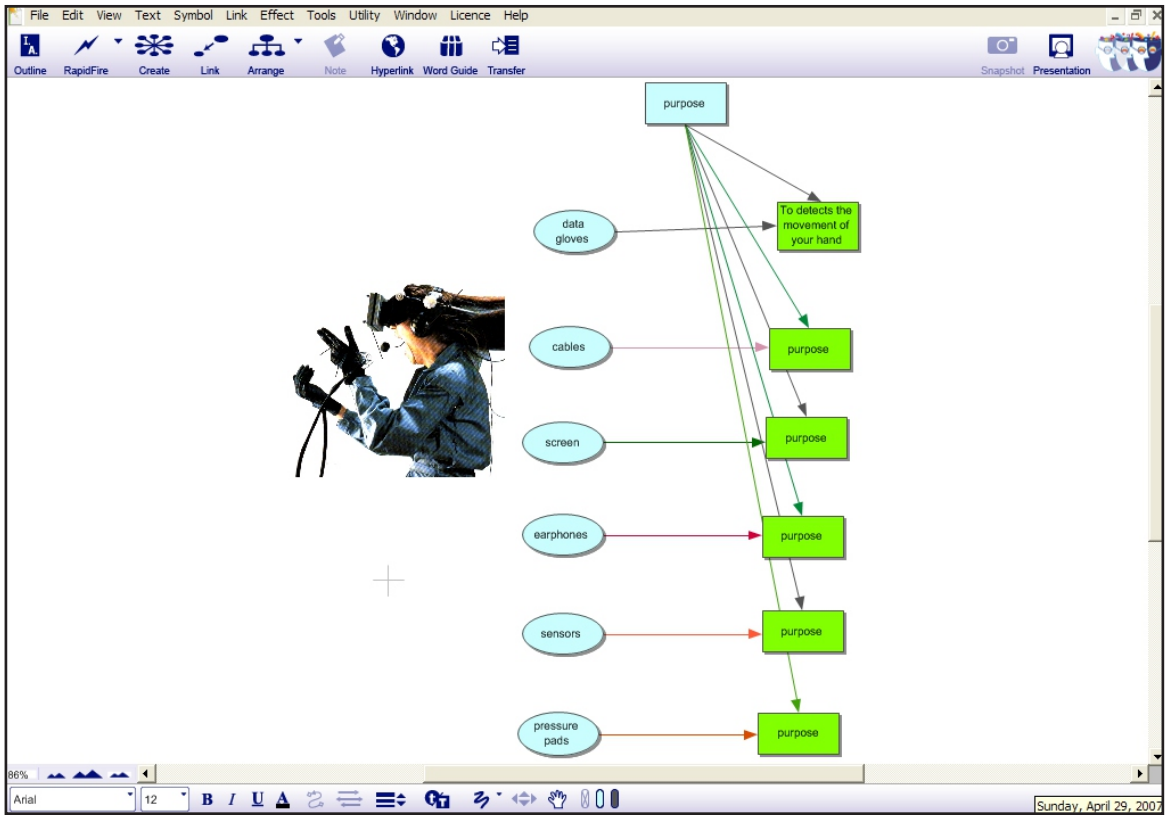
Score

Activity 22

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 8 Activity 22 **Headsets and Data Gloves**.
3. The elements of virtual reality headsets and data gloves are given. State the reasons why they are essential elements of the said devices.
4. Link all the devices to the pictures in the left side. Use the Link tool in the Main toolbars to do it.

Preview:



4. Save the activity as **Headsets and Data Gloves**.

Flying Plight

Lesson 8

Score

Activity 23

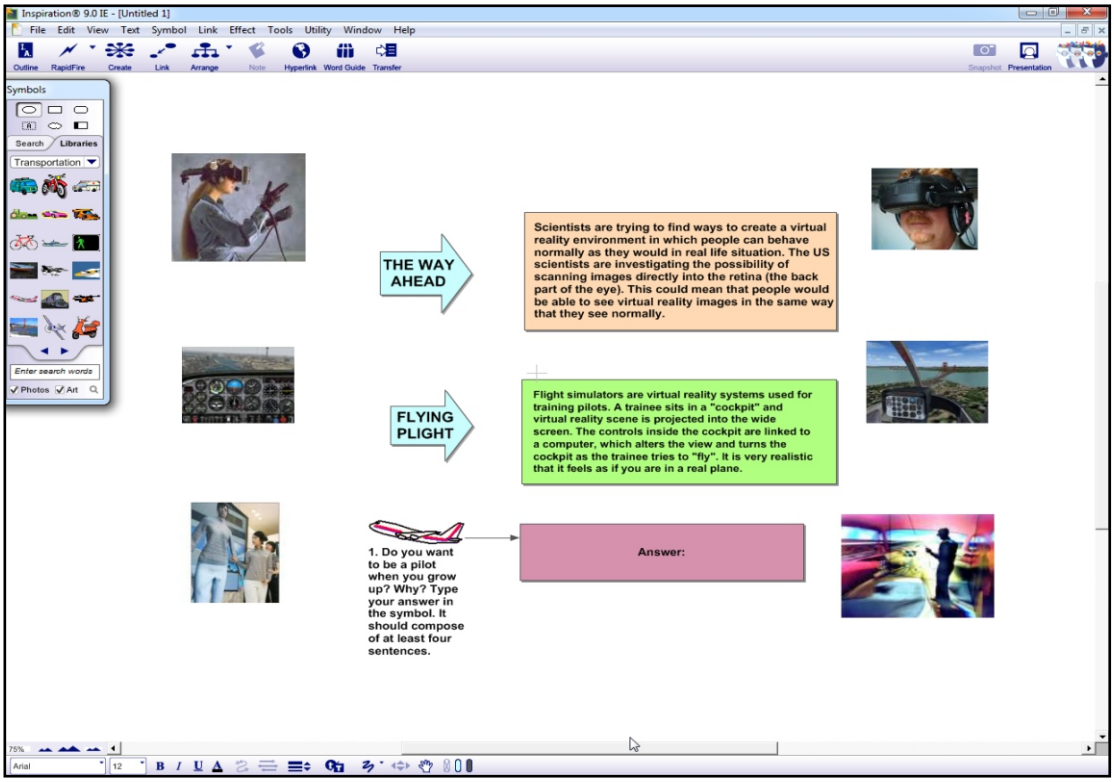
Directions:

1. Launch Inspiration.
2. Open and answer Lesson 8 Activity 23 **Flying Plight**.
3. Underline the predicates of the paragraphs and answer the given questions.

The **predicate** tells what the subject does, did or doing.

Example: Pets need special care. (The underlined phrase is the predicate.)

Preview:



4. Save the activity as **Flying Objects**.

Almost Real

Lesson 8

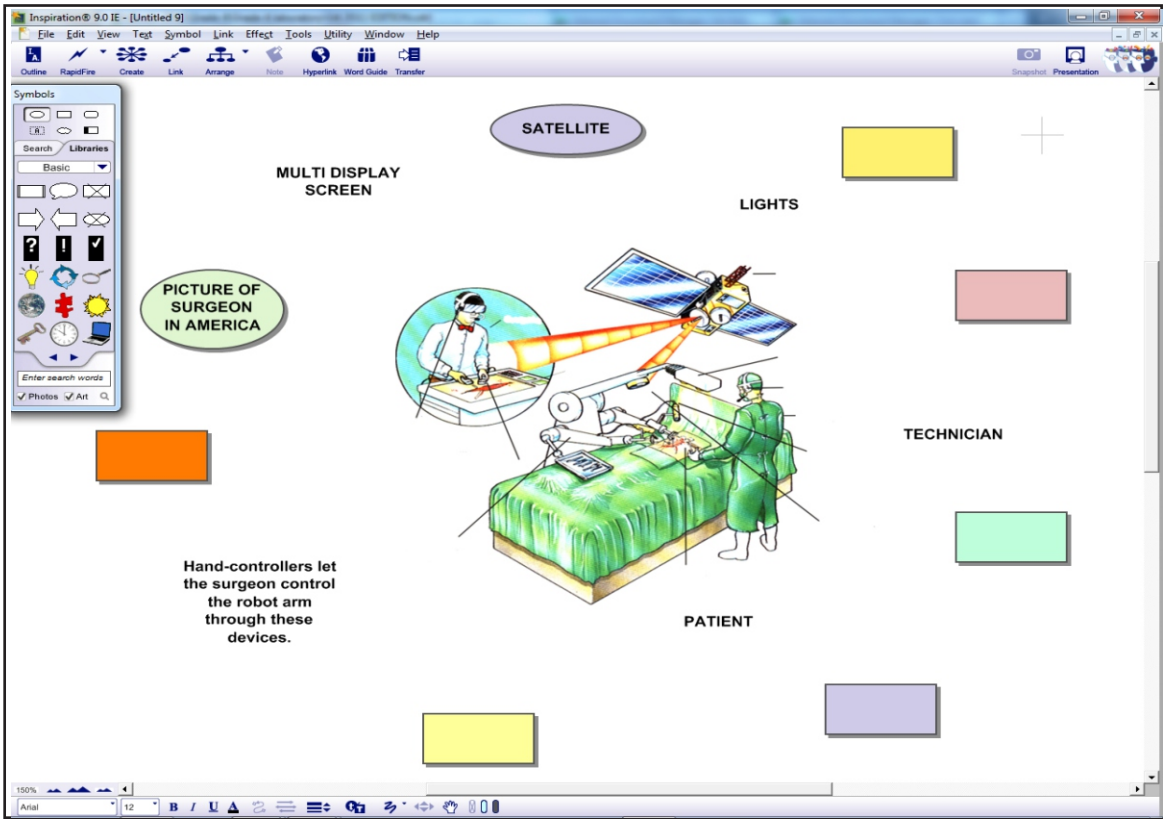
Score

Activity 24

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 8 Activity **24 Almost Real**.
3. Fill in the blank symbols with the correct data to complete the descriptions of Robodoc at work and answer the given questions. Use the Link tool in answering.

Preview:



4. Save the activity as **Almost Real**.