



# Communicating Computers

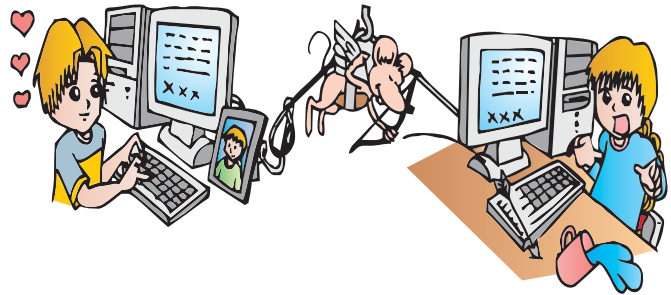
Lesson 13

Computers can be linked together so they can swap information and share equipment. Two or more computers that are joined in this way form a computer network. Computers that can be linked together are said to be compatible. This link can be as simple as the telephone line, or as sophisticated as a satellite. There are two main kinds of networks: local area networks and wide area networks.



## Local Area Network

**Local Area Network (LAN)** links together computers in a small area, such as building. They are very useful for teamwork when people need to know what each other is doing. Without LAN, people would constantly have to print out hardcopy or exchange disks. Using a LAN, data can be sent electronically between computers.



## Electronic mail

Electronic mail, or e-mail, is one of the big benefits of a network. Using e-mail, a personal computer user can send documents or graphics to other personal computer users. All the sender needs to do is type the names of the people he wants to receive the document and press a key. Receivers who are working on their computers will see a message that flashes up on their screen saying, "mail is waiting". They can read it and reply to it immediately.



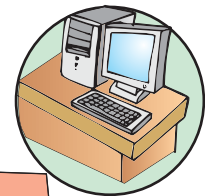
**Person 1**  
Types in and sends a message.

**Sending electronic mail**



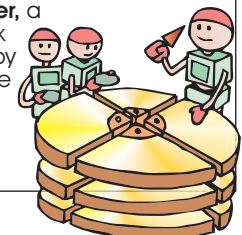
**Person 2**  
Reads the message immediately on the monitor.

**Person 3**  
(away from terminal)  
Message flashes when terminal is turned on.



### File servers

Some linked PCs operate a **file server**, a hard disk shared by everyone on the LAN.

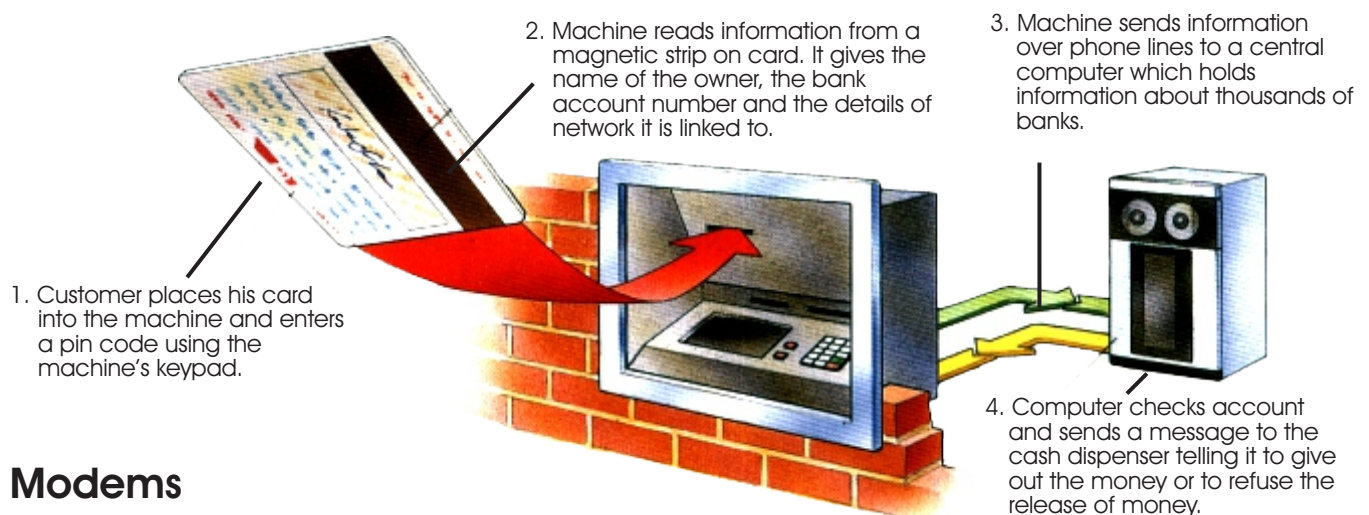


## Wide Area Network

Places that used to be cut off from the rest of the planet can now, with only electricity, a telephone and a computer terminal, be part of a worldwide network of computers. Computers all over the world can be linked as part of **wide area network (WAN)**.

The network of cash dispensing machines, or automated teller machines (ATM), is one of the widest networks. It links together thousands of bank computers across the globe. This means that an American on vacation in Europe can withdraw cash from a cash dispensing machine in France using an American withdrawal card.

### How an Automated Teller Machine (ATM) works



## Modems

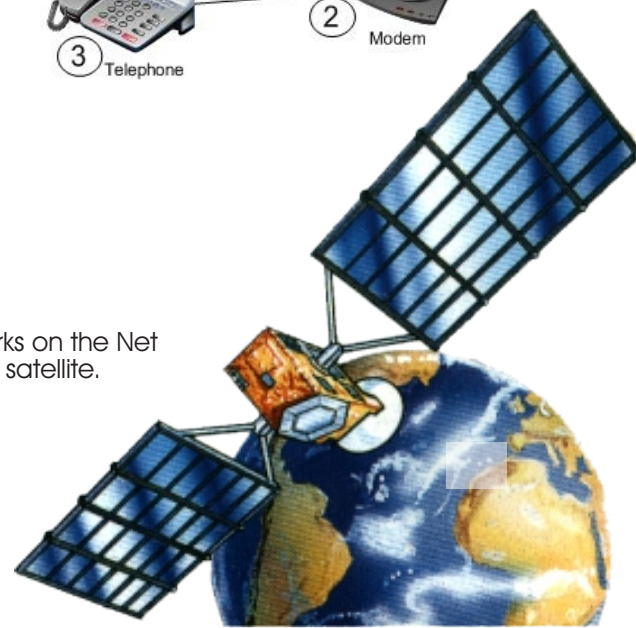
Computers may need to use a device called a **modem** to communicate with each other via telephone lines. Some telephone systems send data in the form of waves, and not in pulses like a computer. A modem converts the pulses into waves so the telephone can understand them. At the receiving end, the modem converts waves back to pulses.



## The Internet

The **Internet**, also known as the Net, is a worldwide computer network made up of smaller networks. Once you are connected or online you can use the Net to send e-mail, talk to friends, copy files and software from other computers and look for information from sources all over the world.

Some networks on the Net are linked by satellite.



# Connecting Local

## Lesson 13

Score

### Activity 34

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 13 Activity 34 **Connecting Local**.
3. Underline the prepositions of the statements.

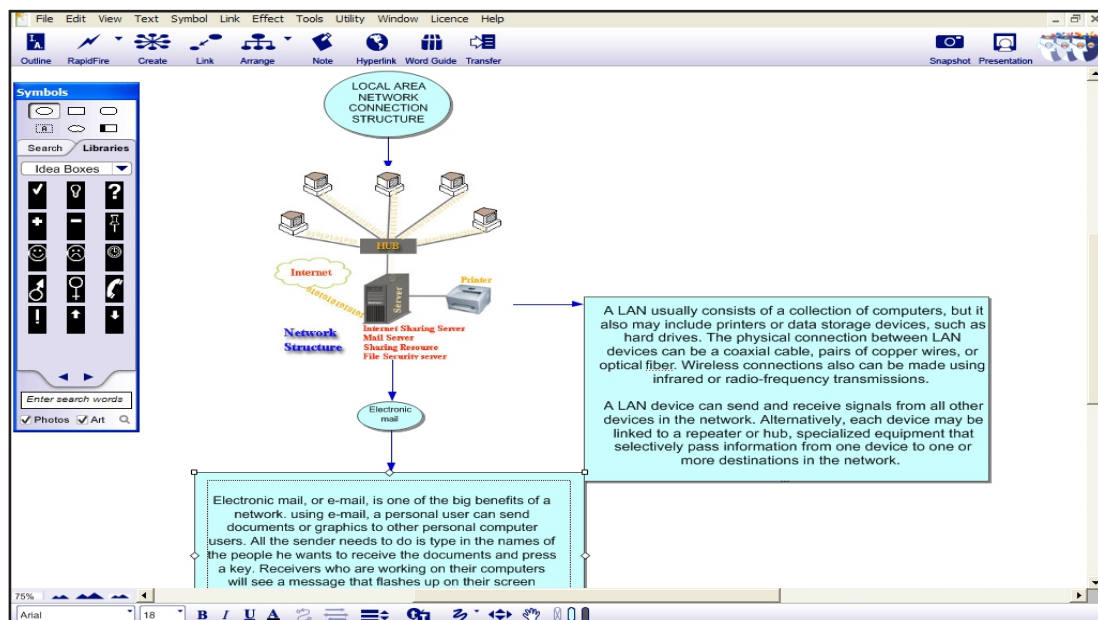
**Preposition** is a word that comes before a noun or pronoun and shows the relationship of that noun or pronoun to the other words in the sentence.

Example: The girl with red hair spoke first.  
The preposition is the word with.

#### Prepositions

across	behind	from	near	over	to	on
by	through	in	around	off	with	of
after	before	for	between	beyond	at	into

Preview:



4. Save the activity as **Connecting Local**.

# Connecting Wide

## Lesson 13

Score

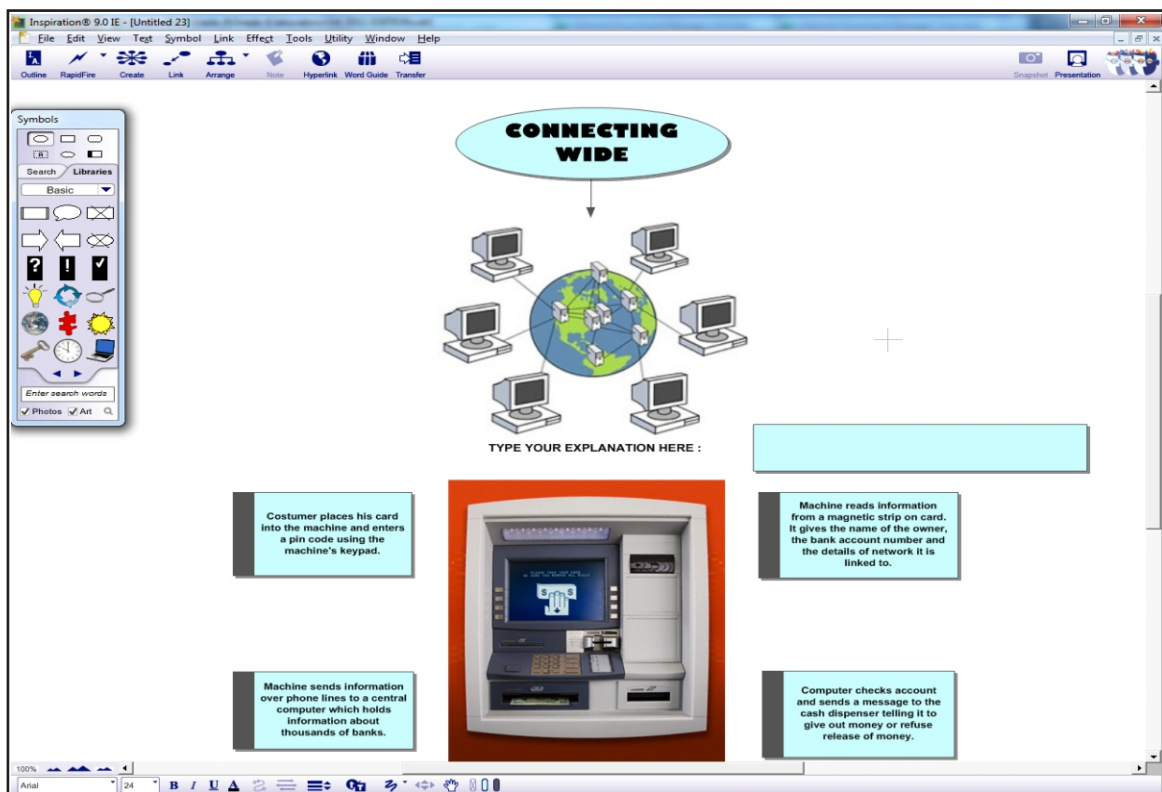
### Activity 35

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 13 Activity 35 **Connecting Wide**.
3. In 3 to 4 sentences, explain the diagram of how a Wide Area Network (WAN) works.
4. Label orderly the process on how an Automated Teller Machine works.

**Note:** To label, double-click the upper left portion of the symbol where the text is inside.

Preview:



4. Save the activity as **Connecting Wide**.



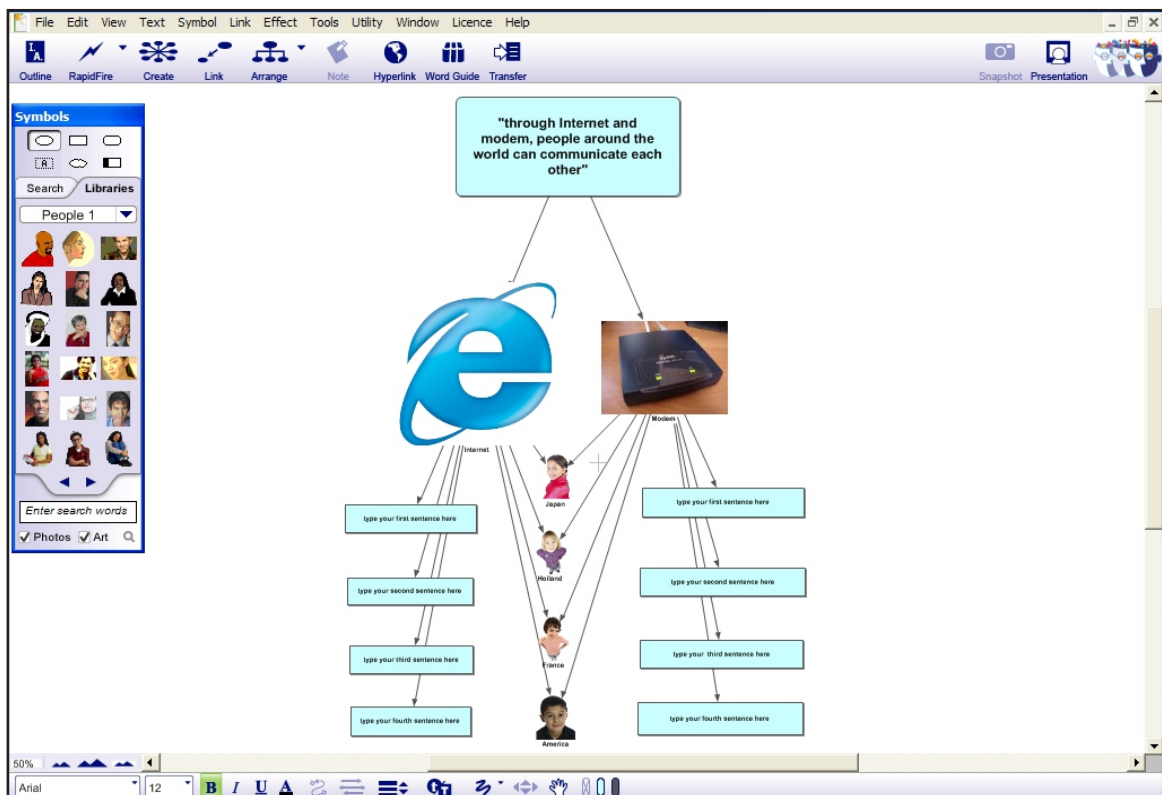
### Activity 36

Directions:

1. Launch Inspiration.
2. Open and answer Lesson 13 Activity 36 **Modem and Internet**.
3. Type at least 4 sentences about the Internet and modem in the symbols provided.

Through modem and Internet, people around the world can communicate with each other.

Preview:



4. Save the activity as **Modem and Internet**.