



## Curriculum Development Team Training

### Instructional Scenario

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**Title Ideas:** Which Network and Technology is the Best?

**Duty/Concept Area(s):** 6670 69-72/Exploring Network Fundamentals

#### Scenario

You have the opportunity to open your own business. You will have between five to ten employees. Decide what type of network system will work best for your new company. Compare peer-to-peer and client-server networks to make this decision.

Comparing may include the following information:

- Peer-to-Peer Networks—architecture in which all of the computers on a network are equal, with no computer designated as the server
  - cost
    - simple and cost efficient
    - server is not needed
    - each client computer acts as its own server
    - each computer user manages its security and administration
  - operating system
    - in many of the current operating systems, peer-to-peer software is built in at no additional cost
    - in many of the current operating systems, expensive server software is not required
  - implementation
    - computers are located at the users' desks
    - users act as their own administrators
    - a simple cable system connects computers to computers
  - when to use
    - security is not an issue
    - growth is limited in the near future
- Client-Server Networks—architecture in which one or more computers on the network acts as a server
  - cost
    - servers and software can be expensive
  - server operating systems
    - server and software work together
    - server software is expensive
    - servers add to the costs
  - implementation
    - resources are shared
    - network cabling
    - servers kept in a secure room
    - file management and security administration are central



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- user management and permissions, backup management
- security and safety techniques to protect the network from virus attacks, new products, and the use of new technologies (i.e., wireless connections)

### Big Question:

- What is your business?
- How does this determine which network system you choose?

### Focused Questions:

- Why is it important to select the best network for your business?
- Does the number of employees affect the type of network you choose?
- Does your location factor into your decision?

### SOL Correlation:

English 9.5, 10.5

Computer Mathematics COM. 1

Science PH. 4

### Project-Based Assessment:

The teacher will divide students into four groups and explain that each group will be given one of the topics and a presentation rubric. Each group will then present their findings to the class.

#### 1. Peer-to-Peer Networks

- cost
- operating system
- implementation
- usage

#### 2. Client/Server Networks

- cost: servers and software can be expensive
- server operating systems
- implementation
- security and safety techniques to protect the network from virus attacks, new products, and the use of new technologies (i.e., wireless connections)