

Lesson Plan

Chapter 5 Layer 1 – Media, Connections, and Collisions

Headline What the hell are straight-thru, roll-over, and cross-over patch cables?

In Advance

Create a diagram of each of the cables and gather all of the tools, cable and parts to create a cable.

Review

5.3 Making and Testing Cable

Materials

Handouts, RJ-45 connectors, CAT 5 cable

Preparation for Learning

Target Indicators

5.3

Vocabulary

RJ-45 connector

Crimp Tool

CAT 5 cable

Cable tester

Focus Question

What are the straight-thru, roll-over, and cross-over patch cables used for?

Delivery Of Instruction

Lecture

Along with a lecture, I will demonstrate how to make straight-thru, roll-over, and cross-over cables. I will refer them to charts depicting the color code of cables.

Key Graphics

I will prepare a web based presentations and handouts that will show the steps to make each of the cables listed above.

Online

Chapter 5.3

Lab/Activity

- Cut three 1 meter lengths of cable.
- Strip off the jacket on the ends of each cable.
- Separate out the 4 pairs of wires.
- Untwist the pairs.
- Organize the wires according to the proper color code for each of the cables and flatten the wires.
- Clip their length of the wire pairs to a maximum of 1.2 cm.

- Insert ordered wires into RJ-45 plug according to the wire configurations making sure the conductors are all visible, in the right order and flush with the stop in the RJ-45 connector.
- Insert the plug firmly into the crimp tool and crimp down until the tool releases
- Inspect both ends making sure there is a firm connection.
- Use a cable tester to verify the cable.

Assessment

All students must make a verified straight-thru, roll-over, and cross-over cable.

Reflection

The students will create their own acronym identifying the color codes of each of the cables constructed in this exercise.

Homework

Review material for straight-thru, rollover, and crossover cable.

Resources

Web Sites

http://www.siemon.com/support/installation_instructions/

Alternate Lesson Plan Ideas

Books