



## Learning Guide Unit 2

### Overview

#### The Physical Layer

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##### Topics

- Bandwidth and maximum [data rate](#)
- Guided Media
- Unguided Media
- [Satellite Communication](#)
- [Digital Multiplexing](#) and Modulation
- Ethernet

##### Learning Objectives

- Describe the term "[crosstalk](#)" with respect to wire pairs.
- Examine reasons for the use of different frequencies in up and down [downlinks satellite communications](#).
- Differentiate between [Circuit Switching](#) and [Packet Switching](#) techniques.
- Explain advantages of [CRC checksum](#) placement in the frame trailer versus in the frame header.

##### Checklist

- Peer-assess Unit 1 Assignment
- Read through the Learning Guide and the Reading Assignment
- Complete the Discussion Assignment by posting in the Discussion Forum
- Respond to and rate three of your fellow classmates' posts in the Discussion Forum
- Complete and submit the Written Assignment
- Complete and submit the [Learning Journal](#)
- Take and submit the Self-Quiz

