

## 101.01 TEACHER OBJECTIVE GUIDE

### Categorize storage devices and backup media.

#### Essential Question:

*What are the differences in the various types of storage devices and backup media?*

**Expected Time to Cover: 3/90 days {5/180 days}**

#### Expected Outcomes:

- ✓ **Categorize storage devices and backup media**
  - FDD
  - HDD
    - Solid state vs. magnetic
  - Optical drives
    - CD / DVD / RW / Blu-Ray
  - Removable storage
    - Tape drive
    - Solid state (e.g. thumb drive, flash, SD cards, USB)
    - External CD-RW and hard drive
    - Hot swappable devices and non-hot swappable devices

#### Activities and resources:

*Listed below are examples of the kinds of activities you may choose to do in the course of teaching this objective. Just as every student has a different learning style, every teacher does things differently as well. Feel free to mix and match the plans below to match your own teaching style.*

**Overview** Show Objective 101.01 Overview PowerPoint and introduce the content of objective 101.01. Find out what students already know.

**Reading** The following handouts are included and are recommended to be addressed in the following order:

- ✓ [10101-h-hdd](#)
- ✓ [10101-h-ssd](#)
- ✓ [10101-h-raid](#)
- ✓ [10101-h-cdrom](#)

- ✓ 10101-h-dvd
- ✓ 10101-h-bluray
- ✓ 10101-h-removablestorage
- ✓ 10101-h-fdd

## Assignments

The following reading comprehension worksheets are included and are recommended to be addressed in the following order:

- ✓ 10101-w-hdd
- ✓ 10101-w-ssd
- ✓ 10101-w-raid
- ✓ 10101-w-cd
- ✓ 10101-w-dvd
- ✓ 10101-w-bluray
- ✓ 10101-w-removablestorage
- ✓ 10101-w-fdd

## Activities

There are two activities included in this objective. Activity sheets are included, and a brief synopsis of each activity is listed below:

- ✓ **Activity 1 – Storage Drive Identification.** Students are given various types of drives to look at either spread out on a table or in Google images. They are then asked to classify the devices based upon criteria like whether they store data in a spiral pattern or have a magnetic material to store data on. They are also asked to draw and label connection types.
- ✓ **Activity 2 – HDD Dissection.** For this activity, students are given an old hard disk drive and tools and are asked to remove the top of the drive. They then draw the components inside and label them with their appropriate names. To find old hard drives contact your IT department or find a local repair shop or recycle center they are bound to have plenty of old hard drives they would be willing to donate.
- ✓ **Activity 3 – Storage Drive Comparison.** Students are asked to research various types of drives and fill in a table comparing items like storage capacity, connection types, internal vs. external and cost.

### **Categorize storage devices and backup media**

## Lecture

- ✓ Floppy Disks (FDD)
- ✓ Hard Disks (HDD)
- ✓ Optical Drives
- ✓ Removable Storage

## Assessment

Assess students' understanding of the content by using a variety of methods and sources

- ✓ Give the pre-made Benchmark Exam given on CD or in your Moodle course. After students take the exam, have them copy or type each question they missed into a Word document, mark the correct answer, and write a brief explanation of why that answer is correct.
- ✓ Create a Moodle quiz on this objective and assign students to take it for a grade - see the ExplorNet PLC Course for instructions. (**Note:** The questions from the Benchmark Exam

and the Moodle itembank are identical)

- ✓ Use textbook resources or other A+ Preparation materials to give students familiarity with a variety of question types and styles.

## Other Activities

Attempt to find as many "hands on" activities as possible to reinforce the concepts in this objective. Listed below are a brief sketch of possible activities. If you need assistance with any of these activities or are able to come up with other activities, be sure to bring them up in the ExplorNet Teacher Forum.

- ✓ Lay out as many different drives you have on hand, IDE, SATA, USB, Firewire, Floppy, ZIP, SCSI both internal, external with all of the cables that attach them to the motherboard have students match the cables to the drives and then plug into the motherboard.

## Vocabulary

A variety of vocabulary activities (crosswords, matching, and vocabulary lists) are provided for you on both the CD and the Moodle Site. Vocabulary is an important way for students to comprehend complex topics. Use a variety of methods to assess student vocabulary:

- ✓ For this objective, choose only one (1) vocabulary activity from our materials and assign it to students. Mix up the types of assessments as students complete different objectives.
- ✓ Use the other activities as focused review during exam review or for extra credit.
- ✓ Try using the Moodle Games Module to create vocabulary games for students to play during "down time".

## Web Research

Have students visit appropriate web sites of your choosing. A list of recommended sites for this objectives can be found at [www.explornet.net/links/CE1-links.htm#10101](http://www.explornet.net/links/CE1-links.htm#10101).