

## Session 2 Extension Activity: More About Data Storage

1.

A 01000001	B 01000010	C 01000011	D 01000100	E 01000101	F 01000110
G 01000111	H 01001000	I 01001001	J 01001010	K 01001011	L 01001100
M 01001101	N 01001110	O 01001111	P 01010000	Q 01010001	R 01010010
S 01010011	T 01010100	U 01010101	V 01010110	W 01010111	X 01011000
		Y 01011001	Z 01011010		

- Write a word or short sentence using binary code.
- How many bits are in the word or sentence?
- How many bytes are in the word or sentence?
- Give the code to your friend to decipher. Can they "crack" it?

Extension Activities are optional challenges at the end of sessions.

- Compare the cost of purchasing a hard drive. Who has the best deal? Why?
- What does it mean to *back up* a file? Why would a person want to back up their files? Make a backup copy of the *Information Package* presentation.
- When you are working on a document and it is not saved to any storage medium, what happens to your work if the power goes out?
- What are the benefits of saving your work onto a flash drive? What are the disadvantages?
- What are the benefits of storing data on the hard drive? What are the disadvantages?
- A CD holds 650 MB of data. A DVD holds 4 GB of data. How many CDs would you need to equal one DVD?

10. A file can be compressed or *zipped* to make it smaller. This is done using a compression program. Although data is already coded in digital form for computer processing, it can often be coded more efficiently by using fewer bits. The program replaces strings of repeated characters with a single character thus making the file smaller. Although file compression is a great way to reduce file size, compressed data must be decompressed or *unzipped* before it can be used.

*Check File Size Before Compression:*

- a. Go to student folder and locate the *Information Package* presentation file.
- b. Right click on the presentation file and select *Properties* from the menu.
- c. Look in the *Size* area. What is the file size?

*Compress a File:*

- a. Right click on the file name and select *Send To* from the menu.
- b. Select *Compressed (zipped) Folder*.
- c. What does the icon of the new file look like?

*Check File Size After Compression:*

- a. Right click on the compressed file and select *Properties* from the menu.
- b. Look in the *Size* area. What is the file size?

*Decompress a File:*

- a. Right click on the compressed file and select *Extract All* from the menu.
- b. Click *Extract*.

11. Files can be transferred to different storage devices. This is a good way to transport files or back up your work. Try it!

- a. Connect a flash drive to the computer.
- b. Display the contents of the flash drive. To do this click *Computer* and then right click on the flash drive icon. From the menu, select *Open*.

**KEEP THE WINDOW OPEN.**

- c. Display the contents of your student folder.

**KEEP THE WINDOW OPEN.**

- d. Right click on the *Information Package* presentation file.
- e. From the menu, click *Copy*.
- f. Right click inside the *flash drive* window.
- g. From the menu, click *Paste*.