

## VITAL INFORMATION

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<b>Subject(s):</b>	Careers, Computer Fundamentals 1-2
<b>Topic or Unit of Study:</b>	Software Development
<b>Grade/Level:</b>	9-12
<b>Objective:</b>	<p>At the conclusion of this lesson students will be able to:</p> <ol style="list-style-type: none"><li>1. Manage their folders/directories and documents/files on the H: drive including creating, renaming, moving, and deleting a folder and creating (copying), renaming, moving, and deleting files.</li><li>2. Use both the keyboard and mouse for management operations.</li><li>3. Give suggestions (before something happens) as well as give and receive constructive feedback (after something happens) appropriately.</li><li>4. Create a Visual Basic project directly on the H: drive without needing to store it on the C: drive temporarily.</li></ol>
<b>Summary:</b>	Students organize or reorganize their documents and folders to match a specified hierarchy and set of names. In doing so they practice using both the keyboard and mouse in Windows Explorer and work in pairs, giving and receiving feedback. In sharing they learn about alternate ways to accomplish the same task.

## IMPLEMENTATION

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<b>Learning Context:</b>	Until now students have been allowed to organize their folders and documents as they like. While some variation is usually allowed, groups of people in a department (which we are simulating) generally need to follow some guidelines which help them share files, make backups, automate operations, grade projects, write instructions, and so on. It's time to organize our computers and in the process practice skills listed in the objectives. Some students appear weak in them and that is to be expected since we went directly into programming without practicing these organizational skills first.
<b>Procedure:</b>	<ol style="list-style-type: none"><li>0. As students find their seats make sure that nobody is isolated and that no groups form where two students who will have problems with the exercise sit next to each other. Watch for groups with odd numbers and decide whether trios can work together, an aide can assist, or the teacher must even the count. In the case of evening, have the side with the evener move first (as explained later).</li><li>1. Introduce the lesson by reminding students of the learning context.</li></ol>

They are nearing completion of animations which need to be collected for either the product release or dog and pony show for venture capitalists. In order to collect the animations to be used in presentations, or to organize them on the CD that we release, or to make a backup, we need to know where they are. One way is for students to report the information to recordkeeping. I tried that and it wasn't working well. The way we will use starting now, and the way I've seen most companies do it, is the other way around. A centralized organizer instructs others where to place files and what to name them so that they can be automatically used in a business process. So, that's what we will practice today.

2. Instruct students not to begin yet (and if they start at the front of the room, they won't have a computer and can't be tempted), because doing so will cause problems when they begin their pair work. Show students the new Tips & Tricks page of the website where they will find the desired file structure. Use the example documented in the attached print of the activity page to demonstrate necessary operations, periodically asking a volunteer to suggest how an operation should be performed (because there are multiple ways).

3. The steps are approximately these for Scratch: look inside MyScratch to find CatAndTheHat.sb and move it into Scratch, delete MyScratch, create the directory MyProjects inside Scratch, Move CatAndTheHat.sb into MyProjects, find Bubbles.sb in Projects and move it to MyProjects. Now everything is in place and needs to be renamed. Rename CatAndTheHat.sb to animation.sb and Bubbles.sb to tests.sb. In this case the animation also contains the splash screen to grade, so make a copy or two of it. Delete the extra copy and rename the remaining one to splash.sb.

4. For Visual Basic begin by creating a directory VS. Move WindowsApplication1 into it. Try to move WindowsApplication1 from VS2008 into VS, but note the error message and abort that process. First go into VS and rename WindowsApplication1 to HelloWorldWideWeb. Now move WindowsApplication1 into VS and rename it MyCalculator. Lastly remove the empty VS2008 directory.

5. Start students working in pairs. The double check is necessary because if something is wrong, the overnight backup procedure or CD mastering will be aborted and will have to be started over the next day, causing a day's loss in the schedule (and profits and reputation). Not only that, there are multiple ways of doing things. I learned from Mr. Madden, for example, about right clicking and dragging. There are two rounds. In the first, students on the north and south (or east and west, whichever one does not have the evener) sides of the pod move one student clockwise. They suggest where to start and in which order to do things. Students who stayed show how to do it or ask the other student for advice. Students who moved should give any constructive criticism as required.

6. After five to ten minutes students sit back down and those on the other sides of the pods move one student clockwise and repeat the process of organizing. In this way students will have worked not with one but with two others.

7. At the end have all students sit down and click along as the teacher creates a Visual Basic project called HomeworkCalculator and stores in directly in the H:\VB directory that they should all now have. The simple instructions for this are on the web page along with the Hello World program.

**Differentiated Instruction:**

Groups originally with odd numbers who are helped with an aide or teacher will likely receive extra attention. Almost every student will begin with a different directory structure or file names. They will be personalized.

**Sample Student Products:**

Student products should very closely resemble the structure shown on the Tips & Tricks page that accompanies the lesson plan.

**Collaboration:**

Students will work collaboratively & individually. Students will work in groups of 2.

**Time Allotment:**

1 class period. 55 Min. per class.

**Author's Comments & Reflections:**

Reflections will follow in a diary entry

Re. collaboration: After the initial presentation, students should work in two different groups of two on this assignment. They create the Visual Basic project on their own.

Re. time allotment: 15 minutes for the presentation, 10 minutes for each grouping for a total of 35 minutes.

## **MATERIALS AND RESOURCES**

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**Instructional Materials:**

Tips & Tricks page of web site as well as activity page.

**Attachments**

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| <ol style="list-style-type: none"><li>1. <a href="#">Files and Directories</a></li><li>2. <a href="#">Tips and Tricks</a></li></ol> |
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**Resources:**

- Technology resources:  
Windows, Visual Basic

## **STANDARDS & ASSESSMENT**

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**Standards:**

 **AZ- Career and Technical Education Programs**

- **Level** : Career Preparation (Grades 10 - 12)
- **Program** : Information Technology CIP No. 15.1200
- **Option** : Software Development - Option C
- **Competency** : \*5.0 EXPLORE COMMUNICATION SKILLS IN AN INFORMATION TECHNOLOGY ENVIRONMENT
  - **Indicator** : 5.3 Give suggestions and/or ideas in an appropriate manner
  - **Indicator** : 5.4 Give and receive constructive feedback
- **Competency** : \*9.0 UTILIZE TECHNOLOGY REQUIRED IN AN INFORMATION TECHNOLOGY WORKPLACE

■ **Indicator** : 9.5 Apply folder and directory management techniques

**Assessment/Rubrics:** Check for accuracy with the creation of the Visual Basic program. If something goes wrong, it is likely that the directory structure and names are not correct. Students' work will be sampled when the animations are pulled from their directories and placed on the web server. This provides the teacher a second opportunity for control. Students will also have checked each other's work as they assisted each other.