"J: Drive" File and Folder Security – A Guide for Teachers

In order to better utilize the "J: Drive" (in your network drive list it may appear as "hs (\\msd-stor3)(J:)" or "hs on msd-stor3 (J:)"), we've decided to give every teacher their own folder that is then fully controlled by each of you. This accomplishes several things. In the long run, this will save a lot of time, on both your end, and on the Technology Departments' end. It will also give you each a better knowledge of how to use the powerful File and Folder Security features that are readily available in Windows. This is something that we already own, so, in this manner we are therefore making better use of the technology that we already have. We will leave it totally up to you on whether or not you want to have "Hand-In and Hand-Out" folders, what you want to name them, and how you want to use them. The Technology Department will no longer have to micro-manage everyone's hand-in and hand-out folders, or other folders in the J: drive, and, you will each have full control of your own section of the J: drive to use however it fits your needs the best.

What's the J: drive for? It is similar to your I: drive in that it is a network drive that you have any place that you login, only, every teacher and student in the HS has the same J: drive. Therefore, it can be very useful for sharing files, assuming you set up the access levels to your individual folder in the J: drive. Let's assume you wish to hand out a Word document to your students. You can place a copy of it somewhere in your J: drive folder for the students to browse into to get. Or, even among staff members. If you had to get a Word document to 20 staff members, instead of emailing them a copy of it, you could put it in your J: drive folder and tell them where it is located. This saves on email traffic and is the preferred method of sharing files.

Now, let's describe what a "Dropbox" or "Hand-In" folder is. It is a *secure* place where individual students may electronically turn in assignments or tests. Security is important because it creates an environment where you as a teacher can be sure that students are not able to reopen submitted material and make modifications. This is especially important when tests are being submitted. Bear in mind students would still be able to resubmit an item with a different file-name but that you would find each submitted item in the drop box without the original being replaced. Security is also important for the computer network. If students have the ability to place files on the server outside of their own personal folders it creates a situation where malicious material can be anonymously added to the network.

Folders on a computer network are secured through the use of 'Privileges'. Privileges are assigned by personnel who have been granted the right to set privileges. The *(J:)* drive has been set up in such a way that each teacher has the right to set the privileges for any folder created by that teacher within their own folder.

# Steps to allow students and/or staff into your J drive folder:

1. Open the *(J:)* drive.
2. Right-click on your folder and select Properties. The window that comes up will have five tabs across the top. You want to click on the Security tab. You will then have a window that looks like the following. In Vista, it will look like this. In XP, instead of seeing the Edit button, you will see an Add and Remove button. The rest will look the same though regardless of XP or Vista.
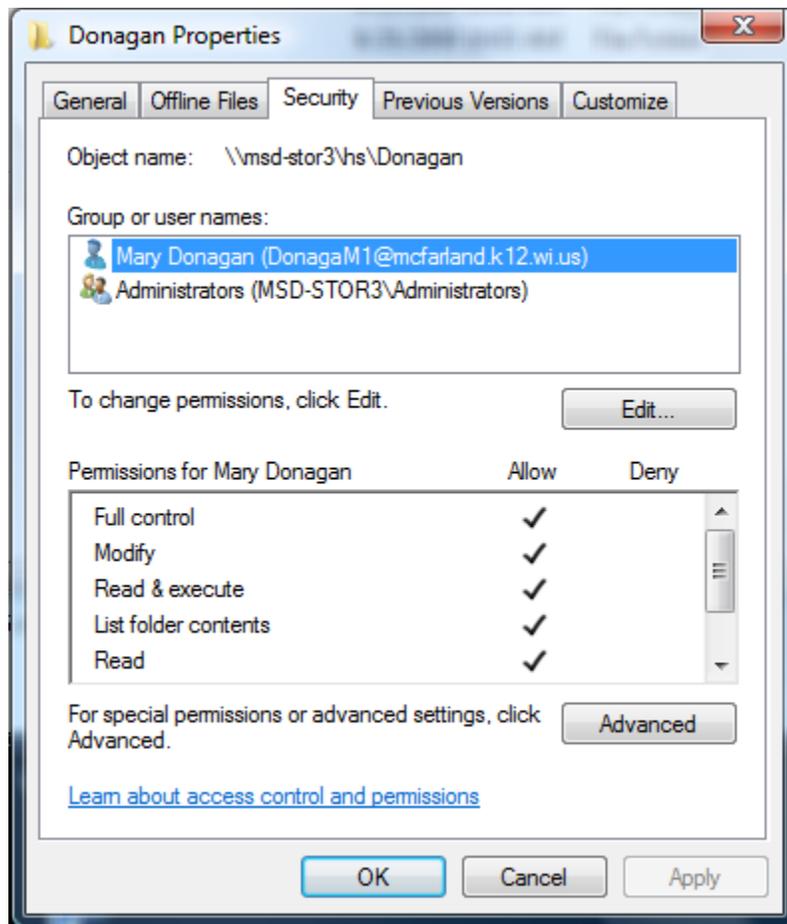
3. In this exhibit, this is Mary Donagan's folder. So it only has listed, Mary Donagan, and the server Administrators group. All folders will contain the Administrators group, as this is used for us to back-up your files. DO NOT remove the Administrators group. By default, we've set up each persons folder with ONLY their own account as having access to it in addition to the Administrators group. Therefore, when you open this window for the first time on your folder, it will look similar to the above picture.
4. At this point you need to determine who you want to let into your folder. If you plan on sharing items amongst your students, you will need to let them into your folder. If you plan on sharing items amongst other staff members, you will also need to let them open

your folder. Let's assume this was the case for Mary Donagan, she wants to let in All HS staff members and All HS students. To keep things secure, we will therefore allow the BARE MINIMUM security setting to allow staff and students to merely OPEN her folder. Which is the List Folder Contents permission.

5. To do this, in Windows XP, you will already have the Add and Remove buttons on this window, similar to picture below. Move to step 6 if you already see Add and Remove. If you're on a Vista machine, click on the Edit…. button near the middle right of the properties window. At which point you will have a picture like below that includes Add and Remove.
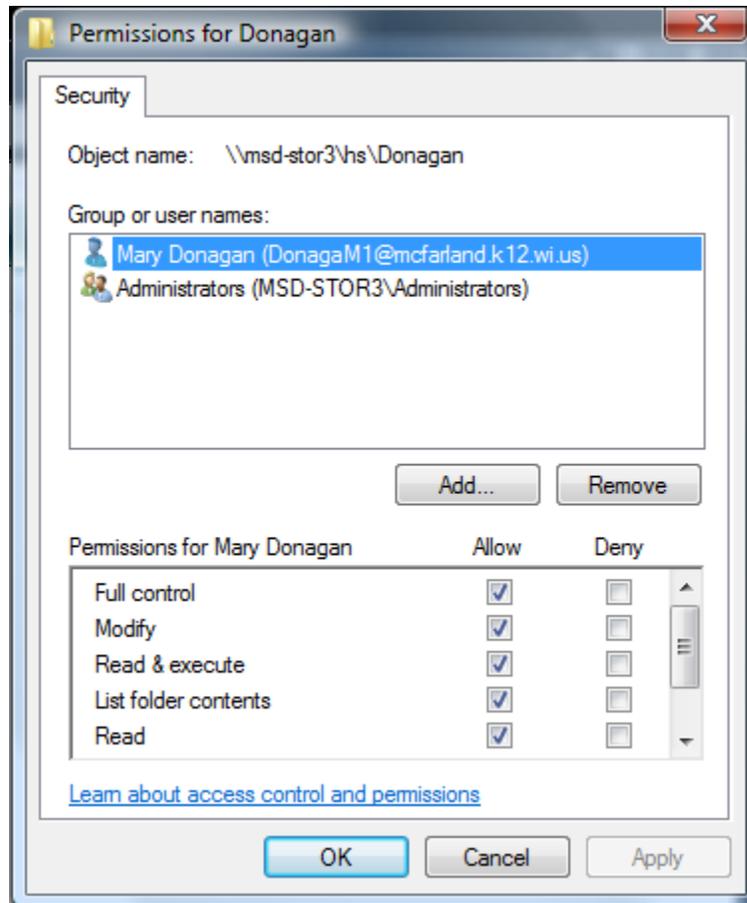
6. Look at the different options under "Permissions for <your name>". It is important to know what each of these items means. **Full Control** means just that. You probably don't want anyone else besides yourself having this, as, this gives the ability to even DELETE the folder and everything within it. Unless you had a co-worker that was sharing the use of your folder and you both were needing the full management of it. Other than that though, stay away from giving anyone besides yourself and the server administrators the Full Control ability. (notice also that clicking full control adds all other checkboxes below it.). **Modify** is almost as much as full control, but without the ability to add other people to the security list. Also, modify, if added to a folder, does not allow DELETION of the folder, however, it allows the "modification" of anything WITHIN that folder. Meaning the person could open the folder and delete everything

INSIDE that folder. Notice also that when checking modify, it also checks everything below it. As with full control, you probably don't want anyone else having this level of permission as it is too much potential destructive power. An area where you WOULD perhaps want MODIFY is if you were to set up a folder further down within your set of folders that you wanted an individual student or staff member to be able to modify files. We'll get to that later. Right now, at the ROOT level of your folder, you most likely do not want to give anyone Modify permission. Next, **Read & Execute.** Checking this one also checks List Folder Contents and Read. "Execute" only means, if you had a small application stored in this folder, for example an Executable file, it is whether or not that file could be Opened. So, for the sake of not confusing anyone, we'll just assume the Read&Execute and Read items, function the same. If you wish to give "READ" permission to any folder, just check Read&Execute, which will automatically check List Folder contents and Read, which, is fine. Next, to describe **List Folder Contents**. For a person to be able to open a folder, this is the MINIMUM permission necessary to do this. While this allows them to open the folder, if there are any documents within that folder though, the person will NOT be able to open any of the files since "List Folder Contents" means just that, they can "see" what's in it but nothing else. If you drag the slider on the right of these options down, you will also see a **Write** permission. This is more secure than Modify, as, it allows the saving of an item into the folder, but, once it's saved there, no deletion of the file is possible. Renaming the file is not allowed either. Opening up and Changing the contents of the file, IS possible. For example if you saved a Word document into a folder that you had only Write permission to, then realized you needed to make a change to that file, you WOULD be able to open up that file, make the change you needed to make, and Save the change. You would not however be able to delete that file or change the name of the file. So, that is it for descriptions of the different permissions. Ignore the Special Permissions item at the bottom of the list.

7. Let's assume Mary wanted to allow students and staff members into this folder. She would therefore click the Add button, at which point you will see a window such as the one below:
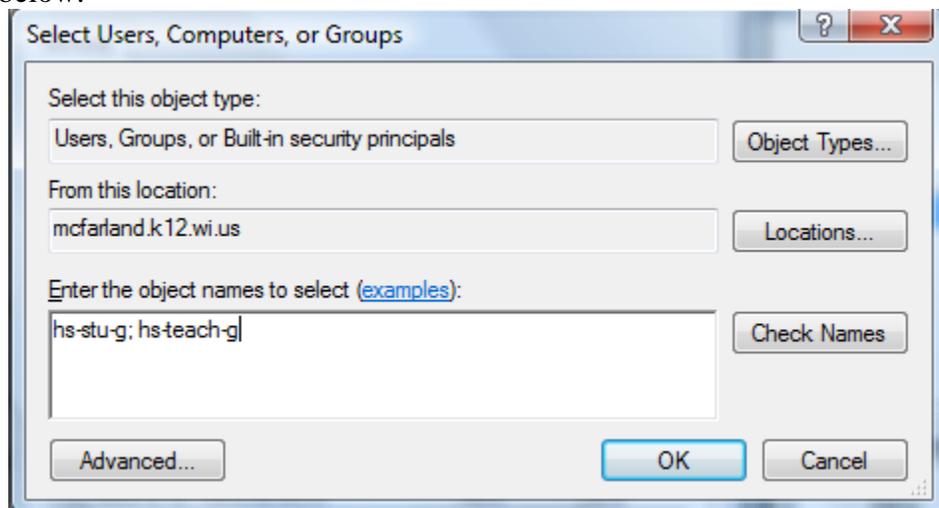
8. Now, the name of the High School students group is: "hs-stu-g" and the HS Teacher group is "hs-teach-g". Therefore, in the window above, you would type in: hs-stu-g; hs-teach-g. (note the group names separated by a semicolon and space. If you were putting

in just a single person's name, you would type their full name including the space between their first name and last name, for instance: Jim Lawless; Barb Schuetz; Mike Eversoll, if you wanted those three people added to the security list.

9. Once you click OK you will be at a window that looks like this:
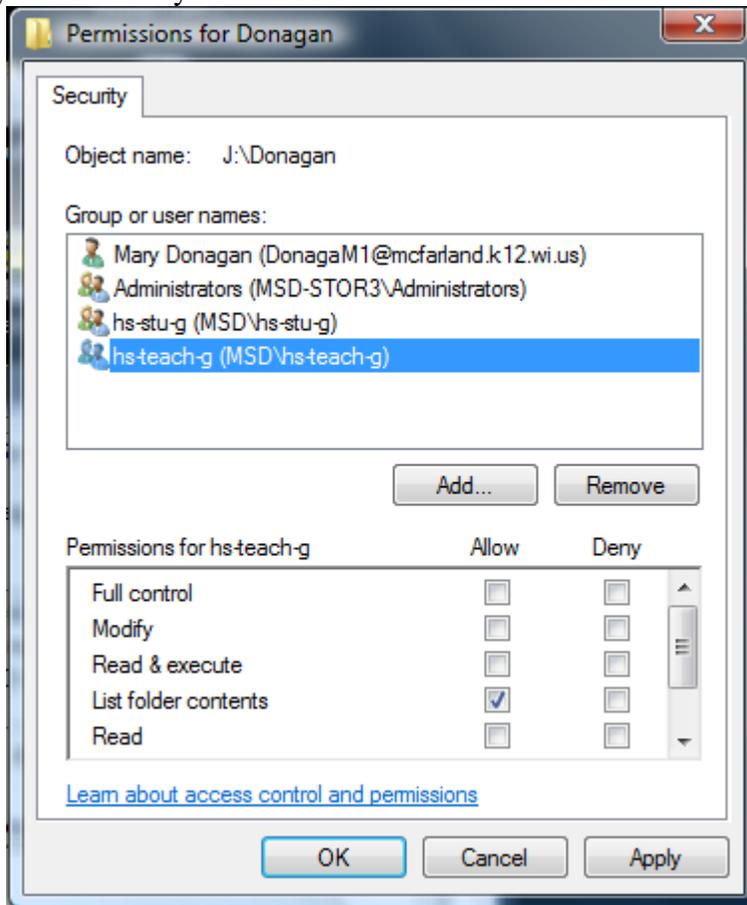
10. Notice there are now hs-stu-g and hs-teach-g in this list. Now let's assume you wanted to let these groups inside this folder and then further subdivide things up into different folders within that folder. So, the only permission both of these groups need here would be "List Folder Contents". So that is the only box that should be check as in the photo above. You need to click on hs-teach-g, uncheck read&execute and read, click on hs-stu-g and uncheck read&execute and read. Then click OK.

11. Now, within Mary Donagan's folder, let's create two folders, one named Teachers and one named Students. Right-click on Teachers and go to Properties and then the Security tab. Click Advanced and then Edit, and then Un-Check the Include inheritable permissions checkbox, then click Copy, then OK, then OK again. Then click the Edit button. Remove "hs-stu-g" from the list (since this is a Teacher only folder). Let's assume Mary wanted teachers to be able to edit and share documents in this folder. You would therefore want to click on the hs-teach-g item and then give Modify access. Click OK and OK again. Have a HS student test this out, they should be able to get to the level of seeing the Teachers and Students folders but get "Access Denied" when trying to open the "Teachers" folder. If they are able to get in then something must be set wrong.

12. So, let's go back to the Students folder now and open it. Now let's assume we want to create a Hand-In and Hand-Out folder. First create these two folders labeled as such. For the Hand-Out folder, you will want the hs-stu-g group to have Read&Execute, List Folder Contents, and Read. This way they can open the folder and copy and/or drag things out of it into their i: drives. For the Hand-In folder, you will want the hs-stu-g group to have ONLY the "Write" permission. With this they cannot open the folder but can drag and drop items into it.
13. Now, let's move on to the some other steps for, if you would like to create individual folders for individual students. The following exercises will give you more familiarity with the file and folder permissions and how they work.
14. Give the folder a name, such as *US History – Block 3*, then press the *Enter* key
15. Open the newly created folder.
16. Right-click in any open area of the window and choose *New*, and then *Folder* from the menu. (Windows Vista users can choose *New Folder* from the *Organize* menu found at the top of the window)
17. Give the folder a name such as *Rush Matt*.
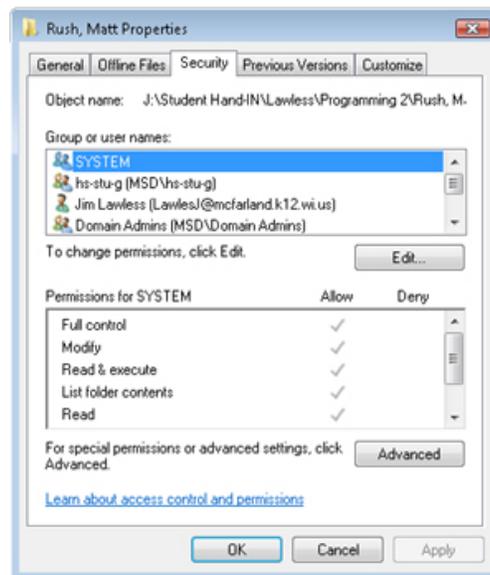18. Right-click on the *Rush Matt* folder and select *Properties*.

Figure 1. The Security tab in the Properties window

19. Select the *Security* tab. (See Figure 2)
20. Press the *Edit…* button.
21. From the *Group or user names:* area select *hs-stu-g (MSD\hs-stu-g).*
22. In the *Permissions for hs-stu-g* area check the *List folder contents* box under the *Deny* column. (See Figure 3) This disables the ability for the entire student body from being able to open this folder and view its contents.
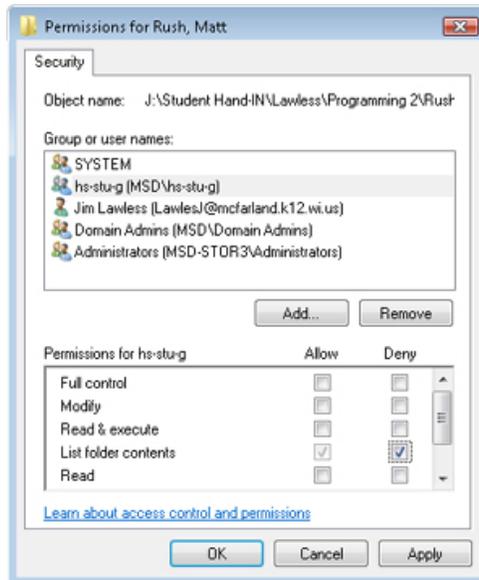
Figure 2. Denying privileges for the entire student body

23. Press the *Apply* button. Press the *Yes* button in the *Windows Security* dialog box that appears.
24. Press the *Add...* button.
25. In the *Select Users, Computers, or Groups* window enter the logon name of the student. (See Figure 4) It is only necessary to enter the first few letters of the student's last name, to a maximum of 6 letters.

Figure 3. Entering the student's logon name

26. Press the *Check Names* button.
27. Select the intended student from the list that appears and then press the *OK* button. (See Figure 5) *Notice:* If only one student matches the letters you entered then the computer will skip this window.
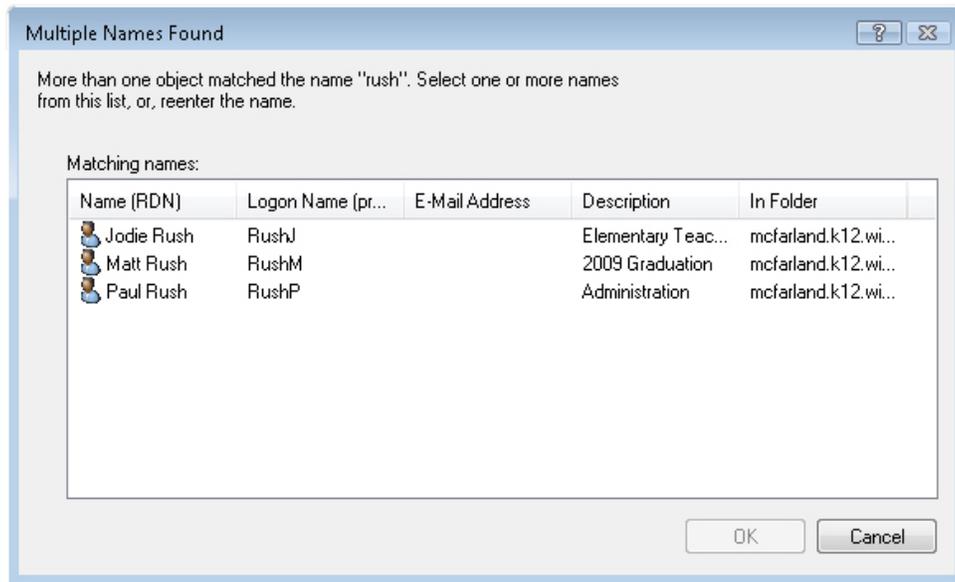
Figure 4. Selecting the student's name

28. Press the *OK* button in the *Select Users, Computers, or Groups* window.
29. In the *Permissions for Rush Matt* window under the *Allow* column deselect any already selected item and then check the *Write* item. (See Figure 6) This setup disallows the student all privileges except pasting items into the folder.
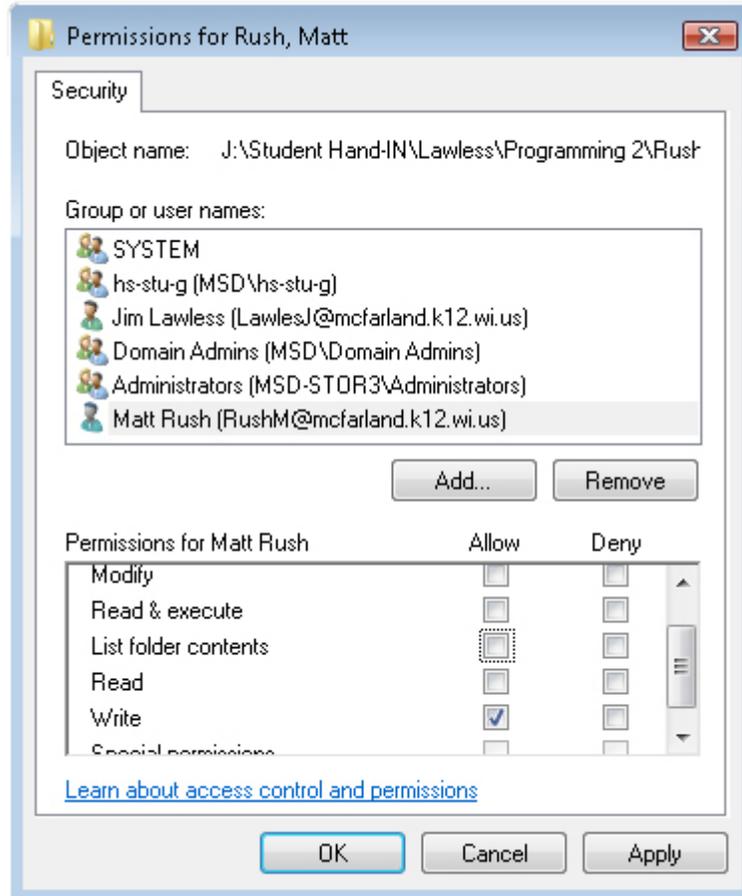
Figure 5. Changing the student's privileges

30. Press the *OK* button.
31. Press the *OK* button in the *Rush Matt Properties* window.
32. Repeat the previous steps for each student requiring a drop box.

Steps for a student to drop items into his/her drop box:

1. After a piece of work has been saved it can be copied by right-clicking on the file (usually the file would be found in the student's I: drive) and then selecting *Copy* from the menu.
2. After the student navigates to his/her drop box folder he/she can right-click on the folder and choose *Paste*. For the teacher the item will then appear in the drop box. The student will not be able to see that the file has been placed in the drop box.

Using and Creating Handout Folders

Handout folders are used by teachers as a method to make documents available to their students. The advantages in delivering material in this manner are many. Saving paper is one such benefit. Fixing an error in a document viewed by many students means only one file needs to be edited and then replaced in the handout folder. Documents in a handout folder are available 24 hours a day, seven days a week from any computer in the world.

Security is not an issue with handout folders. Students do not need to be assigned privileges because the privilege to open a file from a handout folder has already been set by the school's network administrators.

The *hs (\\msd-stor3) (J:)* computer drive, or just *(J:)* drive, for short, that you see when you open the *My Computer* (or just *Computer* for Windows Vista) is a computer hard drive that has been setup as a place where teachers can create handout folders for their students. On the *(J:)* drive you will find a folder named *Student Hand-OUT*. In that folder you will find folders created for each teacher. The *(J:)* drive setup will allow an individual teacher to access only that teacher's folder.

Steps to Create a Handout Folder:

1. Open the *(J:)* drive.
2. Open the *Student hand-OUT* folder.
3. Open your own teacher folder.
4. Right-click in any open area of the window and choose *New*, and then *Folder* from the menu.
5. Give the folder a named that reflects the materials that will be in the folder. For example, a folder that has documents for students in Spanish 1 would be *Spanish 1*.

Placing Documents in the Handout Folder:

1. Navigate to the file that you wish to place in the handout folder. Generally for teachers this will be in the *(I:)* drive on your computer.
2. Right-click on the file, or folder full of files, and choose *Copy*.
3. Navigate to the location on the *(J:)* drive where you have the handout folder.
4. Open the handout folder.
5. In any open area in the folder, right-click and choose *Paste* from the menu.

Having Students Retrieve Documents from a Handout Folder

1. Generally students should not open files located in handout folders. It is better practice to have them copy the files and paste them in their *(I:)* drive where they can then open them.
2. Students should navigate to the handout folder.

3. They should then right-click on the file to be retrieved and then choose *Copy* from the menu.
4. The students should next navigate to their respective *(I:)* drive folders and then paste the copied file.