# Module 4 Activity: Data Storage, Backup, and Security Checklist

Fill out this chart based on your own research.

* Have you consulted the central IT agent at your institution to determine what resources they are able to provide with regard to storage, backup, and security for your data and research.
* Where will you store your data?
  + PC or laptop
  + Removable media
  + External hard drives
  + Network drives
  + Remote storage (the Cloud)
* Where will you store your backup copies
  + PC or laptop
  + Removable media
  + External hard drives
  + Network drives
  + Remote storage (the Cloud)
* How will you create and sync your backup copies?
  + Automatic system tools
  + Manual
* What kind of backup will you run?
  + Full
  + Incremental
  + Differential
* How frequently will you run your backup?
  + Daily
  + Weekly
  + Monthly
* Who will be responsible for running your backup?
  + Data creators
  + PI
  + IT manager
  + Other
* How will you organize your backups?
  + Retain file naming conventions
  + Label external media consistently
* What formats will your files be stored in?
  + Non-proprietary
  + Open documented
  + In common use by the research community
  + In standard representation (ASCII, Unicode, PDF)
* Have you tested your backup files?
* Does the physical location where your computers, servers, and data storage reside have appropriate security controls?
* Will external media related to my research such as paper lab notebooks, CD’s, DVD, be kept secure in locked cabinets with access logs and a list of authorized users be maintained?

* How will you protect access to your data?
  + User ID/password
  + Limited network access
  + Role-based access rights
* How will you protect your hard and software systems?
  + Anti-virus software
  + A systematic plan for updating and patching all applications and OS
  + Firewall
  + Anti-intrusion software
  + Restricted physical access
* How will you protect the integrity of your data?
  + Data transferred over the network will be encrypted.
  + Access to data related to my research is accessible only by those who are authorized to access it.
  + I have a plan for validating the integrity of my data.

4.) Look at Google Drive and Dropbox policies online. What are the pros and cons of using these types of remote resources?