1. Environments
   1. Console
      1. Tab
      2. Administrator
   2. ISE – Integrated Scripting Engine
      1. Tab
      2. Administrator
      3. IntelliSense
   3. VSCode
      1. Version
         1. V1.0 folder refers to the language version of the engine.
         2. $PSversiontable
2. Help
   1. Get-help
      1. http://github.com/PowerShell
   2. Get-command
   3. Show-command
   4. Get-member
   5. About\_
3. Command Structure
   1. Verb
      1. Get-verb
   2. Noun
   3. Aliases
      1. Get-content; cat
      2. -definition
      3. get-command \*alias
4. Support for external commands
   1. Ipconfig; ping; nslookup; net; dsmove
   2. &
      1. Many times you can execute a command by just typing its name, but this will only run if the command is in the environment path. Also if the command (or the path) contains a space then this will fail. Surrounding a command with quotes will make PowerShell treat it as a string, so in addition to quotes, use the & call operator to force PowerShell to treat the string as a command to be executed. (<https://ss64.com/ps/call.html>)
   3. --%
      1. Allows PowerShell to pass the command and arguments to cmd.exe
5. Navigating the file system
   1. Set-location
   2. New-item
   3. Path parameter
      1. Literal paths
      2. \* zero or more characters
      3. ? a single characters
6. The Pipeline
   1. Export-csv
      1. -noinformationtype
   2. Export-clixml
      1. Command-line Interfaces Extensible Markup Language
   3. Diff two files
      1. Referencefile; Differencefile
      2. Diff -ref (import-cilxml <path to file> -differ (get-process) -property name
      3. Side indicators
         1. <=; =>
   4. Out-file
   5. Out-default
   6. Convertto-
      1. get-service | ConvertTo-Html | out-file C:\Sans\services.htm
   7. Modify the system
      1. Get-process -name bits | stop-process
      2. -confirm; -whatif
7. PowerShell Expansion
   1. PSSnapins
   2. Modules
      1. No advanced registration
      2. Need to be installed in the module path
         1. Get-content env:PSModulePath
            1. C:\Program Files\WindowsPowerShell\Modules;
            2. C:\Users\honey\Documents\WindowsPowerShell\Modules;
            3. C:\Program Files (x86)\WindowsPowerShell\Modules;
            4. C:\WINDOWS\system32\WindowsPowerShell\v1.0\Modules
      3. PSModulePath can be set as Windows Environment
         1. Can be changed in control panel and/or GPO
      4. PSModulePath allows for auto-discovery of modules used by update-help
      5. Get/remove/import-module
8. Demo exploring Modules
   1. Help \*DNS\*
   2. Import-module -name DNSClient
   3. Get-command -module DNSClient
   4. Help clear-dnsclient -verbose
9. Profile Script
   1. Create a folder
      1. Win: $env:USERPROFILE\Documents\WindowsPowerShell\Microsoft.PowerShell\_profile.ps1
   2. Add-PSSnapin and import-module
   3. Enable script execution (set by GPO)
   4. Close & Open PowerShell; Modules should autoload