

Macrosystems EDDIE: Getting Started + Troubleshooting Tips

Developed by K.J. Farrell, C.C. Carey, and A.G. Hounshell
for use with the Macro-Scale Feedbacks
Macrosystems EDDIE module.

<http://module4.macrosystemseddie.org>

Module development supported by NSF EF 1702506.

Last updated: 15 April 2020

R and RStudio



R

- Statistical environment



RStudio

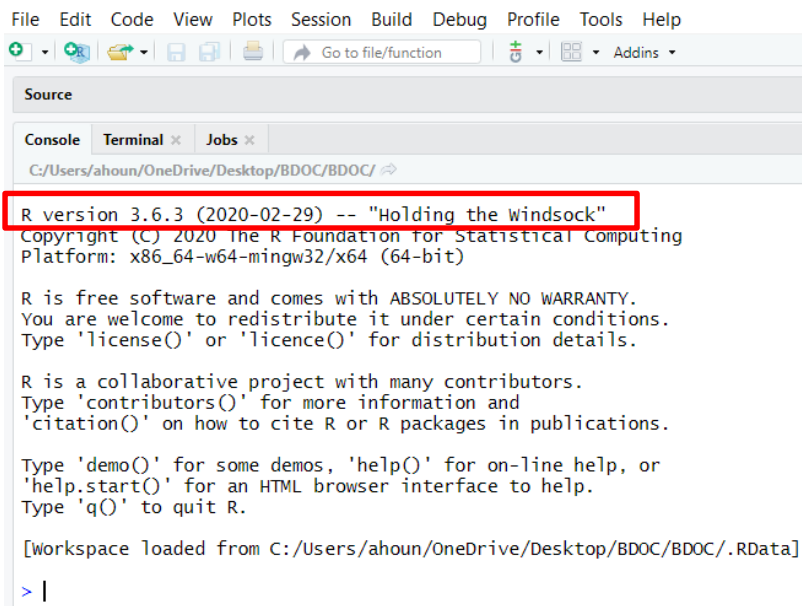
- Point and click program for using R in one place
 - Run code
 - Visualize plots
 - Access files

Check-in:

- Have you downloaded **both** R and RStudio?
- Look in your Applications (Mac) or in the Start menu (Windows) to confirm this-- both programs should be listed.
- If either program is missing, install it now!

Are R & RStudio up to date?

- Check that R and RStudio are both up-to-date, and download new versions if necessary
 - When you open RStudio, you will see your version of R. It should be at least **3.6.3**
 - Check for updates to RStudio by clicking **Help**, then **Check for Updates**



The screenshot shows the RStudio interface with the console window open. The console displays the R version information: "R version 3.6.3 (2020-02-29) -- 'Holding the Windsock'". This line is highlighted with a red rectangle. Below this, the console shows the copyright notice for R, stating that R is free software and comes with absolutely no warranty. It also provides instructions on how to cite R or R packages in publications.

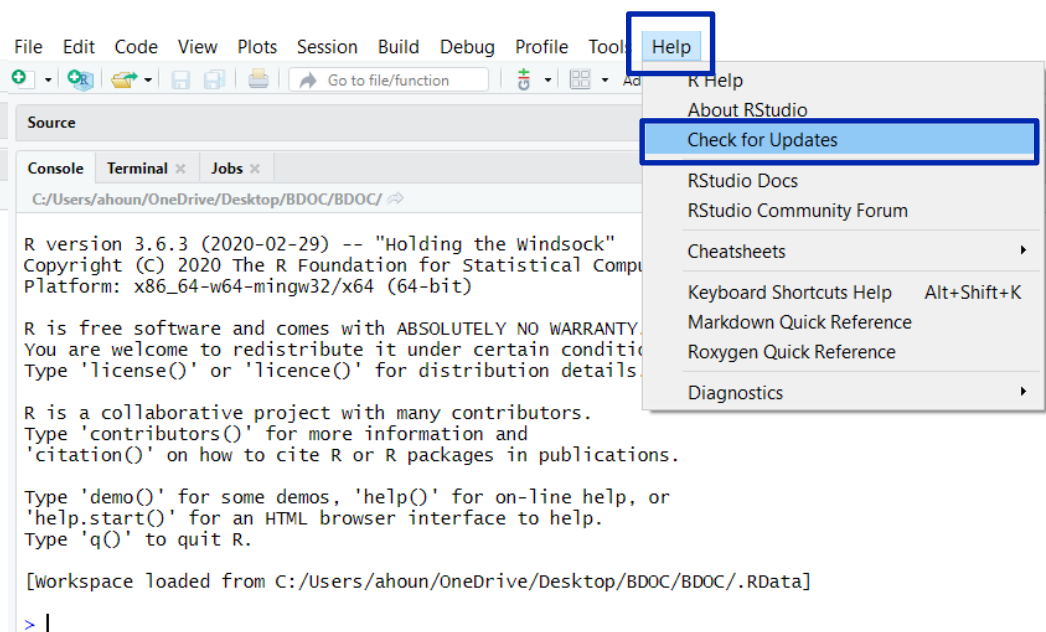
```
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Source
Console Terminal x Jobs x
C:/Users/ahoun/OneDrive/Desktop/BDOC/BDOC/
R version 3.6.3 (2020-02-29) -- "Holding the Windsock"
Copyright (C) 2020 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from C:/Users/ahoun/OneDrive/Desktop/BDOC/BDOC/.RData]
> |
```



The screenshot shows the RStudio interface with the Help menu open. The 'Check for Updates' option is highlighted with a blue rectangle. The menu also includes options for R Help, About RStudio, RStudio Docs, RStudio Community Forum, Cheatsheets, Keyboard Shortcuts Help, Markdown Quick Reference, Roxygen Quick Reference, and Diagnostics.

```
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function Addins
Source
Console Terminal x Jobs x
C:/Users/ahoun/OneDrive/Desktop/BDOC/BDOC/
R version 3.6.3 (2020-02-29) -- "Holding the Windsock"
Copyright (C) 2020 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

[Workspace loaded from C:/Users/ahoun/OneDrive/Desktop/BDOC/BDOC/.RData]
> |
```

Download the module files

- Navigate to the Macrosystems EDDIE Module 4 website
 - <http://module4.macrosystemseddie.org>
- Scroll down to Teaching Materials and click Files for Running Module 4

Teaching Materials:

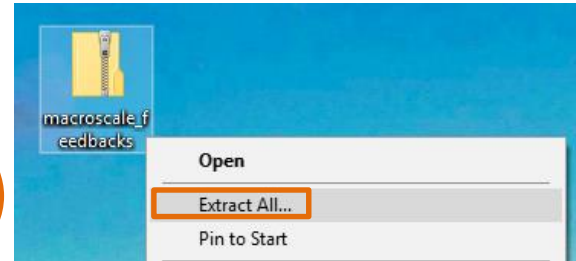
- [Files for Running Module 4](#) (Zip Archive 795kB Aug24 18) – Zipped folder of all files needed to run the module in RStudio
- [R You Ready for EDDIE? Module 4](#) (Microsoft Word 2007 (.docx) 23kB Aug24 18) – Step-by-step guide to download R, RStudio, and module files

- Save the .zip folder to your Desktop

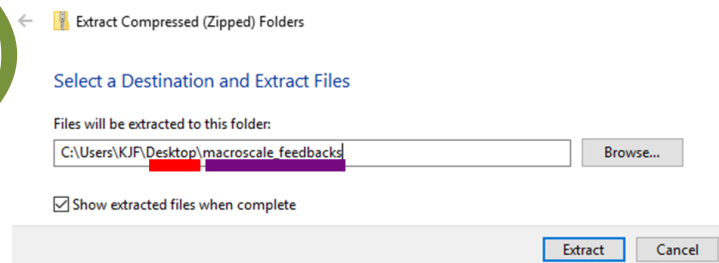
Unpack Files to Desktop: Windows

- 1) Download the zip folder directly from the Macrosystems EDDIE website to Desktop (or move folder from Downloads to Desktop)
- 2) Right click on the .zip folder and choose **Extract All**
- 3) Check that your files are:
 - being extracted to the **Desktop**
 - called *exactly* **macroscale_feedbacks**.Also **check the box** “Show extracted files when complete”
- 4) To open the module script in RStudio, right click on the file name (MSF_R_Script), then choose **Open with...** and **RStudio**

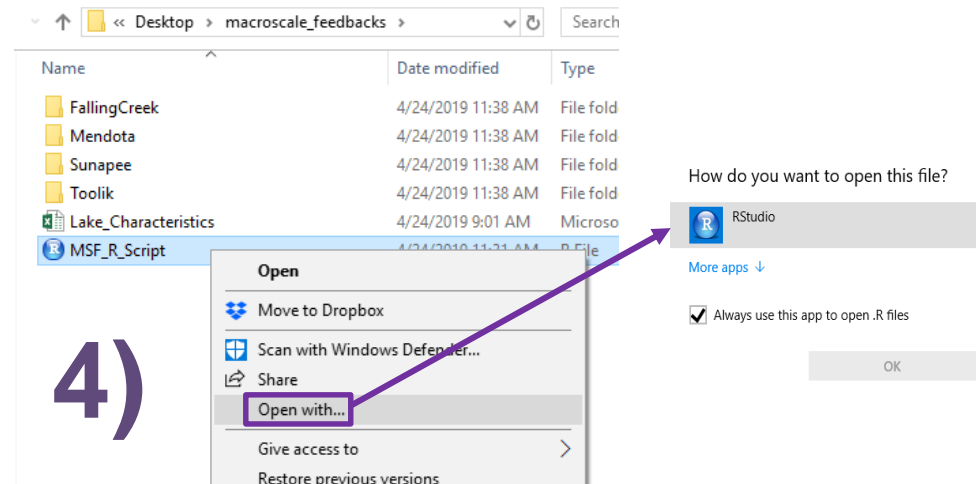
1)
2)



3)



4)

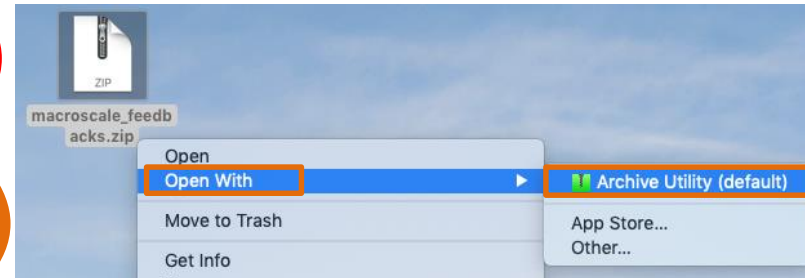


Unpack Files to Desktop: Mac

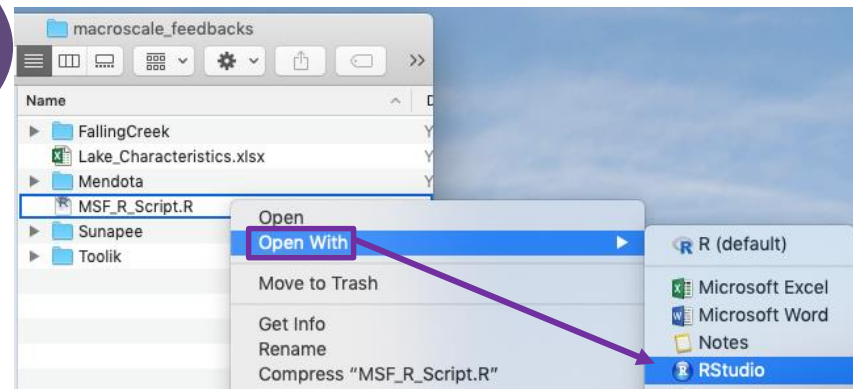
- 1) Download the zip folder directly from the MacroSystems EDDIE website to Desktop (or move folder from Downloads to Desktop)
 - **Note:** Your folder may have automatically been unzipped when you downloaded it. If it was, drag the **unzipped** 'macroscale_feedbacks' folder from Downloads to the Desktop, and skip to step 4
- 2) Control + click on the .zip folder and choose **Open with** → **Archive Utility** to unzip the folder. Then double click on the unzipped folder
- 3) Check that your folder is:
 - being extracted to the **Desktop**
 - called **exactly macroscale_feedbacks**.
- 4) To open the module script in RStudio, control + click on the file name (MSF_R_Script), then choose **Open with...** and **RStudio**

1)

2)

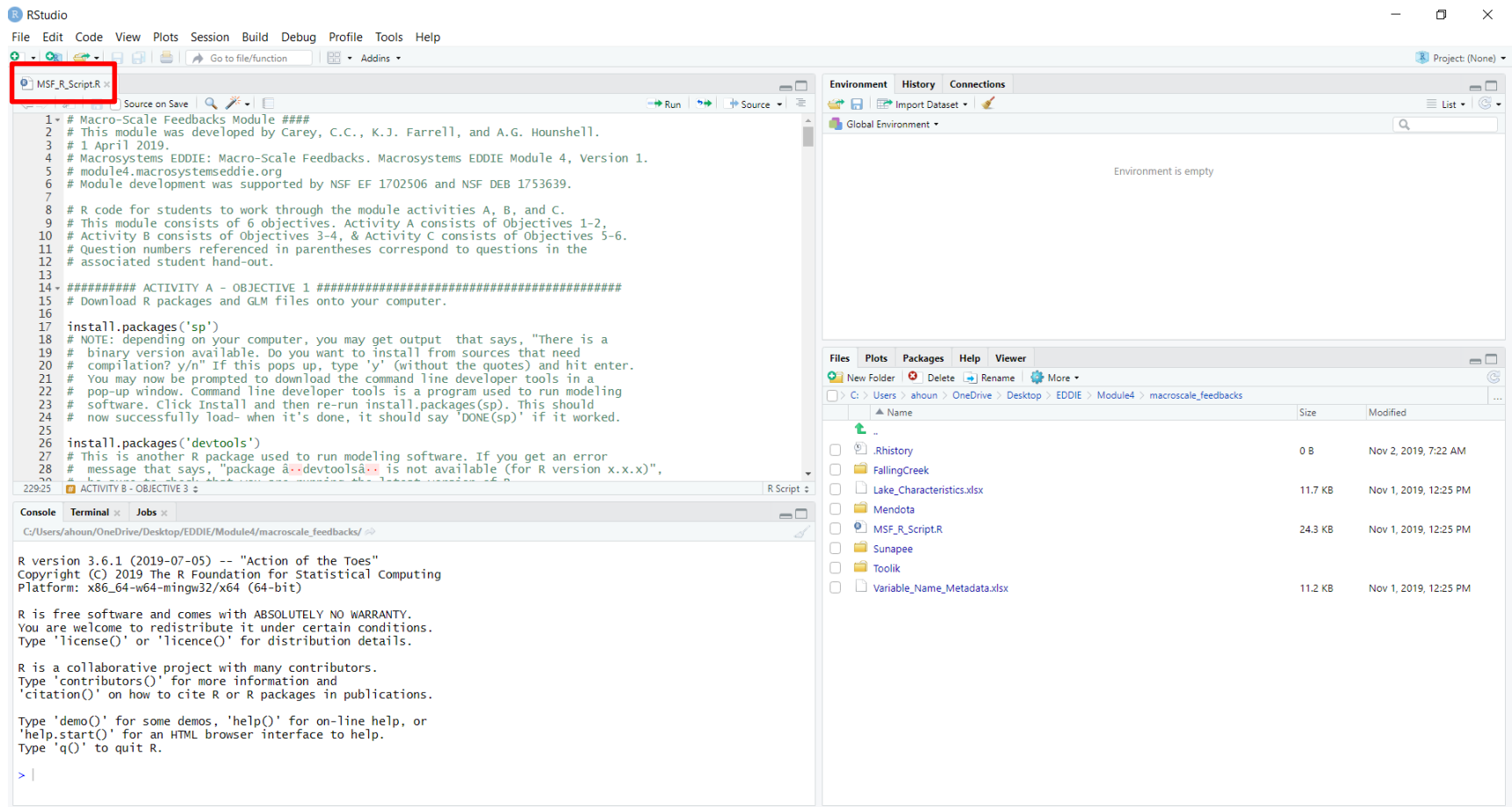


4)



Opening Module Files in RStudio

- Congrats! You've opened the module script in RStudio!



The screenshot shows the RStudio interface with the file `MSF_R_Script.R` open in the editor. The file contains R code for installing packages and setting up the environment. The Environment panel on the right shows the Global Environment. The Files panel on the right shows the directory structure of the project.

```
1 # Macro-Scale Feedbacks Module ###
2 # This module was developed by Carey, C.C., K.J. Farrell, and A.G. Hounshell.
3 # 1 April 2019.
4 # Macrosystems EDDIE: Macro-Scale Feedbacks. Macrosystems EDDIE Module 4, Version 1.
5 # module4.macrosystemseddie.org
6 # Module development was supported by NSF EF 1702506 and NSF DEB 1753639.
7
8 # R code for students to work through the module activities A, B, and C.
9 # This module consists of 6 objectives. Activity A consists of Objectives 1-2.
10 # Activity B consists of Objectives 3-4, & Activity C consists of Objectives 5-6.
11 # Question numbers referenced in parentheses correspond to questions in the
12 # associated student hand-out.
13
14 ##### ACTIVITY A - OBJECTIVE 1 #####
15 # Download R packages and GLM files onto your computer.
16
17 install.packages('sp')
18 # NOTE: depending on your computer, you may get output that says, "There is a
19 # binary version available. Do you want to install from sources that need
20 # compilation? y/n" If this pops up, type 'y' (without the quotes) and hit enter.
21 # You may now be prompted to download the command line developer tools in a
22 # pop-up window. Command line developer tools is a program used to run modeling
23 # software. Click Install and then re-run install.packages(sp). This should
24 # now successfully load- when it's done, it should say 'DONE(sp)' if it worked.
25
26 install.packages('devtools')
27 # This is another R package used to run modeling software. If you get an error
28 # message that says, "package 'devtools' is not available (for R version x.x.x)",
29 # you may need to update R.
30
31 ##### ACTIVITY B - OBJECTIVE 3 #####
```

Environment

Global Environment

Files

Name	Size	Modified
..		
.Rhistory	0 B	Nov 2, 2019, 7:22 AM
FallingCreek		
Lake_Characteristics.xlsx	11.7 KB	Nov 1, 2019, 12:25 PM
Mendota		
MSF_R_Script.R	24.3 KB	Nov 1, 2019, 12:25 PM
Sunapee		
Toolkit		
Variable_Name_Metadata.xlsx	11.2 KB	Nov 1, 2019, 12:25 PM

Console

```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

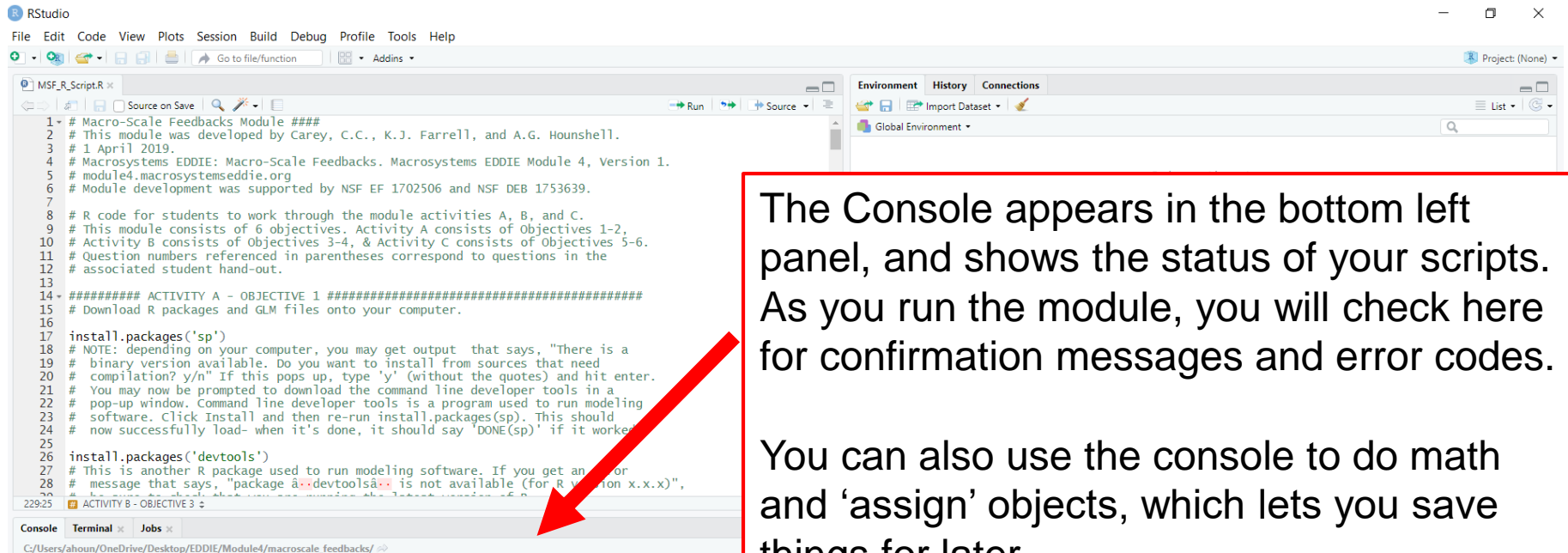
R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

RStudio Basics: Console



The Console appears in the bottom left panel, and shows the status of your scripts. As you run the module, you will check here for confirmation messages and error codes.

You can also use the console to do math and 'assign' objects, which lets you save things for later.

Try typing in the following on the console:

```
mySum <- 2 + 2 + 4 (press Enter)
mySum (press Enter)
```

```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```


RStudio Basics: Console

The screenshot shows the RStudio interface with three main panes. The top-left pane contains an R script with code for installing and loading GLM packages. The top-right pane shows the Environment tab with a table of objects. The bottom-left pane shows the Console with R startup messages and user input.

Script Content:

```
35 devtools::install_github("CareyLabVT/glmtools", force = TRUE) # This step
36 # downloads the R packages that allow you to work with GLM in R.
37
38
39 library(glmtools) # Load the two packages that you need to analyze GLM output
40 # NOTE: you may get lots of output messages in red at this step- if this worked
41 # successfully, you should read a lot of text that starts with: "This
42 # information is preliminary or provisional..."
43
44 library(GLM) # If this worked, GLM should load without error messages. Hurray!
45
46 glm_version() # See what version of GLM you are running- should be v.2.x.x
47
48 # CONGRATS! You've now successfully loaded GLM onto your computer!
49
50 # Now, we will explore the files that come with your downloaded GLM files
51
52 # NOTE! Throughout the rest of the module, you may need to modify some of the
53 # lines of code written below to run on your computer. If you do need to modify
54 # a line of code, I marked that line with #### symbols at the beginning of that
55 # line's annotation. If you do not see those symbols, then you do not need to
56 # edit that line of code (you can merely run it as normal).
57
58 # when you downloaded this script, you unzipped the module folder to your Desktop
59 # We now need to tell R where these files are. We do that by setting...
60 computerName <- 'KJF' #### Change to match your computer name
61 LakeName <- 'Mendota' #### Change to match the lake you and your partner selected
62 <
```

Environment Tab:

Global Environment	
mySum	8

Console:

```
R version 3.5.1 (2018-07-02) -- "Feather Spray"
copyright (C) 2018 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> mySum <- 2 + 2 + 4
> mySum
[1] 8
```

Red arrows indicate the flow of information: from the script to the environment, and from the console to the environment.

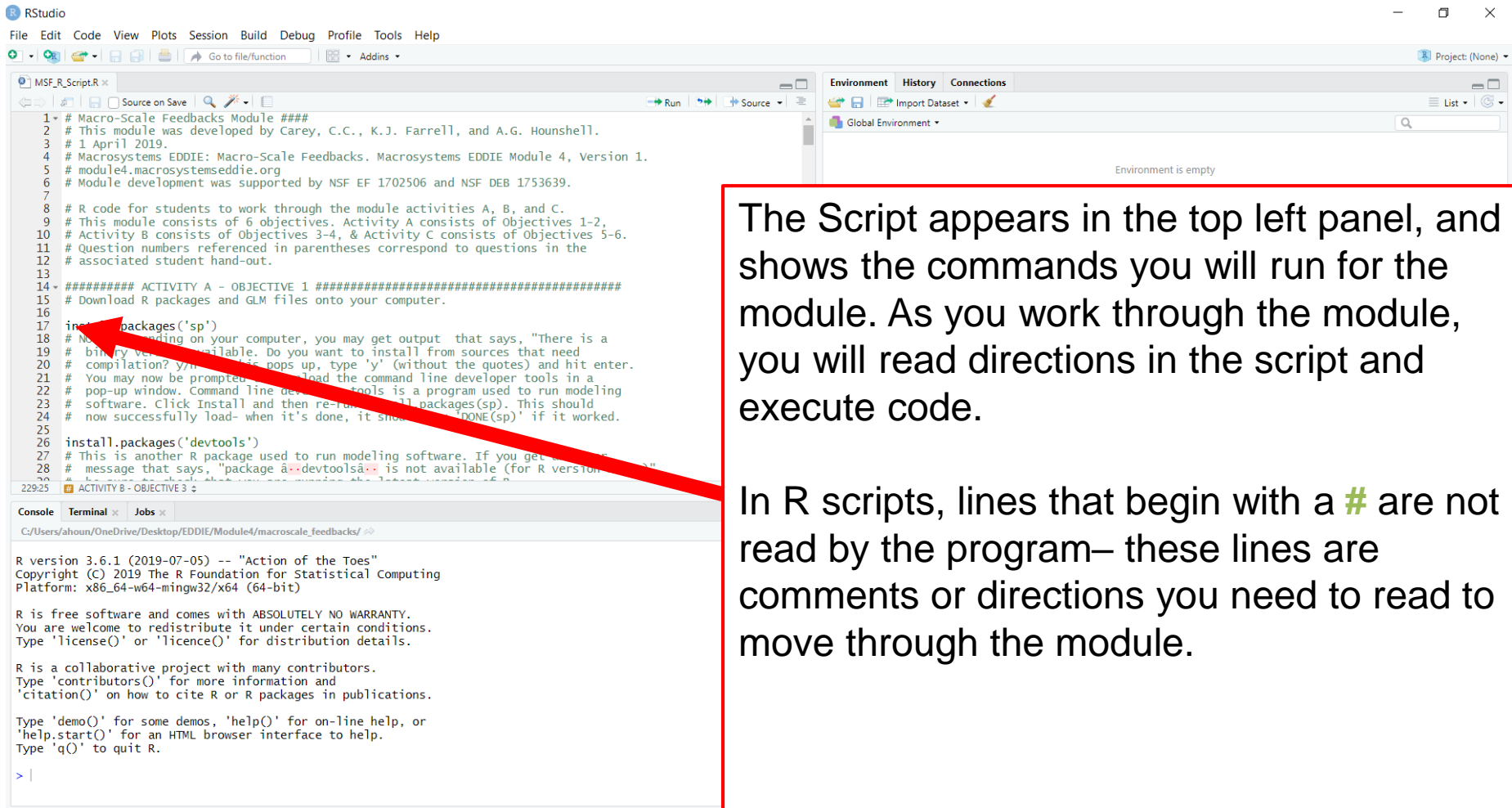
Try typing in the following on the console:

`mySum <- 2 + 2 + 4` (press Enter)

`mySum` (press Enter)

You now see that the object `mySum` is saved in the Environment tab, and when you type `mySum` into the console, you get the answer (8)!

RStudio Basics: Script



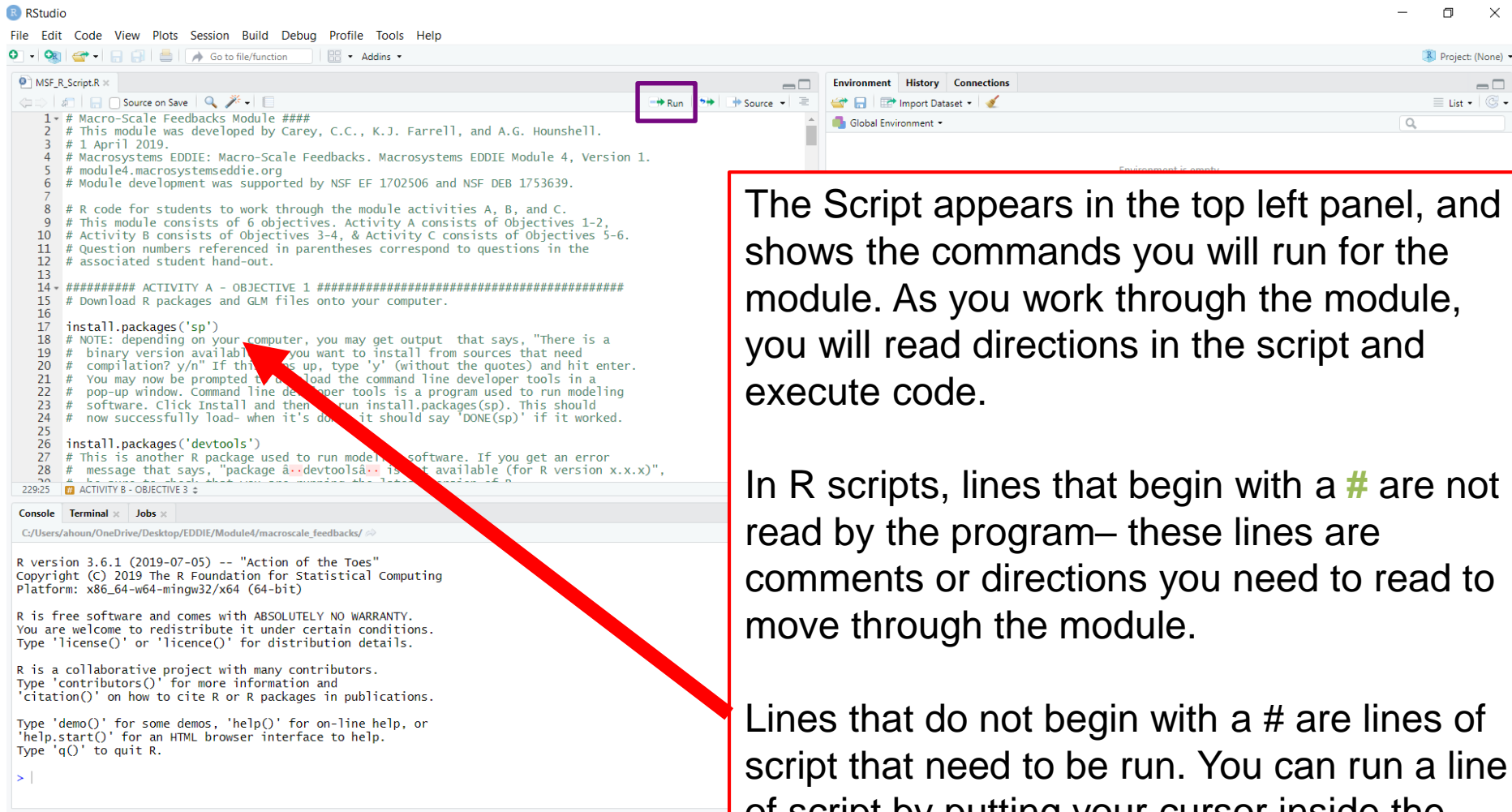
The screenshot displays the RStudio application window. The top-left pane, titled 'MSF_R_Script.R', contains an R script. A red arrow points from the text box on the right to line 17 of the script, which begins with 'install.packages('sp')'. The top-right pane shows the 'Environment' tab with 'Global Environment' listed. The bottom pane shows the 'Console' tab with the R version and license information.

```
1 # Macro-Scale Feedbacks Module ###
2 # This module was developed by Carey, C.C., K.J. Farrell, and A.G. Hounshell.
3 # 1 April 2019.
4 # Macrosystems EDDIE: Macro-Scale Feedbacks. Macrosystems EDDIE Module 4, Version 1.
5 # module4.macrosystemseddiedie.org
6 # Module development was supported by NSF EF 1702506 and NSF DEB 1753639.
7
8 # R code for students to work through the module activities A, B, and C.
9 # This module consists of 6 objectives. Activity A consists of Objectives 1-2,
10 # Activity B consists of Objectives 3-4, & Activity C consists of Objectives 5-6.
11 # Question numbers referenced in parentheses correspond to questions in the
12 # associated student hand-out.
13
14 ##### ACTIVITY A - OBJECTIVE 1 #####
15 # Download R packages and GLM files onto your computer.
16
17 install.packages('sp')
18 # Note: Depending on your computer, you may get output that says, "There is a
19 # binary version available. Do you want to install from sources that need
20 # compilation? y/n". If this pops up, type 'y' (without the quotes) and hit enter.
21 # You may now be prompted to download the command line developer tools in a
22 # pop-up window. Command line developer tools is a program used to run modeling
23 # software. Click Install and then re-run install.packages(sp). This should
24 # now successfully load- when it's done, it should show "DONE(sp)" if it worked.
25
26 install.packages('devtools')
27 # This is another R package used to run modeling software. If you get a message
28 # message that says, "package 'devtools' is not available (for R version
29 # 3.6.1)", you can try installing it from source. Type 'install.packages('devtools',
30 # type='source')' to try.
31
32 ##### ACTIVITY B - OBJECTIVE 3 #####
```

The Script appears in the top left panel, and shows the commands you will run for the module. As you work through the module, you will read directions in the script and execute code.

In R scripts, lines that begin with a **#** are not read by the program— these lines are comments or directions you need to read to move through the module.

RStudio Basics: Script



The screenshot shows the RStudio interface with a script file named `MSF_R_Script.R` open. The script contains the following code:

```
1 # Macro-Scale Feedbacks Module ###
2 # This module was developed by Carey, C.C., K.J. Farrell, and A.G. Hounshell.
3 # 1 April 2019.
4 # Macrosystems EDDIE: Macro-Scale Feedbacks. Macrosystems EDDIE Module 4, Version 1.
5 # module4.macrosystemseddiedie.org
6 # Module development was supported by NSF EF 1702506 and NSF DEB 1753639.
7
8 # R code for students to work through the module activities A, B, and C.
9 # This module consists of 6 objectives. Activity A consists of Objectives 1-2,
10 # Activity B consists of Objectives 3-4, & Activity C consists of Objectives 5-6.
11 # Question numbers referenced in parentheses correspond to questions in the
12 # associated student hand-out.
13
14 ##### ACTIVITY A - OBJECTIVE 1 #####
15 # Download R packages and GLM files onto your computer.
16
17 install.packages('sp')
18 # NOTE: depending on your computer, you may get output that says, "There is a
19 # binary version available but you want to install from sources that need
20 # compilation? y/n" If this comes up, type 'y' (without the quotes) and hit enter.
21 # You may now be prompted to download the command line developer tools in a
22 # pop-up window. Command line developer tools is a program used to run modeling
23 # software. Click Install and then run install.packages(sp). This should
24 # now successfully load- when it's done it should say 'DONE(sp)' if it worked.
25
26 install.packages('devtools')
27 # This is another R package used to run modeling software. If you get an error
28 # message that says, "package 'devtools' is not available (for R version x.x.x)",
29 # then you may need to update the version of R.
30
31 ##### ACTIVITY B - OBJECTIVE 3 #####
```

The console output shows the R version and copyright information:

```
R version 3.6.1 (2019-07-05) -- "Action of the Toes"
Copyright (C) 2019 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

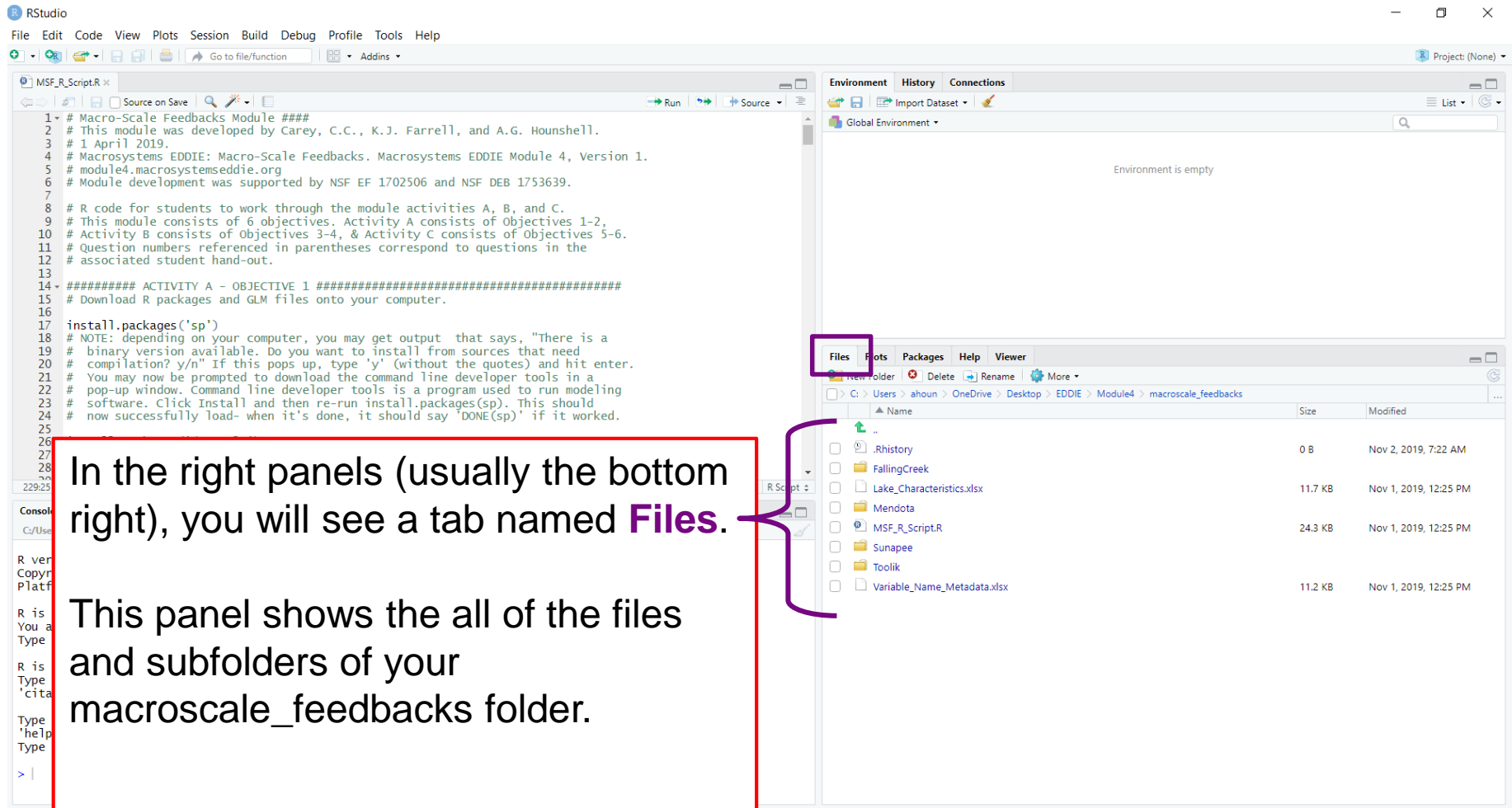
The right side of the image contains the following text:

The Script appears in the top left panel, and shows the commands you will run for the module. As you work through the module, you will read directions in the script and execute code.

In R scripts, lines that begin with a `#` are not read by the program— these lines are comments or directions you need to read to move through the module.

Lines that do not begin with a `#` are lines of script that need to be run. You can run a line of script by putting your cursor inside the line, then pressing **Run** (or Ctrl + Enter)

RStudio Basics: Files



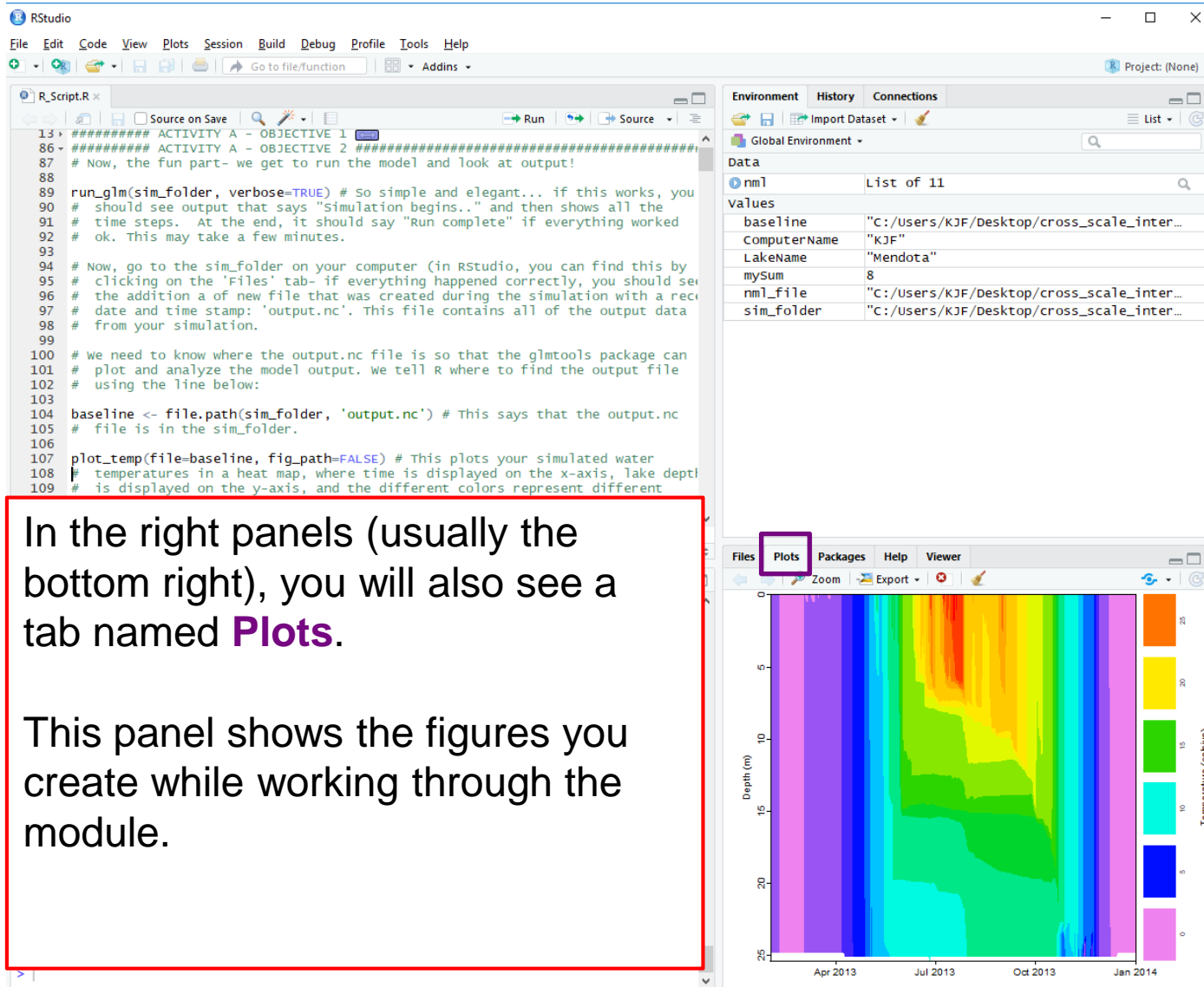
The screenshot shows the RStudio interface. The main editor window on the left contains an R script file named 'MSF_R_Script.R'. The script includes comments about the 'Macro-Scale Feedbacks Module' and R code for installing packages. The right-hand side of the interface features three panels: 'Environment' (top), 'History' (middle), and 'Files' (bottom). The 'Files' panel is active and displays a file explorer view of the 'macroscale_feedbacks' folder. A red box highlights the 'Files' panel, and a purple bracket points to it from the text below. The 'Files' panel shows a list of files and folders with columns for Name, Size, and Modified date.

Name	Size	Modified
..		
.Rhistory	0 B	Nov 2, 2019, 7:22 AM
FallingCreek		
Lake_Characteristics.xlsx	11.7 KB	Nov 1, 2019, 12:25 PM
Mendota		
MSF_R_Script.R	24.3 KB	Nov 1, 2019, 12:25 PM
Sunapee		
Toolik		
Variable_Name_Metadata.xlsx	11.2 KB	Nov 1, 2019, 12:25 PM

In the right panels (usually the bottom right), you will see a tab named **Files**.

This panel shows the all of the files and subfolders of your macroscale_feedbacks folder.

RStudio Basics: Plots



The screenshot displays the RStudio environment. The left pane shows an R script with comments and code for running a simulation and plotting the results. The right pane shows the Environment window with a table of variables. The bottom pane shows a heatmap plot of temperature over time and depth.

Environment Window:

Variable	Value
baseline	"C:/Users/KJF/Desktop/cross_scale_inter..."
ComputerName	"KJF"
LakeName	"Mendota"
mySum	8
nm1_file	"C:/Users/KJF/Desktop/cross_scale_inter..."
sim_folder	"C:/Users/KJF/Desktop/cross_scale_inter..."

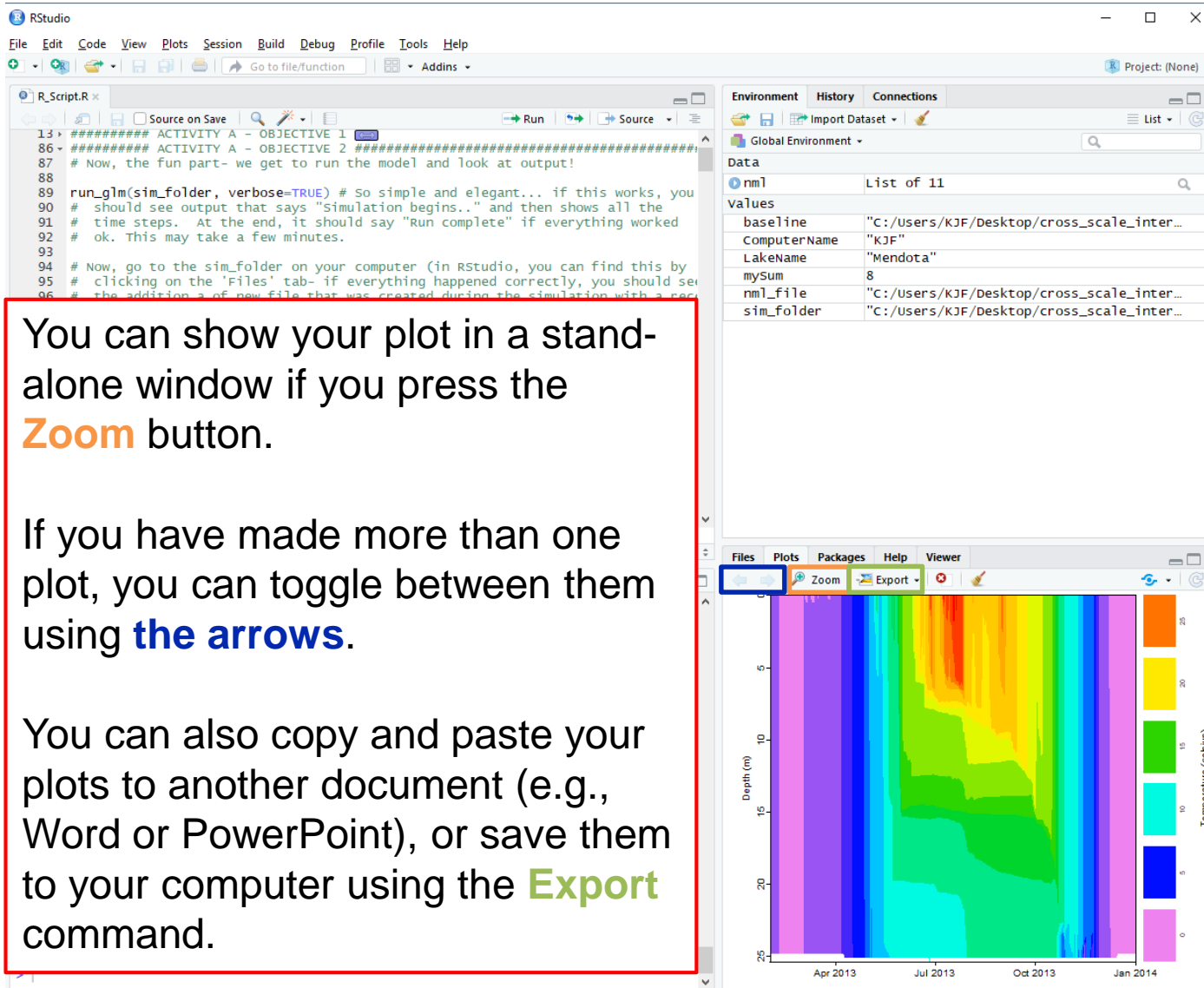
Plots Panel:

The Plots panel shows a heatmap titled "Temperature (celsius)" on the y-axis. The x-axis represents time, with labels for Apr 2013, Jul 2013, Oct 2013, and Jan 2014. The y-axis represents Depth (m), ranging from 0 to 25. The color scale ranges from 0 (blue) to 25 (red).

In the right panels (usually the bottom right), you will also see a tab named **Plots**.

This panel shows the figures you create while working through the module.

RStudio Basics: Plots



The screenshot displays the RStudio environment. The top menu bar includes File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, and Help. The toolbar below the menu contains icons for running code, saving, and other functions. The main editor window shows an R script with comments and a function call: `run_glm(sim_folder, verbose=TRUE)`. The Environment pane on the right lists variables in the Global Environment, including `nm1` (List of 11), `baseline`, `ComputerName`, `LakeName`, `mysum`, `nm1_file`, and `sim_folder`. The Plots pane at the bottom right shows a heatmap plot of Temperature (Celsius) versus Depth (m) over time (Apr 2013 to Jan 2014). The plot features a color scale from 0 to 25. The 'Zoom' button in the plot toolbar is highlighted with a blue box.

You can show your plot in a stand-alone window if you press the **Zoom** button.

If you have made more than one plot, you can toggle between them using **the arrows**.

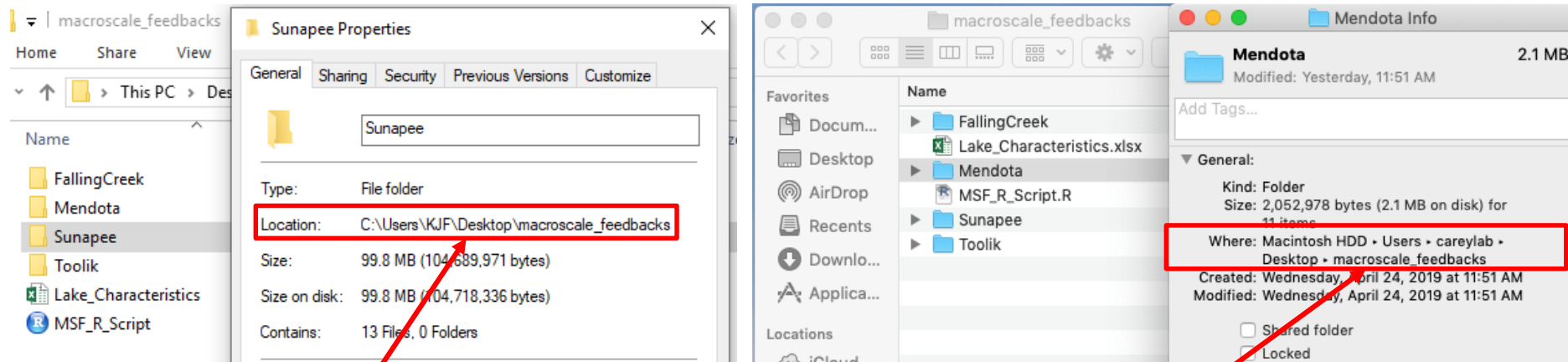
You can also copy and paste your plots to another document (e.g., Word or PowerPoint), or save them to your computer using the **Export** command.

Activity A: What's my sim_folder?

In Activity A, you need to set your `sim_folder` so that R knows where to find the module folders for your focal lake on *your* computer!

To find your folder path:

- 1) Navigate to the 'macroscale_feedbacks' folder on your Desktop
- 2) Right click on the folder that matches your model lake, then select Properties (Windows) or Get Info (Mac)
- 3) Look under Location (Windows) or Where (Mac) to find your folder path (examples below):
 - Windows: Users/KJF/Desktop/macroscale_feedbacks/Sunapee
 - Mac: Users -> careylab -> Desktop -> macroscale_feedbacks -> Mendota



In the R script, make sure you use the / dash, not \ (which is what Windows will show you!)

In the R script, make sure you use the / dash, not an arrow (which is what Mac will show you!)

Activity A: What's my sim_folder?

In the R script, you will need to change the part after Users/ to give the name of your computer (e.g., my computer name is cayelan, but yours will be different!) AND change the LakeName part to match the name of your model lake's folder (e.g., Mendota or Sunapee).

```
64 # To find your folder path, navigate to the macroscale_feedbacks folder on
65 # your Desktop. Right click on the folder that matches your model lake
66 # (Mendota, Sunapee, or FallingCreek), then select Properties (windows) or
67 # Get Info (Mac).
68 # Look under Location (windows) or where (Mac) to find your folder path
69 # (examples below):
70 # Windows: C:/Users/KJF/Desktop/macroscale_feedbacks/LakeName
71 # Mac: Users -> careylab -> Desktop -> macroscale_feedbacks -> LakeName
72
73 ##!! Edit this line to define the sim_folder location for your model lake.
74 sim_folder <- '/Users/cayelan/Desktop/macroscale_feedbacks/LakeName'
75 # You will need to change the part after Users/ to give the name of your
76 # computer (e.g., my computer name is cayelan, but yours will be different!)
77 # AND change the word LakeName to be the name of your model lake (FallingCreek,
78 # Mendota, Sunapee, or Toolik). Note that these computer file paths are case-sensitive.
79
80 # This line of code is sets your sim_folder as the working directory
81 setwd(sim_folder)
82 # The point of this step is to make sure that any new files you create (e.g.,
83 # figures of output) end up together in this folder.
```

If you don't change these two parts of the sim_folder file path, your model won't run because R won't know where to look for your files!

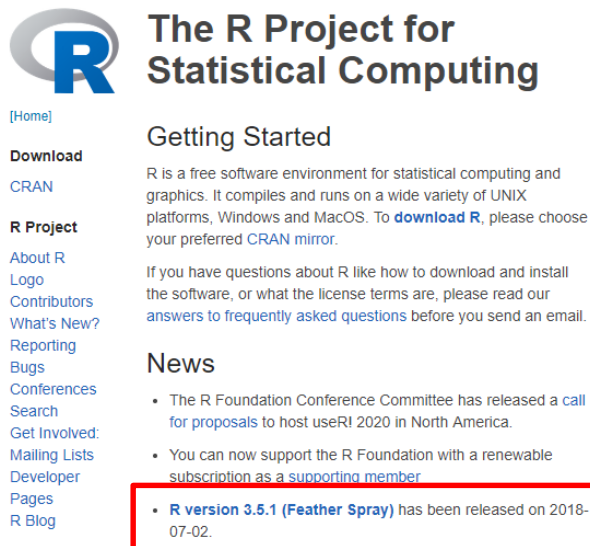
MACROSYSTEMS EDDIE: GLM TROUBLESHOOTING TIPS



Having trouble?

If you're having trouble running the Macrosystems EDDIE module, first double-check that you have the latest version of R!

- Go to <https://www.r-project.org/> and make sure that the version listed on the home page matches the version that opens when you open RStudio



The R Project for Statistical Computing

[Home]

Download

CRAN

R Project

About R

Logo

Contributors

What's New?

Reporting

Bugs

Conferences

Search

Get Involved:

Mailing Lists

Developer

Pages

R Blog

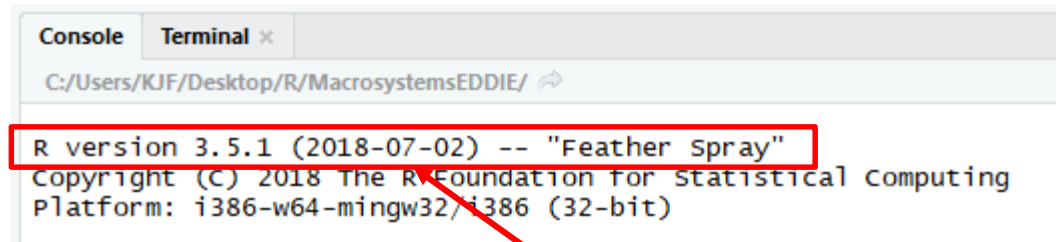
Getting Started

R is a free software environment for statistical computing and graphics. It compiles and runs on a wide variety of UNIX platforms, Windows and MacOS. To [download R](#), please choose your preferred [CRAN mirror](#).

If you have questions about R like how to download and install the software, or what the license terms are, please read our [answers to frequently asked questions](#) before you send an email.

News

- The R Foundation Conference Committee has released a [call for proposals](#) to host useR! 2020 in North America.
- You can now support the R Foundation with a renewable [subscription as a supporting member](#).
- **R version 3.5.1 (Feather Spray)** has been released on 2018-07-02.



```
Console Terminal x
C:/Users/KJF/Desktop/R/MacrosystemsEDDIE/
R version 3.5.1 (2018-07-02) -- "Feather Spray"
Copyright (C) 2018 The R Foundation for Statistical Computing
Platform: i386-w64-mingw32/i386 (32-bit)
```

These versions **must** match!
Otherwise you'll get error messages when
downloading packages to run the GLM model

- If it doesn't match, close RStudio, download and install the new version of R, then reopen RStudio and the MSF_R_Script.R file

Error: `glm.exe` had status 309

When does it happen?

- `run_glm(sim_folder, verbose=TRUE)` will start the GLM run, but you will likely get an error similar to: “`glm.exe` had status 309”

Why?

- Problem with 32-bit vs. 64-bit R in Windows 10

How to fix it:

- 1) In the RStudio menu, click on Tools, then Global Options.
- 2) In the General tab, check what R version RStudio is using (the first line at the top of the window).
- 3) If the selected version starts with [Default] [64-bit], try pressing Change and selecting the [Default] [32-bit] option. You will then need to restart RStudio and try the script again.

Error: Day 2451636 (2000-04-01) not found

When does it happen?

- `run_glm(sim_folder, verbose=TRUE)` will start the GLM run, but you will likely get an error similar to: “Day 2451636 (2000-04-01) not found”

Why?

- *time* column in .csv file not formatted correctly for GLM

How to fix it:

- 1) Open .csv file in Excel. Right click on the *time* column, then select Format.
- 2) Choose Custom, then type in **YYYY-MM-DD HH:MM:SS** *exactly*. Save and close your .csv file.
- 3) Run the following lines in R to ensure your time column is formatted for GLM (search to find in the R script, then run):
 - `metdata <- read.csv("met_hourly_climate.csv", header=TRUE)`
 - `metdata$time <- as.POSIXct(strptime(metdata$time, "%Y-%m-%d %H:%M:%S", tz="EST"))`
 - `write.csv(metdata, "met_hourly_climate.csv", row.names=FALSE, quote=FALSE)`Make sure you edit the file name (in blue, above) to match your .csv file.

Error: "MSVCR100.dll is missing"

When does it happen?

- When you try to run GLM commands, you receive the error: "MSVCR100.dll is missing from your computer" or "The code execution cannot proceed because MSVCR100.dll was not found. Reinstalling the program may fix this problem"

Why?

- The MSVCR100.dll file is missing from your Windows C++ library

How to fix it:

The missing library (MSVCR100.dll) will need to be reinstalled on your computer. This is beyond the scope of Macrosystems EDDIE troubleshooting, and we recommend you check with a campus IT worker for help.

In the meantime, we recommend partnering with a student whose computer isn't having this problem to run the Macrosystems EDDIE module.