Welcome!
Please input this command into R:

```
usethis::use_course("https://bit.ly/2L95hCb")
```

Introduction to

and

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Based on a work at https://github.com/hadley/data-science-in-tidyverse

Schedule

- Getting Started (1:00 – 1:45)
- Intro to tidyhydat (1:45 – 2:15)
- Transforming data (2:15 – 3:00)
- Break (3:00 – 3:30)
- Dates and Joins (3:30 – 3:45)
- Visualizations (3:45 – 4:50)
- How to ask for help – Where do you go next? (4:50 – 5:00)

Introductions

Introductions

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Introductions

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What this workshop is not…

A comprehensive course on all of R

What this course is…

A specific starting point in R

A chance for you to code

A chance for you to think about data analysis differently

Your turn

Introduce yourself

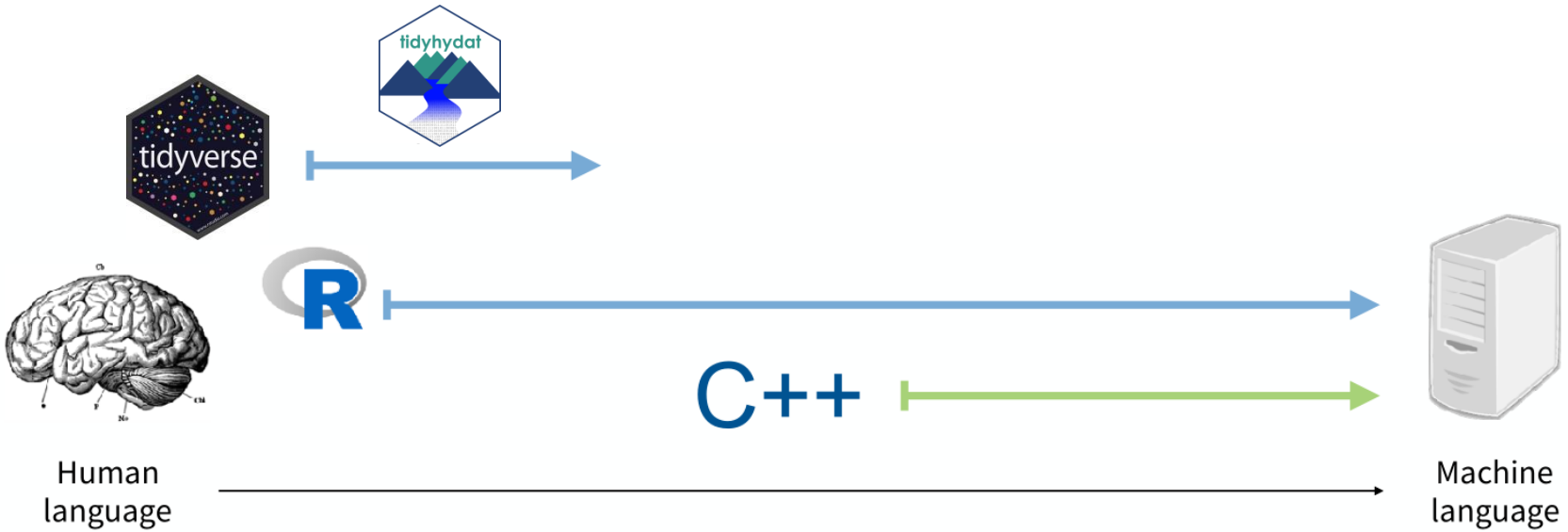
- Who are you?
- Why are you here?
- What is your experience with R?

Your turn

I’m stuck

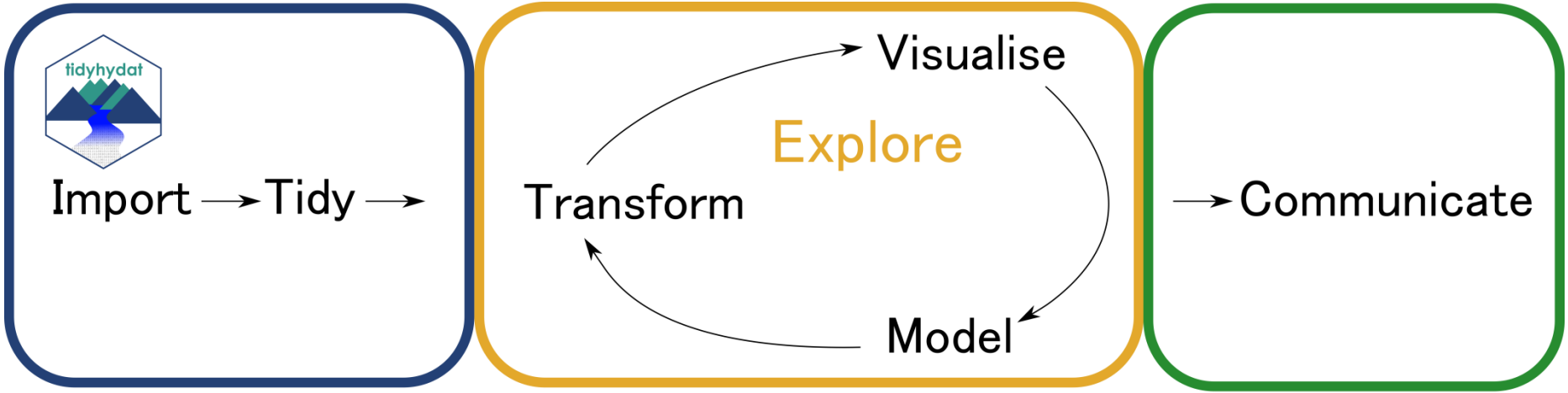
I’m done

R – A programming language for data



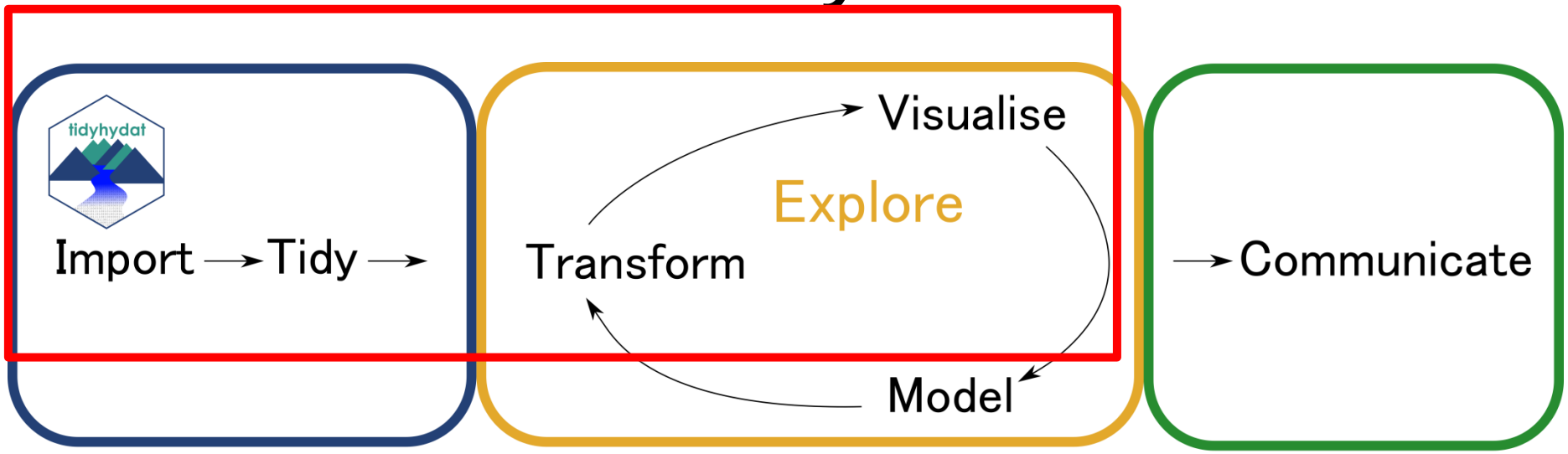
Adapted from ‘Master the tidyverse’ CC by RStudio

The Data Analysis Process



Adapted from Wickham and Grolemund 2017

The Data Analysis Process



Adapted from Wickham and Grolemund 2017

Focus less time of coding and more time on data analysis

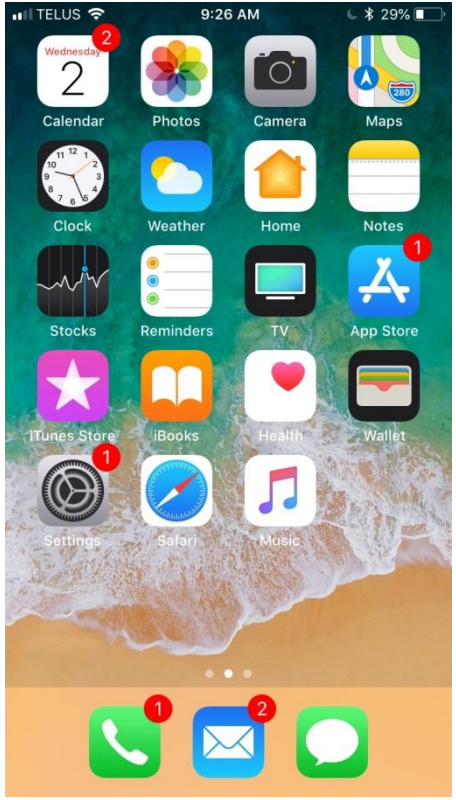
Why use R?

- Free
- Efficient
- Reproducible
- Scalable

Base R

Packages

RStudio



Anatomy of an R function

```
fraser <- hy_daily_flows(station_number = "08MF005")
```

Object

Function

Argument

Value

Anatomy of an R function

```
fraser <- hy_daily_flows(station_number = "08MF005")
```

Object Function Argument Value

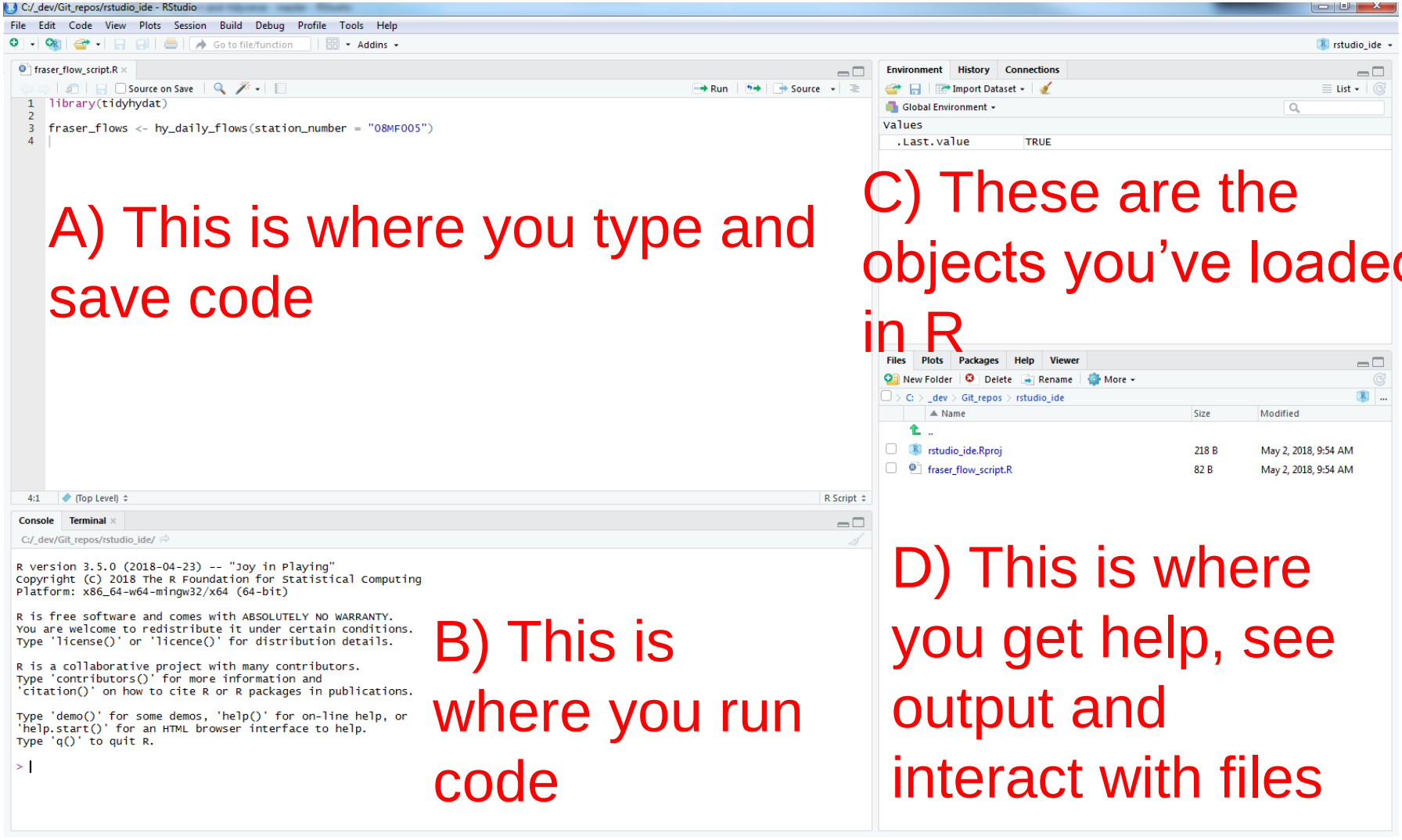
"To understand computations in R, two slogans are helpful:

Everything that **exists** is an **object**.

Everything that **happens** is a **function** call."

— John Chambers

RStudio

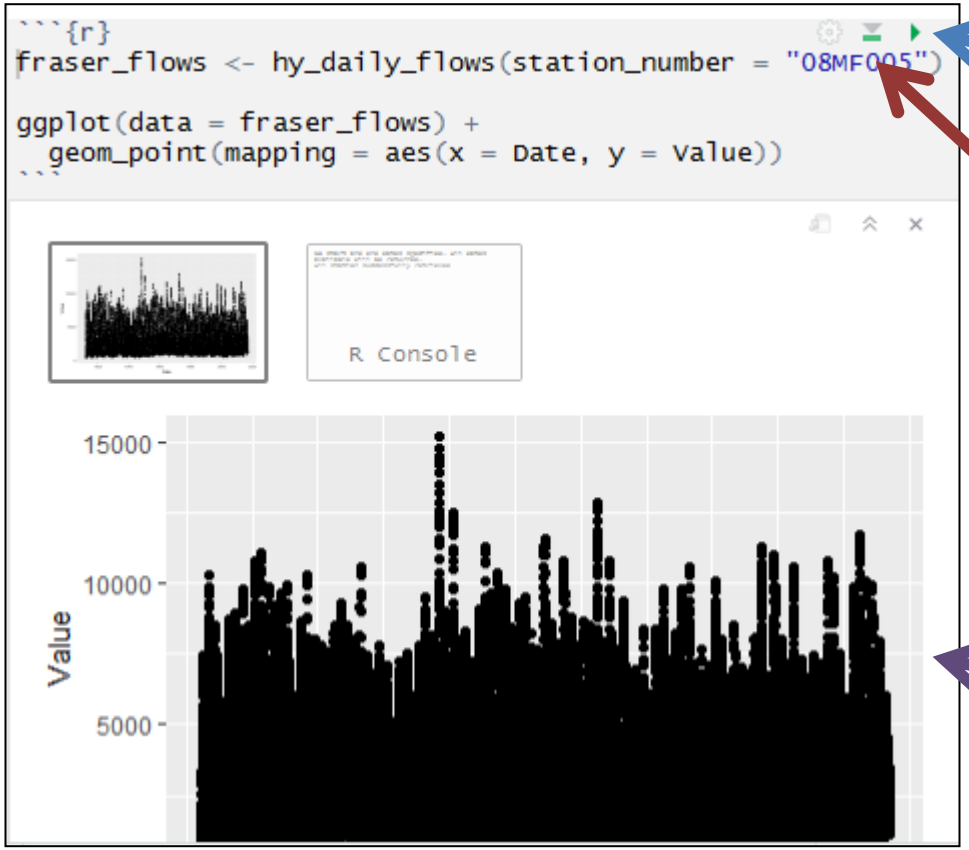

C:/_dev/Git_repos/rstudio_ide - RStudio
File Edit Code View Plots Session Build Debug Profile Tools Help
Go to file/function
Addins
rstudio_ide
fraser_flow_script.R
Source on Save
Run
Source
1 library(tidyhydat)
2
3 fraser_flows <- hy_daily_flows(station_number = "08MF005")
4
A) This is where you type and save code
4:1
(Top Level)
R Script
Environment History Connections
Import Dataset
List
Global Environment
Values
.Last.value TRUE
C) These are the objects you've loaded in R
Files Plots Packages Help Viewer
New Folder Delete Rename More
C: _dev Git_repos rstudio_ide
Name Size Modified
rstudio_ide.Rproj 218 B May 2, 2018, 9:54 AM
fraser_flow_script.R 82 B May 2, 2018, 9:54 AM
Console Terminal
C:/_dev/Git_repos/rstudio_ide/
R version 3.5.0 (2018-04-23) -- "Joy in Playing"
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.
>
B) This is where you run code
D) This is where you get help, see output and interact with files

Your turn

- Open the file intro-to-tidyhydat-and-tidyverse.Rproj
- Open 00-Getting-started.Rmd and start doing analysis!

A quick word on Notebooks

- Integrates:
  - Code
  - Text
  - Output



Click to run code in chunk

Click to run all code chunks above

Code output

Adapted from 'Master the tidyverse' CC by RStudio