Lecture 4.2 – Managing Citations with R Markdown

Specific Learning Objectives:

2.2.1 – Create reproducible scripts in R.

2.2.4 – Create and use Notebooks and documents using R Markdown.

3.7.2 – Practice reading and understanding scientific papers and grant proposals.

Stand on the Shoulders of Giants – Cite Your Work!

- All work in science is built upon the works of others in the scientific community! No on does science alone!!

    - An important aspect of science is citing the work of others. It gives credit to this previous work and is important for the advancement of careers, recognition of others, and grounding your own work.

    - **Citation is taken very seriously in science, failure to cite others' works is a serious offense!**

- **Plagiarism**: Representing the words, research findings or ideas of another person as your own in any academic exercise. [Chapman Academic Integrity Violations]

    - Copying word for word without proper attribution.

    - Paraphrasing without proper attribution.

    - Using phrases from another source embedded into original material without proper attribution.

    - Copying of intellectual property without proper attribution.

How Do You Cite Other's Works?

- Part 1: give a full reference to the work.

  - The **main goal for references** is to give the reader enough information about the work you cite so they can find it and read it.

  - Some information is key to finding works in references:

    - Author(s)
    - Title
    - Year published
    - Book or Journal in which text appears
    - Publisher & location (if book)
    - Volume and issue number (if journal)
    - Page numbers

  - There are a variety of styles/formats that this info appears in (depending on the publication), but the basic info is always there!

How Do You Cite Other's Works?

- Part 2: give an in-text citation where the work is used in your writing.

  - The **main goal for in-text citations** is to point the reader to exactly where in your writing the idea from someone else's work is used.

  - In-text citations should be used at the end of a sentence in which the idea/information is used.

  - Remember that direct quoting in scientific papers is ***very rare***, and should be clearly pointed out when done.

  - In-text citations vary widely depending on the style set by the publisher, and can include:

    - Author(s)
    - Year published
    - Numbered references

Check Your Understanding

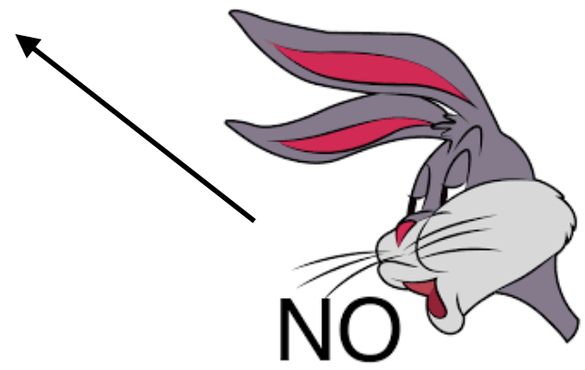
Which of the following DO NOT represent instances of plagiarism?

a) **Student copies information from a website and cites the webpage properly.**

b) **Student paraphrases information from a website and cites the webpage properly.**

c) **Student copies information from a website and does not cite the website.**

d) **Student copies information from a website and changes 40% of the words in the text so that a plagiarism checker does not detect plagiarism.**



Managing Citations with R Markdown

- R Markdown contains system (Pandoc) that allows you to manage references to peer-reviewed works.

  - The management system requires a file with standard organization of information typically contained in a reference.

  - The system will then take a reference style and format the information appropriately.

This is automatic -- no need to reformat references or in-text citations manually!

- What you'll need to have to do citations in R Markdown:

  - Text file saved with extension bib

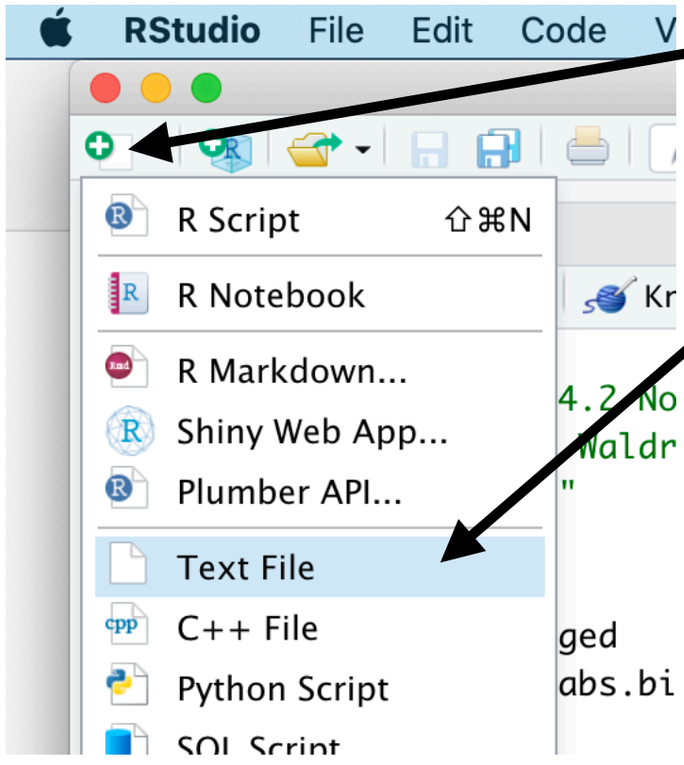
  - Google Scholar

  - CSL style file (optional)

Saving Citations in BibTeX Format

- Pandoc takes reference information in BibTeX format to automatically make reference lists and in-text citations.

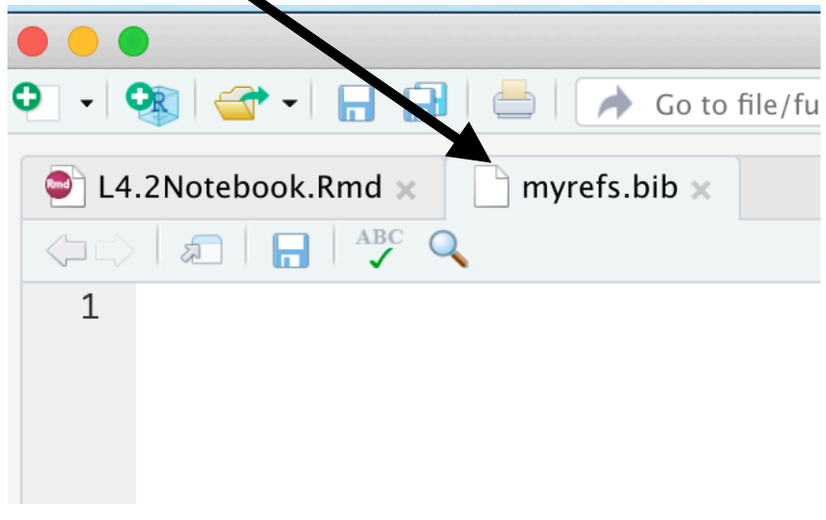
  - Create a new text file and save it with a .bib file extension:



Click New File button.

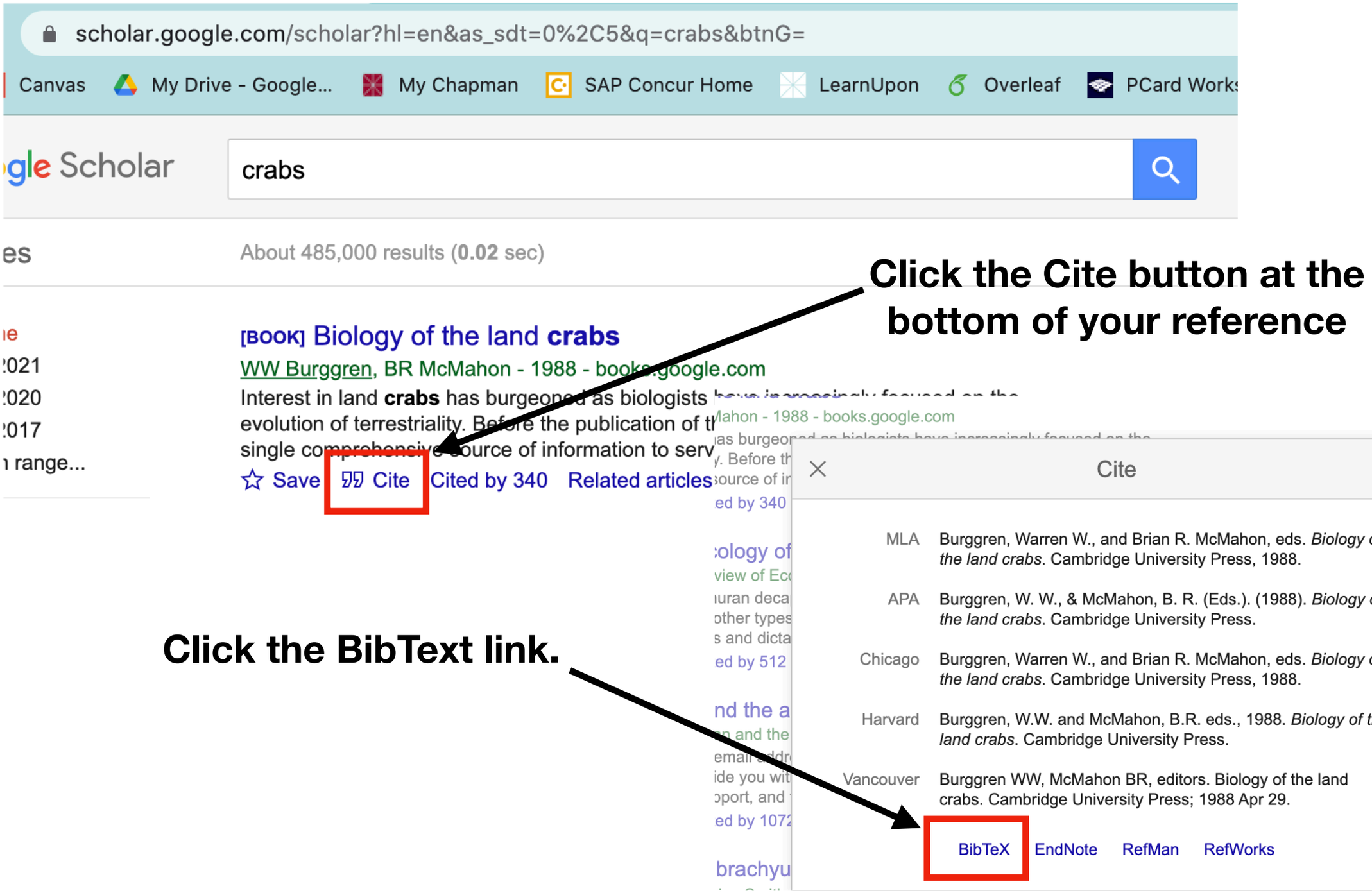
Select Text File.

Save as “myrefs.bib”



Saving Citations in BibTeX Format

- Find a reference you'd like to save in Google Scholar by searching:

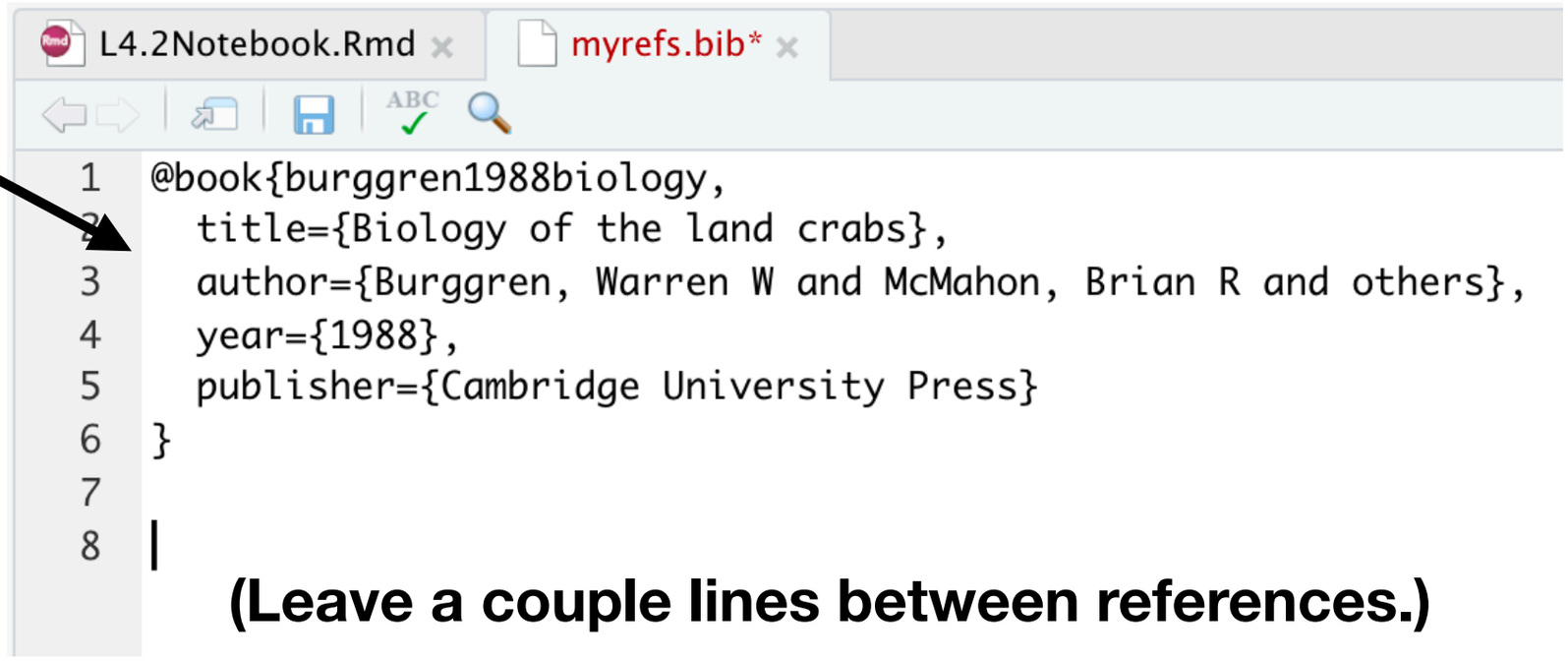


Saving Citations in BibTeX Format

Copy the text.

Paste the text into your bib file.

Save the file!!



(Leave a couple lines between references.)

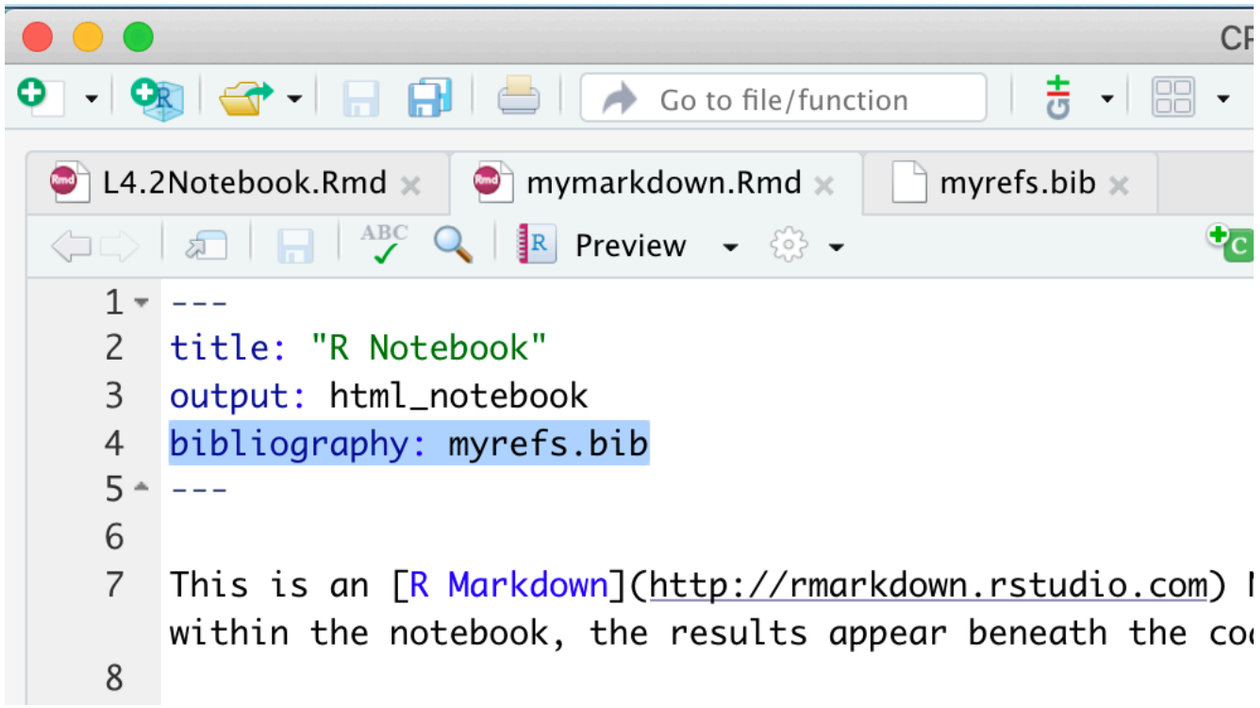
Check Your Understanding

Add three more citations to your `myrefs.bib` file from Google Scholar. Don’t forget to save it!

Using a Bib File in R Markdown

- To use a bib file as your bibliography, add it to the header on its own line:

```
bibliography: myrefs.bib
```



Be sure to save myrefs.bib in the same folder as the RMD file!

Citing a Reference in your Bib File

- Add an in-text citation using the @ symbol and the label of the reference in a text component (NOT a code chunk!)

L4.2Notebook.Rmd | myrefs.bib*

Label of reference

```
1  @book{burggren1988biology
2    title={Biology of the land crabs},
3    author={Burggren, Warren W and McMahon, Brian R and others},
4    year={1988},
5    publisher={Cambridge University Press}
6  }
7
8
```

```
9  Try executing this chunk by clicking the *Run* button within th
   cursor inside it and pressing *Cmd+Shift+Enter*.
10
11 Some text I need to cite about crabs @burggren1988biology.
12
13 ```{r}
14 plot(cars)
15 ```
16
```

In-text citation

Citing a Reference in your Bib File

~/Dropbox (Chapman)/courses/CPSC292/Fall2021/CPSC292-CourseInfo/LectureNotes/Unit4/L4-2_Citations/mymarkdown.nb.html

mymarkdown.nb.html | Open in Browser | Find | Publish

R Notebook

In-text citation

Code

This is an R Markdown Notebook. When you execute code within the notebook, the results appear beneath the code.

Try executing this chunk by clicking the *Run* button within the chunk or by placing your cursor inside it and pressing *Cmd+Shift+Enter*.

Some text I need to cite about crabs Burggren, McMahon, and others (1988).

Hide

```
plot(cars)
```

Add a new chunk by clicking the *Insert Chunk* button on the toolbar or by pressing *Cmd+Option+I*.

When you save the notebook, an HTML file containing the code and output will be saved alongside it (click the *Preview* button or press *Cmd+Shift+K* to preview the HTML file).

The preview shows you a rendered HTML copy of the contents of the editor. Consequently, unlike *Knit*, *Preview* does not run any R code chunks. Instead, the output of the chunk when it was last run in the editor is displayed.

Burggren, Warren W, Brian R McMahon, and others. 1988. *Biology of the Land Crabs*. Cambridge University Press.

Full Reference

See the Lecture 4.2 Notebook for ways to format in-text citations!

Check Your Understanding

Cite each of your references in your RMD file. Give each a different in-text format (with parentheses, date only, etc). Make sure that each shows up as an in-text citation and at the end reference list.

Changing Reference Styles

- Pandoc makes it easy to change the style of the reference list and in-text citation with a single line!

  - It does this with CSL files, which tell Pandoc how to lay out the information in the bib file in the way a publisher wants (according to its style guide).

  - If you desire a different style than default:

    - Search for the CSL file on Zotero: https://www.zotero.org/styles

    - Save the style file (CSL extension) in the same folder as your RMD file.

    - Add a csl line to your RMD header on a line below the bibliography line:

      `csl: filename.csl`

Check Your Understanding

Change the format of your reference style to the `jeb.csl` file on your RMD file.

Then, download a csl file from Zotero from your favorite journal and change your RMD reference style to that format.

In Summary… Cite your work!

- Citing work is an important aspect to communicating science.
- Failure to properly cite your work is often plagiarism and is very serious!
- Citations should allow your readers to pinpoint the source of the idea.
- R Markdown and Pandoc makes it easy to organize and format citations for use in scientific works without the need to manually reformat citations.

In-class Exercises

1. **Complete Assignment 4.2.**

Action Items

1. **Complete Assignment 4.2.**