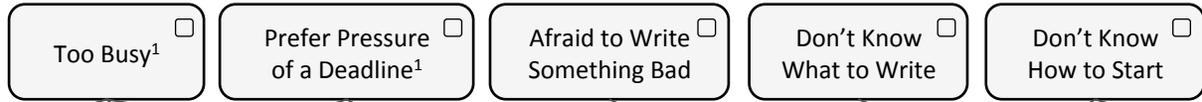


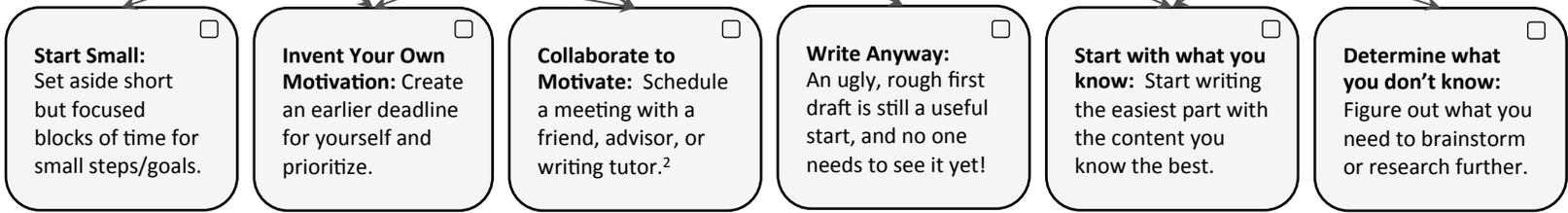
GETTING STARTED with STEM WRITING

Do you encounter any of these?

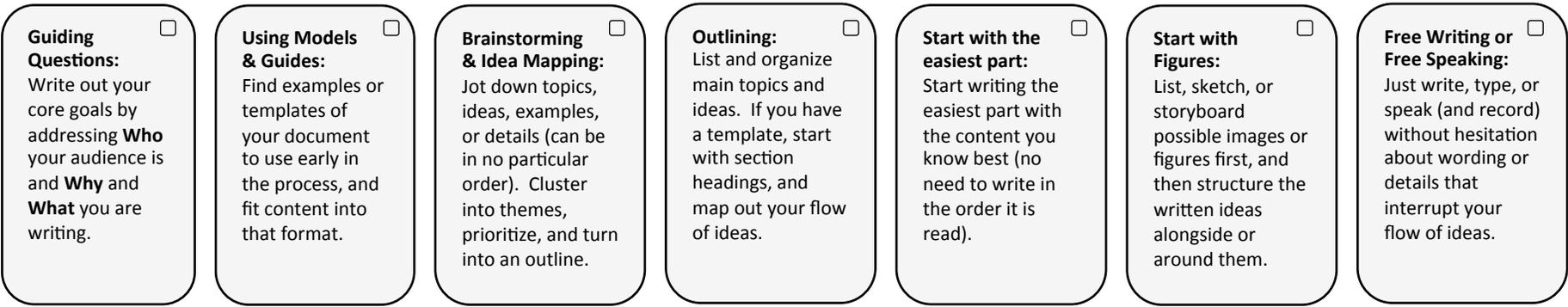
COMMON BARRIERS TO WRITING:



TIPS TO OVERCOME WRITING BLOCKS:



TOOLS AND TECHNIQUES TO GET STARTED:



FLIP OVER PAGE FOR MORE DETAILS & EXAMPLES FOR THESE TECHNIQUES...

¹See also handout: "Procrastination and How to Avoid It: Making the Most of Your Writing Time," <http://www.writing.caltech.edu/resources>
²Make an appointment with a tutor in the HWC who can help you learn more about these techniques: <http://writing.caltech.edu/tutoring>

TOOLS AND TECHNIQUES TO GET STARTED WRITING:

Answer Guiding Questions

Who is my audience?

- Your target audience determines format, style, and language choices.
- Consider who they are, what they want to read, and what info they need.

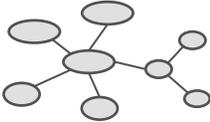
Why am I writing?

- What is your core reason to communicate? (e.g., filling gaps in research knowledge, surprising new findings, new methods)

What am I writing?

- What templates, examples, author's instructions can you find/use?
- What are your core messages?
- What content do you have vs. need?

Brainstorming & Idea Mapping



(1) With no concern for order, begin **jotting down ideas**, topics, or content that you want to include.

(2) **Group similar or linked concepts** (e.g., connect bubbles or reorder lists), perhaps arrange ideas from general to specific (from top to bottom of list, or central vs. periphery bubbles).

(3) Organize according to the **format for your document** (or see Outlining).

Freewriting

Write whatever comes to mind on the topic, ignoring grammar and organization.

Free-speaking

If you more easily or clearly communicate *verbally*, record/transcribe what you say aloud, whether alone or to someone.

Start with the easiest part

For example, you don't have to write the Abstract or Intro first. Methods may be easiest to start if not yet finished Results. Or writing Results may reveal what to include in the Discussion or Conclusions.

Using Models & Guides

Find **examples or templates** for your model choice of document. For articles, journal websites often provide links to guidelines and templates (look for resource pages for authors).

Consider extracting and using **section headings from your model** (then see Outlining). Typical sections in an article:

Abstract
Introduction
Methods/Approach
Results
Discussion/Conclusions
References

Outlining

(1) Start a random or organized **list** of main **topics and ideas**.

(2) **Fit ideas into document structure** or preferred organization, e.g.:

- A. Abstract
- B. Introduction
 - 1. Motivation
 - a. Idea 1
 - b. Idea 2 [perhaps figure idea...]
 - 2. Prior research gaps
 - 3. This research will...
 - ...

...and fill in until ideas become sentences!

Start with Figures

You can **"storyboard" your figures** as sketches in the sequence they would appear in the text, which can tell the story visually to someone skimming.

Decide **which visuals best fit** your data or content (tables, plots, schematics, photos, etc.). Consider whether some visuals can be combined into one figure.

You can initially **note figure ideas within your outline** as placeholders and later treat them as your to-do items once ready to sketch or generate the figures.