**Cognitive Wrappers Template A picture containing drawing

Description automatically generated**

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*This needs to be short, so only select one or two of each type of question (one of each number) and tailor to your unique situation. Here are questions for multiple situations, but the resource list should be limited to 15 items and similarly customized to the study strategy exercise if you are using both.*

*This template is expanded from research by*

*Brown, P. C., Roediger, H. L. & McDaniel, M. A (2014) Make it Stick: The Science of Successful Learning. Belknap Press*

*Chen, P., Chavez, O., Ong, D. C., & Gunderson, B. (2017). Strategic Resource Use for Learning: A Self-Administered Intervention That Guides Self-Reflection on Effective Resource Use Enhances Academic Performance. Psychological Science, 28(6), 774–785.* [*https://doi.org/10.1177/0956797617696456*](https://doi.org/10.1177/0956797617696456)*)*

*Lovett, M. C. (2013), “Make exams worth more than grades: Using exam wrappers to promote metacognition” in Using reflection and metacognition to improve student learning, Kaplan, m, Silver, N, Lavaque-Manty, D., Meizlish, D., ed. San Francisco: Sterling, VA: Stylus (with more math and science templates at* [*www.learningwrappers.org*](http://www.learningwrappers.org)*) and*

*Winkelmes, M-A. (2013), “Transparency in teaching: Faculty share data and improve students’ learning” Liberal Education 99/2 (Spring 2013), 48-55.*

**Rationale:**

This assignment/activity/exam and this feedback was designed to help you/give you practice/improve your… XYZ (achieve what learning outcome?) (So do the activities and feedback really support the goal?)

This form will help you evaluate your own preparation and performance for this assignment/exam/lesson/activity/class session and allow you to adjust your study/practice habits in the future. Your responses will have no effect on your grade and are solely to help you improve. Being brutally honest with yourself here is a useful and important part of self-examination

Ask in advance (i.e. give the wrapper with the homework):

The goal of this assignment/homework/reading/exam is to give you practice with X or to help you analyze your Z. Before you begin, rate your awareness of Y or think about Z.

This form is designed to help you prepare more fully for class. Did you participate fully in class today?

**Reflection**:

1. How much total time did you spend preparing (or writing/reading/reviewing)?

2. When? How did you spread out your preparation?

2. How did you prepare for this exam/lesson/activity/class session?

2. How much time did you spend reviewing X, Y, or Z?

2. What % of your preparation was done alone/groups?

2. What % of your preparation time was spent on each of these activities?

Read textbook section(s) for the first time \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Re-read or highlight textbook section(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Re-read class notes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Read/study other materials \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(From where?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Rewrite key concepts in your own words \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

++Create personal examples or analogies \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Test yourself on material \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Work on extra problems \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Work on more difficult material \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Relate new material to things you already know \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find online content \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Visit office hours \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Visit university learning/math/writing center \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Seek out other individual help \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Summarize to roommate/parent/friend \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Elaborate to roommate/parent/friend \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Create new analogies for roommate/parent/friend \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Attend review session \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Think \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Do new research \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Draft \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Edit \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Listen \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find inspiration \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Analyze your posture/form/performance \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Practice in front of the dog \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Focus on one thing at a time \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Interleave (vary your studying) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Space your retrieval practice \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Play through pieces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Rest in between practice \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Memorize \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Repeat concepts by rote \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Make flashcards \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Play for fun \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Brainstorm \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Experiment \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Work on new material \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Focus ideas \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Review homework solutions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

-Review concepts and ideas \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

+Contextualize concepts in new ways \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Other (Please specify: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NOTE: Items with a – tend to be time consuming and not very effective. Re-reading or highlighting, for example, create fluency (the material FEELS more familiar), but does not stick in long-term memory. It is much better to switch to items with a + as elaborating on the material is faster and more effective. For example, try thinking of new examples, making analogies (how would explain this concept in baseball or fashion terms?) or looking for larger context and restating ideas in your own words. Trying to remember the exact phrase or syntax of an idea is actually counter productive: come up with your own rule or phrase.

**Comparison**:

Now that you have read/listened to my feedback/the feedback of your classmates/looked over your graded exam/read my response to your paper etc.

3. What kinds of mistakes did you make?

3. Estimate the points you lost due to

Trouble understanding a concept (or list specific concepts) \_\_\_

Trouble remembering lines/formulas/structures \_\_\_

Trouble with definitions \_\_\_

Trouble with technique \_\_\_

Not concentrating/focused enough \_\_\_

Careless mistakes \_\_\_

Lack of preparation \_\_\_

Not being able to formulate an approach to the problem \_\_\_

Arithmetic/grammatical errors \_\_\_

Unclear expectations \_\_\_

Reviewed the wrong material \_\_\_

Not practicing enough \_\_\_

Anxiety (and specifically over what?) \_\_\_

Other \_\_\_

3. After having completed this assignment, rate each of the following statements in terms of how true it is for you on a scale from 1-5

(similar list)

**Adjustment:**

4. Name at least three things you will do differently next time in preparing. Be specific. For example, will you spend more time, start your preparation earlier, change a specific study habit, try a new one (if so, try to name it), sharpen some other skill (if so, name it), participate in more review opportunities or something else?

4. Which resources or types of study were more effective? What study /practice strategy worked best/worst?

4. Students sometimes have difficulty drawing appropriate force-body diagrams and applying Newton’s second law appropriately. Was either of these a difficulty for you (check question 2 on the exam)? If so, try to self-assess your understanding: Identify what aspect of these skills are causing you difficulty and what you can do to improve your ability to solve problems using these skills.

4. What aspect(s) of your preparation for this exam/session seemed different from your exam/session 1 preparation? Did these changes have any effect?