

Week 6 - Monday

SLD 2600

Study Skills

Studying

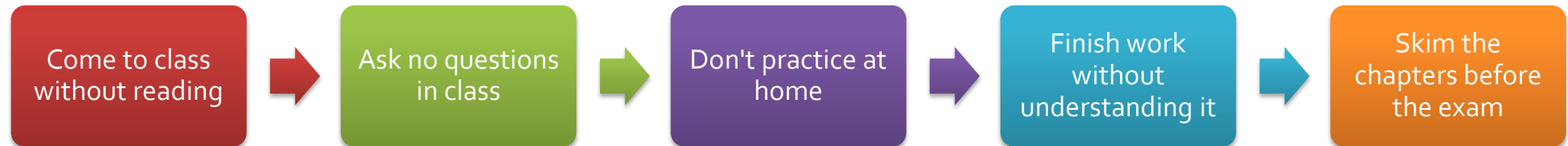
- There's a misconception that studying is cramming right before an exam
- If you've been staying on top of the material, right before the exam should be a time to make sure you're rested
- With midterm exams coming up for many classes, let's go over some of the best research about studying

Flowcharts

Flowchart for success:



Flowchart for failure:



Success Starts Early

Keep up with material

- Catching up is really hard
- If you keep up, week by week, the exam shouldn't be too daunting
- Don't let confusing topics pile up
 - Go to office hours as soon as you're confused about anything
 - Especially in STEM, concepts tend to build on each other

Reading before class

- Read the chapter (or equivalent) ahead of time
- If you have a rough idea of the topic, filling in details in class is so much easier than starting from scratch
- Also, it gives you time to figure out what questions you have that you might want to ask in class
 - Asking questions is **incredibly valuable** because the interactive aspect makes the material stick in your head better
 - Going to office hours works as well if you didn't think up questions in class

Studying Techniques

Buddy system

- It's good to have a small study group
- Studying together builds accountability
- Maybe you'll understand a concept someone else doesn't, and vice versa
- The only thing to be cautious about is when the study session drifts into purely social territory
 - Social life is important, but some time for study is crucial

Active recall

- Answer questions, don't just re-read book or slides
- It's better to study by answering short answer questions than multiple choice
- Writing out answers by hand stimulates neurons differently from simply saying the answers
 - And gives you practice for writing on the exam
- You can also buddy up with a classmate and take turns asking each other questions

Spaced repetition

- The human brain can only absorb so much at once
- Spread out your review sessions over time rather than cramming
- Weird hack:
 - Your brain repeats whatever it was thinking about just before you go to sleep
 - If you study right before you go to bed, it can help with recall
 - But you can't, for example, take a shower between studying and bed because your brain will remember the shower

Dual coding

- Draw pictures or flowcharts in addition to writing words
- Diagrams are incredibly useful tools in STEM

Interleaving

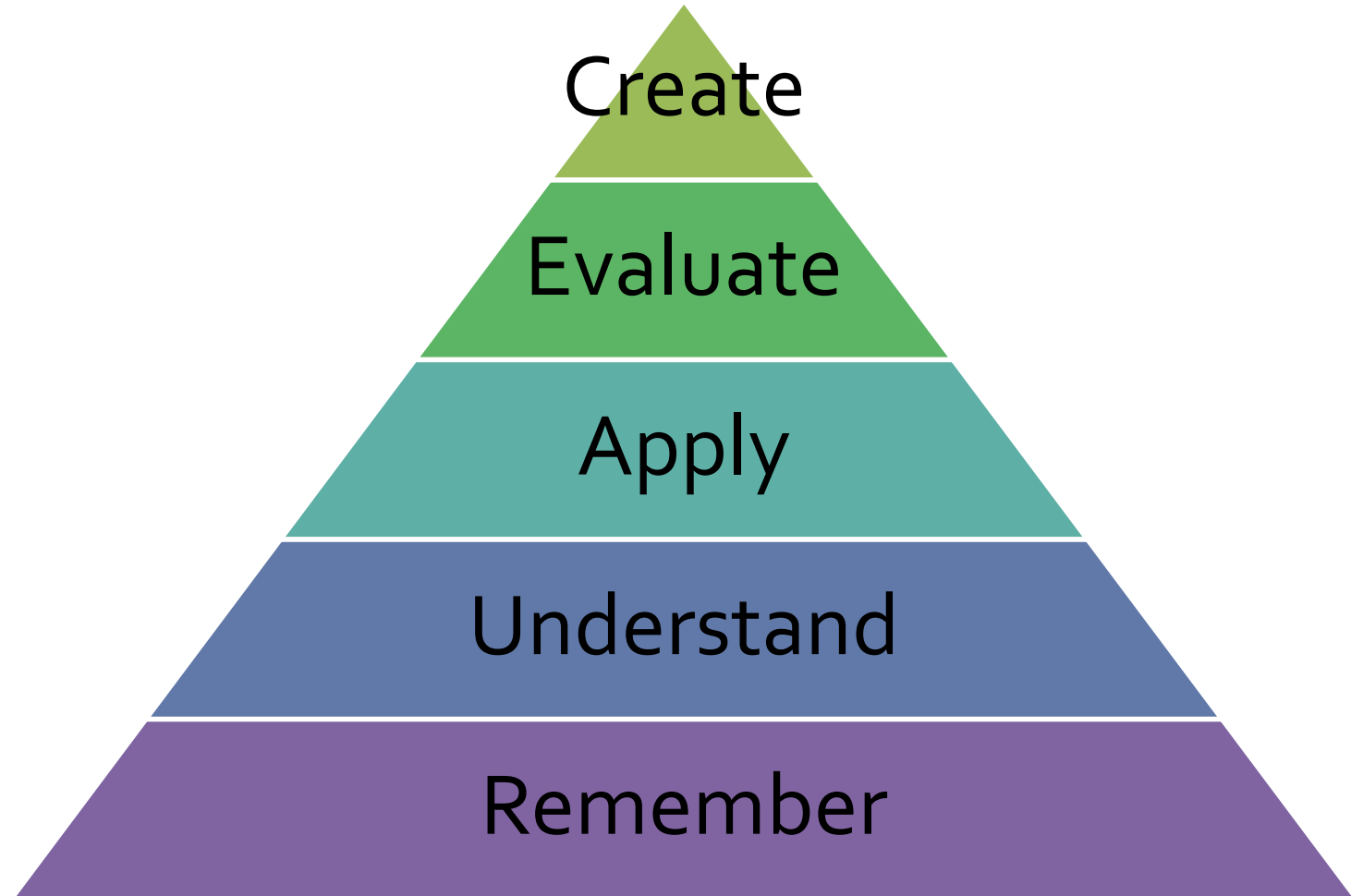
- Do different kinds of problems in one session
- Or study different sections of material
- Why: Recognizing the *kind* of problem (or the area the question comes from) is a key skill for doing well on an exam
- If you only do one kind of a problem at a time, you know the techniques you're supposed to use for that problem

Elaboration

- Don't just answer "what" questions
- Answer "how" and "why" questions
- Superficial recall of terms doesn't mean learning has happened

Bloom's Taxonomy

- Benjamin Bloom came up with a taxonomy of learning that was revised in 2001
- The higher levels of understanding and skill build on the lower ones



Real-life examples

- Try to tie abstract ideas to real examples
- These will help you remember and understand the ideas better

Other Factors

Sleep

- The effect of sleep is underappreciated
- Being better-rested often makes a bigger difference in scores than studying more
- Experts recommend you should:
 - Get 8+ hours a night
 - Go to bed and wake up at the same time, every day
 - Get natural sunlight within an hour of waking up
 - Limit caffeine, especially within 10 hours of bedtime
 - Exercise, but not within 3 hours of bedtime
 - Eat a light dinner
 - Stay off of technology within an hour of bedtime

Caffeine

- Caffeine is one of the most popular drugs in the world
- It decreases the feel of sleep pressure
- It makes time appear to go by more quickly
 - But doesn't actually help you get stuff done faster
- It also has some tough side-effects
 - Interferes with natural sleep habits
 - Neck, jaw, and other joint pain
 - Appetite suppression
 - Withdrawal
- Don't change your routine if you have an exam coming up, but think about reducing your caffeine overall

Final exams

- Final exams have a two-hour time block, but not all professors use the whole time
- This is not an official policy, but most professors let you move a final exam if you have three in one day

At the Exam

Be on time

- My students who struggle the most are often the students who are late to the exams
- Could it be because:
 - They have other chaos in their lives
 - They aren't organized
 - They forgot there was an exam
- Some professors will give you more time, but others won't

Tips for exam day

- Go to the bathroom before an exam
 - Getting up in the middle of the exam loses you time
 - Plus, you're more relaxed after you go to the bathroom
- Bring a pencil (if allowed) rather than a pen
 - Erasing is easier than crossing out
 - Bring one of those big block erasers, don't depend on the one at the end of the pencil
- Wear a watch
 - Some professors disallow looking at phones, and some will take your phone for the duration of the exam
- Know if a calculator is or isn't allowed

Look over the exam when you get it

- See where the hard stuff is
- See where the easy stuff is
- Note which parts are worth more points and make sure you get those parts done

Don't leave stuff blank!

- If you write nothing, you can't get any points
- Don't write "I don't know" or "I forgot"
 - You're wasting your precious time
- Confidently write garbage if that's all you know
- There are exceptions to this rule:
 - Some (rare) professors give points for blank answers so that they don't have to read garbage (maybe 40%, definitely not a passing grade)
 - Know your professors' policies
- An exam is not the time for ego or embarrassment
- It's a time to get points!

Upcoming

Next time...

- Hidden curriculum: things that everyone expects you to know but don't tell you about

Reminders

- Our next class meeting is October 5
- **Assignment 3 is due next Monday**