

The Road to Making Sense

Memorize your new account number: 953434302

You could write it down, which is smart. Taking notes is a recognition that this meaningless number is too much for your **cognitive load**. Our capacity to hold information on the spot is limited and notetaking allows you to take this chunk of information and save it outside our minds for later.

As an experiment, try to hold this number **only in your head** and compare your mental image to the table below. Are you remember the whole number or breaking it into a certain number of chunks? Whether your number break-up was on the table or not, you were able to compare & contrast your mental image with multiple options. This was made possible because the five options were presented **together** on the page.

Things make sense in relationship to other things and presenting multiple bits of information, together, adjacent in space like this allows you to work with them more easily *and* access other ways of thinking.

Holding up individual cards and asking, “How about this? How about this one?” would cause frustration.

Screens, whiteboards, classrooms, and documents grant us access to at least two spatial dimensions for presenting information and we should take advantage of them. If the information goes together conceptually, presenting it together can assist the learner. Audio and video can enhance the mix. See the rich multimedia, multi-information load experienced while playing video games and the complex thinking it enables in the player.

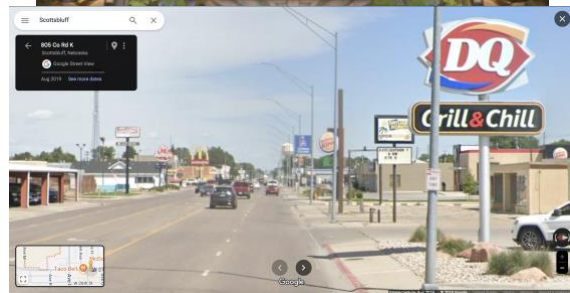
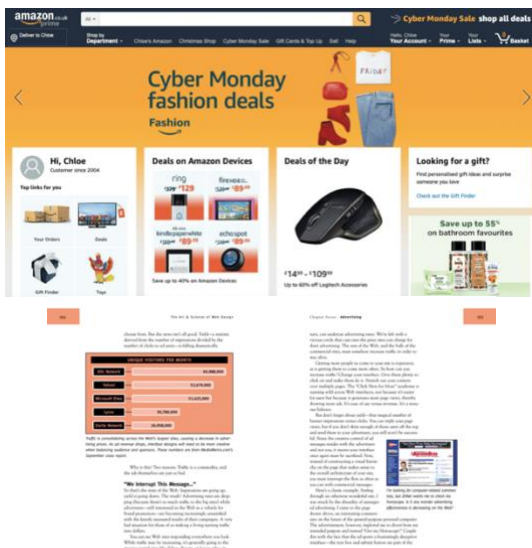
1 Chunk 953434302

2 Chunks 9534 34302

3 Chunks 953 434 302

4 Chunks 95 34 34 302

9 Chunks 9 5 3 4 3 4 3 0 2



Placing multiple informational elements together helps us make sense of it and when things make sense, they have a higher likelihood of getting stored into memory. How much you can manage depends on your context and familiarity with the task, but its not zero. When information is presented adjacent in space, we don't just

receive the information, we are invited to actively think about it, about the relationships between parts. This leads to higher-order thinking skills, which leads to authentic engagement.

Look at the four paintings and notice how your mind starts making sense of them and their relationships.

One of These Things is Not Like The Others

Which is it? What makes you think this?



Starry Night, Vincent van Gogh,
1889, Oil on Canvas



No. 14, Mark Rothko,
1960, Oil on Canvas



The Great Wave Off Kanagawa, Hokusai,
1831, Woodblock Print



The Ten Largest IV, Hilma af Klint,
1907, Tempera on Paper

You can present too much new information at one time, overloading a different way. An experienced gamer can play a complicated game at a high level because they've already logged 500 hours of playtime working from level one to max difficulty. They've been trained in the language of the game.

One of These Things is Not Like The Others

Which is it? What makes you think this?

Deterrence

Rehabilitation

Incapacitation

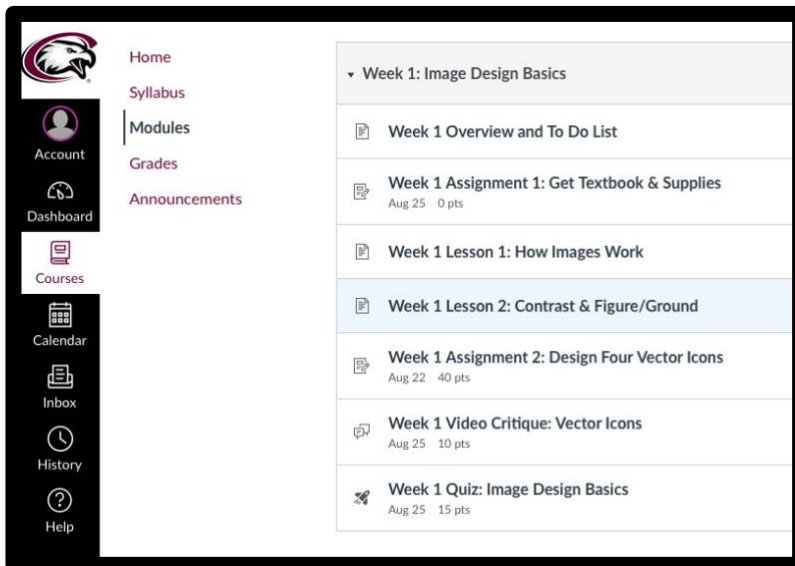
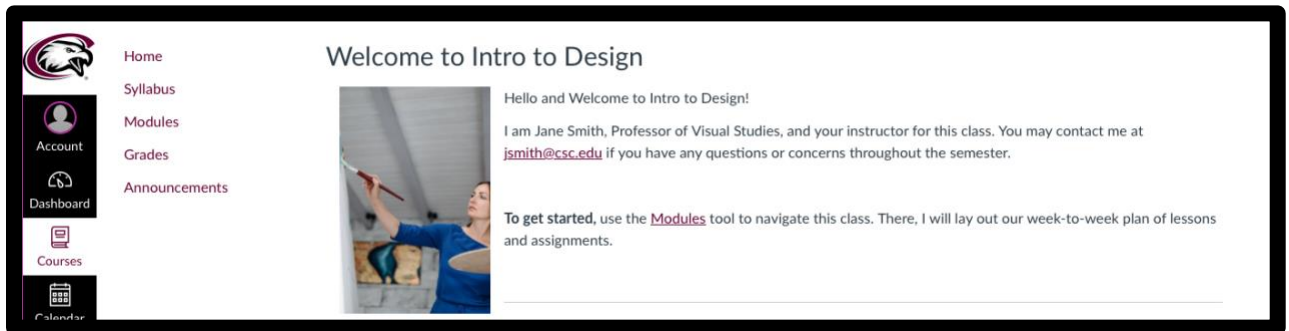
Retribution

Swapping the paintings for specialized terminology causes the thinking exercise to work on a smaller audience.



Ruby is a first-generation college student entering her freshman year. Not only is she completely new to Canvas, she was in middle-school in 2020 and had a negative experience with online learning. This context is loaded onto Ruby's mind as she logs into Canvas for the first time. The display of information will determine if Ruby, with her current cognitive load, can make sense of it. Here is how to insure she can:

1. **Home – Welcome Message:** Keep this brief, but clear. We should also include an image that creates a vibe consistent with the subject area. We just want to reassure Ruby that she made it to the right place.
2. **Home – How to Start:** Tell Ruby exactly what to click to get started. In the TLPEC, we are recommending that you point them to Modules.



3. Modules: Structuring Modules by weeks takes advantage of a system that already makes sense to Ruby for organizing time-sensitive tasks.

Almost every other tool in Canvas can run through Modules which allows us to centralize the content into a one-stop-shop. The other tools are hidden, but still accessible through Modules allowing a decluttered screen and improved focus on task.

All tasks to be seen together, adjacent in space. From one screen Ruby gets a sense for the week's workload. Consistent naming conventions make the demands clear. Due dates and point values are visible to give a sense of priority and weight. All of this information is visible from one screen and Ruby simply scrolls down to see additional weeks. No fancy tools, basic Canvas the whole time.

The adjacency of information in this course setup should reduce the number of emails from lost students. It also grants the instructor better perspective from which to review the whole the course design.

Students & instructor can now get to the interesting stuff: teaching/learning the area of expertise, instead of fighting with Canvas.