2024-2025 **Summer Assignment for Pre-IB Geometry Honors** **Ms. MacLean**
9th Grade Pre-IB **DUE: Monday, August 12, 2024 (1st day of school)** **Room 9-023**

"We believe that learning how to learn is fundamental to a student's education." – IBO.org

https://www.ibo.org/about-the-ib/what-it-means-to-be-an-ib-student/

Welcome to the IB Program at Eastside High School! In order to prepare for the upcoming school year, you should complete the following work independently (without the help of others), and in a timely manner.

Pre-IB Geometry Summer Assignment:
REGARDLESS *of whether you are already familiar with the Cornell method of note-taking*, watch the following video: https://bit.ly/LSCC-htucn. You do not need to take notes on this video.

In Pre-IB Geometry, homework assignments will include **taking notes**, either from the textbook or from other course materials (handouts, videos, online articles, etc.). "Notes" assignments will come in many formats, but the Cornell method of note-taking is one of the most common formats you will use for note-taking.

When you use Cornell notes in Geometry class, you will make the following modifications to the classic Cornell Notes structure. ***Examples of the modified format are provided later in this document.***

<table>
<tr>
<td>1. Add a <u>Lesson</u> section
○ Track the chapter and name of the lesson at the top left, above the cue section</td>
<td>2. Add a <u>Biggest "Whoa!"</u> section
○ Leave a space above the notes to record your biggest "Whoa!" moment. Below are some examples of "Whoa!" moments:
▪ What was something in the lesson that surprised you?
▪ What question are you still pondering?
▪ Did you realize that any of your prior "knowledge" on the topic was based on a misconception?
▪ How has the new information changed your mind about something?
▪ If you are absolutely stuck and can't think of a single thing… then what concept or idea can you share with someone else to give them a "Whoa!" moment?</td>
<td rowspan="2">3. Add a Page & <u>Date</u> section
Along the right-hand side of the header and notes section, create a column so that you can record the date you last reviewed this page of notes.</td>
</tr>
<tr>
<td>4. Specific guidelines for the <u>Cues</u> section
○ All cues must be written in the form of a question.
○ If your notes contain a list, the first cue for that section of the notes should generally prompt you to name the items in the list without providing a "hint" as to how many items are in the list (it's not enough to only know the names of the items in a list – you should also know how many items are in a list; if you can list them, you can count them!)</td>
<td>5. Specific guidelines for the <u>Notes</u> section
○ There are no changes to the Notes section
○ As a reminder, you should not be writing things down word-for-word!</td>
</tr>
<tr>
<td colspan="3">6. Add a section for <u>Visual Cues</u>
○ Visual Cues should be included after the Cues/Notes section and before the Summary
○ One way to think of the Visual Cues section is as if it is a visual summary. Come up with a visual cue for as many of the concepts from the notes as you can. Visual cues make a great study tool!</td>
</tr>
<tr>
<td colspan="3">7. Specific guidelines for the <u>Summary</u> section
○ There are no changes to the Summary section
○ Try to keep your summary short! What is the most necessary information?</td>
</tr>
</table>

Pre-IB Geometry Summer Assignment (Continued):

After you have watched the How to Use Cornell Notes video **and** reviewed the information that explains how Geometry notes will be different from Cornell notes, do the following:

1. Register for the Coursera program called "*Learning How to Learn*"
   https://www.coursera.org/learn/learning-how-to-learn
   (Note: If you do not currently have a Coursera.org email, you will need to sign up for an account. You can register with your own email or with your school email address.)

2. As you watch the videos, use Cornell notes (with the modifications described on the previous page) to record the information. **Learning is not a passive process**. To get you started, there are three partially-filled templates, as well as one blank template.

Lesson	COURSERA: Learning How to Learn - Intro to the Focused & Diffuse Modes - Using the Focused & Diffuse Modes

   The first Cornell notes page is used for **two** videos: "*Intro to the Focused & Diffuse Modes,*" and "*Using the Focused & Diffuse Modes – Or, A Little Dali will do You*". Complete the following:
   - The date
   - One additional Note + Cue (write the cue as a **question**!)
   - Your "Biggest WHOA moment"
   - Draw a visual cue that can help you remember the information
   - Add an additional piece of information to the summary **OR** paraphrase one of the key ideas that is already included in the summary.

Lesson	COURSERA: Learning How to Learn - Terrence Sejnowski and Barbara Oakley – Introduction to the Course Structure

   Complete the second page of Cornell notes by watching *"Terrence Sejnowski and Barbara Oakley – Introduction to the Course Structure"*
   - The **Cues** that are in the left-hand column are missing the Notes that are associated with them. Use **only** the video *"Terrence Sejnowski and Barbara Oakley – Introduction to the Course Structure"* to fill in the Notes column. You do not need to use any additional resources to complete these notes.
   - The **Notes** that are in the right-hand column are missing Cues. Write your own Cue for each Note (in the form of a question!)
   - Fill in all of the other section: Date, Biggest WHOA, Visual Cues, Summary.

Lesson	COURSERA: Learning How to Learn - What is Learning?

   Complete the third page of Cornell notes by watching *"What is Learning?"* It has been **started** for you, but you must include much more information than what has been provided to you!

   Important: These are notes about LEARNING. You do not need to memorize scientific vocabulary or highly specific details. When you are deciding what Notes and Cues are important, think about what information you need to know to understand the **process of learning**. How could you explain the process to a ten-year-old? You might not use highly specific words like "default mode network" or "dendrite," but you **would** still want to explain the important *concepts*.

Pre-IB Geometry Summer Assignment (Continued, 2):

3. Once you have completed the three structured notes (provided as the final three pages of this document), continue to work through the videos in the remainder of the course, taking Cornell notes as you go. The written assignments and practice quizzes and are optional (although I encourage you to try a few, as it is a great way for you to see if you are actually learning the material… **learning is <u>NOT</u> a passive process!**). On the first day of school, you will have written 24 sets of Cornell notes (see the table below). Some videos should be combined into a single document; these are indicated with a "**+**". Pay attention to the video titles; some videos have been excluded from the list and this is not a mistake.

A few additional notes:

- **NOTES MUST BE TAKEN ON <u>LOOSELEAF PAPER</u>** (not in a composition book or spiral-bound notebook)
- Notes must be **<u>handwritten</u>** unless you have specific academic accommodations
- Notes must be **<u>one-sided</u>**
- If you need more than one sheet of paper to make Cornell notes for a video, create a new Cornell Notes page (this means that you might have 2-3 "Biggest Whoa Moments" for one video, if you have three pages of notes for one video)

Partially filled Cornell notes from this packet: 1. Intro to the Focused & Diffuse Modes **+** Using the Focused & Diffuse Modes 2. Terrence Sejnowski and Barbara Oakley – Introduction to the Course Structure 3. What is Learning?	**Additional Cornell Notes from Module 1:** 4. Practice Makes Permanent 5. Introduction to Memory 6. The Importance of Sleep in Learning
Cornell Notes from Module 2: 7. Introduction to Chunking **+** What is a Chunk? 8. How to Form a Chunk, Part 1 **+** How to Form a Chunk, Part 2 9. Illusions of Competence 10. What Motivates You? 11. The Value of a Library of Chunks 12. Generative AI Unleashes the Learning Potential of Metaphors 13. Overlearning, Choking, Einstellung, Chunking, & Interleaving	**Cornell Notes from Module 3:** 14. A Procrastination Preview (this one is located in Module 1) **+** Introduction to Procrastination & Memory 15. Tackling Procrastination – It is Easier, and More Valuable, Than You Think 16. Zombies Everywhere 17. Surf is Up: Process Versus Product 18. Harnessing Your Zombies to Help You 19. Juggling Life and Learning 20. Diving Deeper into Memory 21. What is Long Term Memory? 22. Creating Meaningful Groups and the Memory Palace Technique

Cornell Notes from Module 4:

23. How to Become a Better Learner Introduction to Renaissance Learning & Unlocking Your Potential **+** Creating a Lively Visual Metaphor or Analogy
24. No Need for Genius Envy

These notes are due on the first day of school. In addition, by the time we start class, you will be a pro at taking notes! This skill will serve you in Pre-IB Geometry, as well as all of the other pre-IB classes you will be taking in your first year at Eastside High School!

Should you have any questions or concerns, the following is my contact information:

Shelley MacLean **Pre-IB Geometry** **macleansb@gm.sbac.edu**

Lesson COURSERA: Learning How to Learn
- Intro to the Focused & Diffuse Modes
- Using the Focused & Diffuse Modes

Biggest "WHOA!" moment

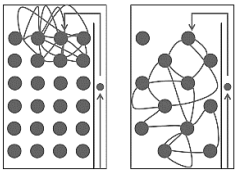
Date: _____

R1: _____ ☐

R2: _____ ☐

Cues	**Notes**
How many modes of thinking are discussed in this lesson? What are they? ** ALL cues are **questions**! You need to know how many items are on a list, without a hint!!*	There are 2 modes of thinking: Focused , Diffused
What is focused thinking? **It's generally good practice to try to list the terms (such as the previous cue) before you define them (this cue)*	Focused thinking: "concentrating intently" when trying to learn
What is diffused thinking?	Diffused thinking = more relaxed
What analogy was used for thinking of focused vs. diffuse mode? **It's not important to memorize this **specific** analogy, but if you remind yourself that an analogy **EXISTS** it provides a cue for how to think of an abstract concept in more concrete terms*	Analogy of pinball machine: Thoughts bounce around neural pathways / neural patterns. Some patterns easier to access. Some patterns more familiar, but not "better."
What is diffuse mode useful for?	Diffuse mode ∽ zooming out and trying to see the *bigger picture*. ✗ Can't work out *details* of problem, ✓ can get in *general area*.
What famous people are known for intentionally using diffuse mode?	Dalí and (supposedly) Edison developed strategies to enter diffuse: nod off to sleep while thinking about problem. Drop object, loud noise ∴ wake up
_____	_____
_____	_____

Visual Cues


1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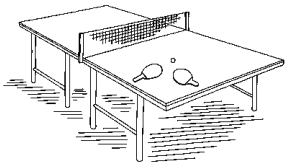
4

5

Summary

Analogies, metaphors, similes are useful tools to assist with learning

Two modes of learning: focused & diffused. Focused mode is concentrated and detail-oriented, good for reaching a final solution. Diffuse mode is more relaxed and is good for getting in the right "neighborhood" of a solution.

Learning takes time because new pathways have to form and the brain needs to switch back and forth from focused and diffuse modes multiple times.

_____

_____

Image sources:

1. https://avthar.com/blog/why-you-have-your-best-ideas-in-the-shower
2. https://www.youtube.com/watch?v=F-eeKc7z5IM
3. https://www.alamy.com/vector-black-and-white-light-bulb-icon-back-to-school-educational-clipart-cute-outline-illustration-education-clever-mind-or-business-idea-linear-image516574150.html
4. https://www.alamy.com/ping-pong-table-sport-graphic-black-white-isolated-sketch-illustration-vector-image367314182.html?imageid=29358D10-F1F8-442C-BC34-F59107098C3F&p=1307089&pn=1&searchId=e4da4f87cf80684eafe17731912c653d&searchtype=0

Lesson COURSERA: Learning How to Learn - Terrence Sejnowski and Barbara Oakley – Introduction to the Course Structure	**Biggest "WHOA!" moment**	**Page 2** **Date:** _____ R1: _____ ☐ R2: _____ ☐

Cues	**Notes**
What are the goals of the course?	Infor from course based on research 25. Neuroscience 26. Cognitive psych. 27. Experienced instr. in challenging subjects
What am I expected to do with this information?	Esp. useful for math, science
What are Terrence Sejnowski's credentials? What makes him qualified to teach me about learning?	Condensing key ideas = easier to und. material

Visual Cues

Summary

Lesson COURSERA: Learning How to Learn
- What is Learning?

Biggest "WHOA!" moment

Date: _____
R1: _____ ☐
R2: _____ ☐

Cues	**Notes**
Why is the brain considered to be "a very expensive organ" ?	Some parts of brain active when I'm active, diff. parts of brain active when I'm resting
What was the "old view" of the brain?	
What is the new understanding of the brain?	

Visual Cues

Summary

Lesson COURSERA: Learning How to Learn -	**Biggest "WHOA!" moment**	**Page** **Date:** _____ R1: _____ ☐ R2: _____ ☐
Cues	**Notes**	
Visual Cues		
Summary		