

Journal Prompts for the next two weeks (Aug 31 through Sep 13). The slide numbers correspond to the file Session01\_ALL-CONTENT

These are merely suggestions for how to take your learning to another level. They are intended to nudge you and are intentionally not overly descriptive. Developing these further is where your personal experience, interests, and creativity comes into play.

- 1) Look at the graphic "Molecules are..." on SLIDE #6. Find examples of molecules in each of these categories. Try to draw them, as awkward as that may seem. Trace them. Color them. Be creative with the fact that molecular language is symbolic, textual, and graphic. Learn about the functions indicated, and start a glossary of terms and concepts.
- 2) On SLIDE #11, "What makes the language of molecules difficult?", associate each symbolic shape with the corresponding part of the molecular structure. For example, draw the symbolic polygon on that portion of the molecule. Color accordingly. Be creative with your drawing. Bonus: find out what this mystery molecule is and what it does.
- 3) Decorate the periodic table, emphasizing where our focus will be placed. SLIDE #13
- 4) On the slide "Everyday elements, every day" (SLIDE #19), find the location of each of the main elements that compose the human body. Color your periodic table to match the body composition diagram. Compare to SLIDE #19 and think about how these two are the same and how they differ.
- 5) Study Slide #21. Interpret what you see. How well correlated are the elements abundance on earth, and the composition of the human body. What, if anything, does this say about evolution of life on earth?
- 6) Why are atomic weights not constants of nature, while atomic masses are? Explore the Atomic Weight Calculator on Slide #24. What did you discover? How could isotopes be used to trace an elements journey from ingestion to excretion?
- 7) Read and summarize the findings presented in the article cited on SLIDE #27.
- 8) On Earth As It Is Not In Heaven. -Read the article and explain what is going on here.
- 9) If salt is one part sodium and one part chlorine, why does one gram of salt only equal 390 milligrams of sodium, and not 500 milligrams? SLIDE #28
- 10) In reading food labels, it is necessary to know the goal of the guideline. RDA = Recommended Dietary Allowance; AI = Adequate Intake; UL = Tolerable Upper Intake Level. Explain how this relates to sodium and potassium. SLIDES #28-#30
- 11) How does the shape of the periodic table reflect the maximum number of electrons in each sub shell? SLIDE #33
- 12) Draw a periodic table and indicate the number of valence electrons for elements 1-10. SLIDE #34
- 13) Explain how hydrogen can become a positive or negative ion. SLIDE #36

