**Astronomy Book Directions**

Take two pieces of computer paper and fold them hamburger style. Number the pages 1-8 and include the information listed below on the pages as listed. Your book needs to include *at least* 5 diagrams or pictures, and needs to be colored!

Please Note: The websites listed are a good starting point but they may not have all of the information! Feel free to look for information on other websites, ask for help while researching if you need it. Even if you don’t like using them, the textbook and class handouts are great resources.

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| Page Number | What needs to be on this page in your book (The bolded words should be the title of your pages) |
| 1  (Front Cover) | 1. Title for your book (something like “Astronomy Book”)  2. Order of cosmic objects from small to large- *meteoroid, moon, planet, star, solar system, galaxy, universe* |
| 2 | **Electromagnetic Spectrum and Doppler Shift**   1. Explain what electromagnetic radiation and the EM spectrum are (p. 674)   <http://www.livescience.com/38169-electromagnetism.html>   1. Explain what the Doppler effect is (p. 677)   <http://www.physicsclassroom.com/class/waves/Lesson-3/The-Doppler-Effect> |
| 3 | **The Universe and proof of the Big Bang**   1. What is the Big Bang Theory and when did the Big Bang happen? (p. 6)   <http://www.space.com/25126-big-bang-theory.html>   1. Explain the proof for the Big Bang (Cosmic Microwave Background Radiation, Red Shifts) (p. 718)   <http://www.schoolsobservatory.org.uk/astro/cosmos/bb_evid>  <http://coolcosmos.ipac.caltech.edu/cosmic_classroom/cosmic_reference/redshift.html>   1. Is the universe expanding? How do we know? (p. 718) |
| 4 and 5 | **The Earth’s Motions (p. 622-625 and your notes from class)**  **-** Explain and draw a diagram of all of these terms (it is okay if you combine these into single diagram)  - Tilt of the Earth and the 4 seasons - Rotation  - Revolution - Equator  - Equinoxes and Solstices (March 21, June 21, September 21, December 21)  - Precession - Nutation  <https://quizlet.com/44450944/science-exam-flash-cards/>  *MAKE SURE YOU EXPLAIN WHAT THE MOTIONS OF EARTH CAUSE!!!* |
| 6 | **Solar radiation**  1. Explain how it is created through Nuclear Fusion (*p. 689*)  <http://earthguide.ucsd.edu/virtualmuseum/ita/07_2.shtml>  2. Explain what solar radiation is and how solar energy gets to Earth. (p. 484-485)  <http://www.ei.lehigh.edu/learners/energy/solar/solar1.html>  3. Explain how it warms the earth (*seasons & latitudinal differences, p. 589*)  <http://spaceplace.nasa.gov/seasons/en/>  4. Explain how it makes life possible on Earth- photosynthesis (*p. 433*)  <http://www.solarradiation.net/>  5. Explain the differential/ unequal heating of land and water on Earth and what it causes (p. 489)  <https://www.youtube.com/watch?v=y986-h3dfCk> |
| 7 | **How is the Earth protected from dangerous Radiation?**   1. Ozone (Explain what ozone is, where the ozone layer is found, and what it protects us from) (p. 478)   <http://www.ck12.org/earth-science/Stratosphere/lesson/Stratosphere/?referrer=featured_content>   1. Magnetic Field (Explain what it is, how it forms, and what it protects us from)   <http://www.ck12.org/earth-science/Earths-Magnetic-Field/lesson/Earths-Magnetic-Field/?referrer=featured_content> |
| 8  (Back Cover) | **Planetary Motion and Kepler’s Laws**   1. Explain Kepler’s 3 Laws of Planetary Motion (p. 618, class reading)   <http://oneminuteastronomer.com/8626/keplers-laws/>   1. Explain the term “Barycenter” and draw a diagram   <http://spaceplace.nasa.gov/barycenter/en/> |