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| Astronomy | | **Standards-Based Education Priority Standards** |
| **12th Grade** | | |
| *The Earth-Moon System* | | |
| PS1 | Describe and explain the composition of Earth including the size, density, atmosphere, and magnetic field. | |
| PS2 | Describe and explain the composition of the Moon including the size, density, atmosphere, and magnetic field. | |
| *The Solar System* | | |
| PS3 | Explain the tools used by astronomers to study electromagnetic radiation to determine the composition, motions, and other physical attributes of astronomical objects. | |
| PS4 | Describe and explain the celestial sphere and astronomical observations made from the point of reference of the Earth. | |
| PS5 | Describe and explain the solar system including both main and minor players. | |
| PS6 | Evaluate the significance of the composition, location, and orbits of the terrestrial planets and Jovian planets. | |
| *History of the Universe* | | |
| PS7 | Describe the scientific view of the origin of the universe, the evolution of matter, and the development of resulting celestial objects. | |
| PS8 | Evaluate the significance of energy transfers and energy transformations in understanding the universe. | |
| *Astronomy Methods* | | |
| PS9 | Analyze the dynamic nature of astronomy by comparing and contrasting evidence supporting current views of the universe with historical views. | |
| PS10 | Scientific progress requires the use of various methods appropriate for answering different kinds of research questions, a thoughtful plan for gathering data needed to answer the question, and care in collecting, analyzing, and displaying the data. | |
| PS11 | Conclusions must be logical, based on evidence, and consistent with prior established knowledge. | |
| PS12 | Public communication among scientists is an essential aspect of research. Scientists evaluate the validity of one another's investigations, check the reliability of results, and explain inconsistencies in findings. | |
| *Literacy in Science* | | |
| 11-12. RST.2 | Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. | |
| 11-12. RST.4 | Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11-12 texts and topics. | |
| 11-12. WHST.1 | Write arguments focused on discipline-specific content. a. Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence. b. Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. c. Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims. | |
| 11-12. WHST.4 | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience | |