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|  Meteorology | **Standards-Based EducationPriority Standards** |
| **12th Grade** |
| *The Atmosphere* |
| HS-ESS2-1 | Develop a model to illustrate how Earths internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features. |
| 9-12.ESS2.C | Earth is a system that contains essentially a fixed amount of each stable chemical element existing in different chemical forms. Each element on earth moves among reservoirs in the solid Earth, oceans, atmosphere, and organisms as part of biogeochemical cycles driven by energy from earth's interior and from the sun. |
| *Weather* |
| HS-ESS2-2 | Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth Systems. |
| 9-12.APPF | It is important for all citizens to apply science and technology to critical issues that influence society. |
| 9-12.PS2.I | The rate of physical or chemical change may be affected by factors such as temperature, surface area, and pressure |
| *Forecasting* |
| 9-12.INQG | 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. |
| HS-ESS3-5 | Analyze geoscience data and the results from global climate models to make an evidence-based forecast of the current global or regional climate change and associated future impacts to Earth's Systems. |
| *Climate* |
| HS-ESS2-4 | Use a model to describe how variations in the flow of energy into and out of Earth's systems result in changes in climate |
| 9-12.ES2.B | Climate is determined by energy transfer from the sun at and near earth's surface. This energy transfer is influenced by dynamic processes such as cloud cover and Earth's rotation, as well as static conditions such as proximity to mountain ranges and the ocean. Human activities, such as burning of fossil fuels, also affect the global climate. |
| *Literacy in Science* |
| 11-12.RST.1 | Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account. |
| 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.RST.7 | Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. |
| 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 |
| 11-12. WHST.8 | Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation. |