

Weeks 31&32 – Physical Science

18-25Mar13

Dust Bowl Activity – 50 classroom points

Mr. Stewart

Students will choose one of the standards listed below and write a 1 page discussion on the subject.

HS-ESS1-d – Analyze data on the variability of mass and energy outputs from the sun to justify the valid and reliable scientific claim that short-term changes in the sun affect human technologies and societies.

HS-ESS2-b – Construct an evidence-based argument about how a natural or human-caused change to one part of an Earth system can create feedback that causes changes in that system or other systems.

HS-ESS2-h – Design and conduct investigations to model the conditions at which clouds form and precipitation occurs, taking into account the factors of humidity, temperature, and pressure.

HS-ESS3-a – Construct explanations based on evidence for how the development of human societies has been influenced by natural resource availability.

HS-ESS3-b – Analyze and revise solutions for developing, managing, and utilizing resources that would increase economic, social, environmental, and/or cost to benefit ratios.

HS-ESS3-c – Ask questions to construct and revise explanations of the impact that natural hazards and other geoscience events have had on the course of human history at regional and global scales.

HS-ESS3-d – Construct and evaluate scientific claims based on valid and reliable evidence that human activities can contribute to the frequency and intensity of some natural hazards.

HS-ESS3-f – Analyze data regarding the effects of human activities on natural systems to make valid scientific claims for how engineering solutions are designed and implemented to help limit environmental impacts.

HS-ESS3-h – Apply scientific reasoning, theory, and models to construct explanations for how humans may predict and modify their impacts on future global climate systems.

HS-LS2-j – Design, evaluate, and refine a solution for reducing negative impact of human activities on the environment and ways to sustain biodiversity and maintain the planet's natural capital.

E.12.A.1 – Students know the Sun is the major source of Earth's energy, and provides the energy driving Earth's weather and climate.

N.12.A.5 – Students know models and modeling can be used to identify and predict cause-effect relationships.

N.12.B.1 – Students know science, technology, and society influenced one another in both positive and negative ways.

N.12.B.4 – Students know scientific knowledge builds on previous information.

Students will actively watch the Dust Bowl PowerPoint presentation and take appropriate notes so that they are able to create a 1 page constructed response (20 points) summarizing details from the PowerPoint.

Students will actively watch 5 videos containing music and lyrics that were current during the dust bowl. Students will then compose a 1 page reflection (15 points) on how climate change can affect lifestyles in the U.S. Consideration should be given to the possibility that another dust bowl could occur in the U.S. in the future.

Students will write a 1 page discussion of a selected standard (15 points) to be added to the current portfolio. Portfolio 9 will be collected and graded at a later date.