## Earth and Space Science Final Project DescriptionInvestigating Human Impact on Earth’s Systems

## Essential Question:​How have humans impacted Earth's systems, and what can be done to limit future impacts?

**Standard HS-ESS3-4:**

**Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.**

**Final Exam Project: Requirement for Creating an Interactive Website**

* + **Informational Website**
		- **Introduction:** Introduce the topic (background information that describes/explains topic, introduction to challenges/issues/problems)
		- **Connections:** Explain the connections of your topic to the other spheres of Earth (hydrosphere, atmosphere, geosphere, biosphere)
		- **Human Impact:** Describe how this human activity is affecting your system/topic or causing it
		- **Impact on Maine’s Environment:** Describe how Maine’s environment is impacted by human activities associated with your topic.
		- **Possible Solutions:**
			* Describe **one** technological solution or idea for solutions for your topic
			* Identify the scientific knowledge and reasoning on which the solution is based
			* Describe how the technological solution functions and may be stabilizing or destabilizing the natural system
			* Describe that the solution comes from scientists and engineers in the real world who develop technologies to solve problems of environmental degradation
			* Include images if possible
		- **Pros and Cons of Solution:**
			* Describe the benefits of the solution to the problem
			* Describe the downsides, side effects, or negative implications of the solution to the problem
			* Include images if possible
		- **Examining Solution & Evaluating Refinements:**
			* Evaluate or Refine a technological solution that reduces human impacts your system and how it might also impact other systems
			* Describe how the refinement will improve the solution to increase benefits and/or decrease costs or risks to people and the environment.
			* Evaluate the proposed refinement for:
				+ Their effects on the overall stability of and changes in natural systems
				+ Cost, safety, aesthetics, and reliability, as well as cultural and environmental impacts.
	+ **Your Reflection on Your Research:**
		- Why it is important for humans to be aware of this problem/issue?
		- What questions still need to be answered by science? Or could not be answered?
		- How aware do you think people are of this issue? Do you think people need to be made more aware of this?
		- What would you do if you had to “solve” this or make decisions about this issue/problem? What would you recommend to people?
		- How does your topic connect to the other systems/spheres of earth? What do these connections imply?