



Priority Standards

Physical Oceanography – Grades 9-12

Olathe North Only

Below is a table of the priority standards.

Priority Standards	Description
450.Sc.E.I.1	Conduct laboratory and field investigations related to each major theme of physical oceanography.
450.Sc.E.I.2	Explain and demonstrate understanding of the usage of scientific tools and data collection techniques in the ocean sciences.
450.Sc.E.I.3	Actively engages in investigations, including developing questions, gathering and analyzing data, and designing and conducting research.
450.Sc.E.K.1	Summarize the formation of the oceans.
450.Sc.E.K.2	Compare and contrast early and modern oceanic exploration.
450.Sc.E.K.3	Describe current data collection techniques and tools in ocean science.
450.Sc.E.K.4	Understands science advances new technologies. New technologies open new areas for scientific inquiry.
450.Sc.E.K.5	Demonstrates an understanding of the history of science.
450.Sc.E.K.6	Describe the physical and chemical properties of water.
450.Sc.E.K.7	Understands the principles of (reflection) and refraction.
450.Sc.E.A.1	Analyze the influence of the properties of water in determining the composition of seawater.
450.Sc.E.K.8	Understands waves have energy and can transfer energy when they interact with matter.
450.Sc.E.K.9	The ultimate source of atmospheric and oceanic energy comes from the sun.
450.Sc.E.K.10	Understands the processes of water cycling through surface water, ground water, and the atmosphere.
450.Sc.E.A.2	Applies the relationship between the earth, moon, and sun to explain the (seasons), tides, and (moon phases).
450.Sc.E.K.11	Understands the theory of Plate Tectonics explains that internal energy drives the earth's ever changing structure.
450.Sc.E.K.12	Describes the primary physiographic features of the ocean basins and continental margins.
450.Sc.E.A.3	Gathers and analyzes evidence supporting the theory of Plate Tectonics
450.Sc.E.K.13	Understands geological time is used to understand the earth's past.
450.Sc.E.K.14	Understands constructive and destructive processes, including weathering,

Priority Standards	Description
	erosion, and deposition dynamically reshape the surface of the earth.
450.Sc.E.K.15	Understands processes leading to coastal change.
450.Sc.E.A.4	Observes and explains evidence of coastal change in the United States.
450.Sc.E.K.16	Understands human beings live in and impact ecosystems.
450.Sc.E.K.17	Understands natural resources from the lithosphere and ecosystems are required to sustain human populations.
450.Sc.E.K.18	Understands earth does not have infinite resources.
450.Sc.E.K.19	Understands technology is the application of scientific knowledge for functional purpose.
450.Sc.E.A.5	Understands progress in science and technology can be affected by social issues and challenges.
450.Sc.E.A.6	Explains how science uses peer review, replication of methods, and norms of honesty.
450.Sc.E.A.7	Recognizes society's role in supporting topics of research and determining institutions where research is conducted.