

DEFINITION A **BIG IDEAS IN SCIENCE**

NOTE: This definition assumes the student is already proficient with the concepts and procedures described in the Washington State Grade Level Expectations for Science through Grades 9/10*.

Students will demonstrate facility with the core science concepts at cognitive demand levels beyond those described in Washington State Science EALR 1. The emphasis will move from primarily knowing and understanding towards synthesizing, evaluating and transferring knowledge and skills across disciplines to solve problems and generate explanations.

[This is necessary for success in courses that are part of the general education requirements in science in Washington State colleges and universities. Students intending to prepare for majors in science and technical fields should pursue high school courses that target more advanced topics and skills.]

A.1 Physical Science,
Life Science,
Earth/Space Science

Synthesize knowledge of:

- properties of matter, forces, motion, and energy;
- living things, ecosystems, human biology, molecular heredity, and evolution and natural selection;
- Earth materials and systems, the solar system, stars, galaxies, the universe, and the evolution of the Earth and the universe;
- big ideas into a coherent and useful picture of the natural world; and,
- real world phenomena and approach the solution of unique problems.

Evaluate experimental or observational evidence based on knowledge of:

- properties of matter, forces, motion, and energy;
- living things, ecosystems, human biology, molecular heredity, and evolution and natural selection; and
- Earth materials and systems, the solar system, stars, galaxies, the universe, and the evolution of the Earth and the universe