

The following are the key shifts called for by the [Louisiana Student Standards for Science](#).

1. Apply content knowledge

Content knowledge is critical and evident in the standards in the **Disciplinary Core Ideas**, the key ideas in science that have broad importance within or across multiple science or engineering disciplines. However, simply having content knowledge is not enough. Students must investigate and apply content knowledge to scientific **phenomena**.

2. Investigate, evaluate, and reason scientifically

Scientists do more than learn about science; they “do” science. Science instruction must integrate the **practices**, or behaviors, of scientists and engineers as they investigate real-world phenomenon and design solutions to problems.

3. Connect ideas across disciplines

For students to develop a coherent and scientifically-based view of the world, they must make connections across the domains of science (life science, physical science, earth and space science, environmental science, and engineering, technology, and applications of science). The **crosscutting concepts** have applications across all domains.

♦**Three Dimensional Learning**: the integration of the **Science and Engineering Practices**, **Disciplinary Core Ideas**, and **Crosscutting Concepts** in science instruction♦