

Hinsdale Central D86 Freshman Science Information and Placement

The two pathways of our D86 Science Program:

- The **Physics-Chemistry-Biology** pathway includes Earth Science applications relevant to the core content, and through which students will meet most Illinois Learning Standards within three years.
- The **Biology-First** strand starts with a biology course, then students choose courses to take in future years. Most Illinois Learning Standards can be met in four years if all four core sciences are taken.

Pathway	Freshman	Sophomore	Junior	Senior
<p><u>P-C-B</u></p> <p>This pathway includes core courses with Earth Science applications, therefore meets most Illinois State Learning Standards within three years</p>	<p>Physics 9 ---- OR ---- Physics Honors 9</p>	<p>Chemistry 10 ---- OR ---- Chemistry Honors 10</p>	<p>Biology 11 ---- OR ---- AP Biology</p>	<p>Anatomy/Physiology* Physics Earth Science Earth Science Honors Earth Sci Capstone AP Research AP Seminar AP Biology AP Chemistry AP Environmental Sci AP Physics 1 AP Physics C AP Physics C-M</p>
<p><u>Biology-First</u></p> <p>This pathway meets most Illinois State Learning standards within four years only if the four core courses are taken (Biology, Earth Science, Chemistry, Physics)</p>	<p>Biology ---- OR ---- Biology Honors</p>	<p>Earth Science/ Earth Science Honors ---- OR ---- Chemistry/ Chemistry Honors</p>	<p>Earth Science/ Earth Science Honors ---- OR ---- Chemistry/ Chemistry Honors --- OR --- Physics/ AP Physics 1</p>	<p>AP Research AP Seminar AP Biology AP Chemistry AP Environmental Sci AP Physics 1 AP Physics C AP Physics C-M</p>

AP and elective courses can be taken concurrently if prerequisites are met

*housed at HSHS

How are students recommended for D86 Science courses?

Most students will have a choice between the Physics or Biology pathways. If a student has the option of either pathway, then the choice is completely up to them! Below are the factors that are considered as freshman course recommendations are made. Once students receive their recommendations, the family can make their final selections.

Placement Option 1: Freshman Physics		Placement Option 2: Freshman Biology	
Physics 9	For freshmen concurrently enrolled in an Algebra 1 course	Biology	MAP scores and previous teacher recommendation are used to determine placement
Physics Honors 9	For freshmen concurrently enrolled in a math course higher than Algebra 1	Biology Honors	MAP scores and previous teacher recommendation are used to determine placement

Freshman Physics: These courses are designed to be very hands-on science classes that cover the skills and content of a first year physics course within the context of Earth and Space Science. Topics include science practices, waves, Big Bang, motion, plate tectonics, forces, energy, momentum, gravity, orbital motion, and projectiles.

Freshman Biology: These courses are designed to cover the skills and content of a first-year biology course. Topics include: Ecology, Evolution, Genetics, Molecular Biology, Photosynthesis and Cellular Respiration.

Incoming freshmen. . . how to choose?

Most of this year's 8th graders will have a choice when they register for classes.

How should a family choose?

Both sequences are designed to challenge students and help them learn the process of science. In either selection, students will have an array of elective and AP options in both their junior and senior years.

Physics	Biology
<ul style="list-style-type: none">• More hands-on problem solving and utilization of algebra• Allows for students to enroll in Biology 11 or AP Biology junior year• AP Biology can earn a student two semester's worth of college credit	<ul style="list-style-type: none">• More information-based and conceptual and requires higher reading comprehension• Allows for students to enroll in Physics 11 or AP Physics 1 junior year• AP Physics 1 can earn a student one semester's worth of college credit

Finding the Right Fit: The difference between regular- and honors-level

Both the regular- and honors-level options allow students to change levels as they progress through their high school career depending on their needs, interests, and prerequisites. Courses are college-preparatory. Lesson approaches can include hands-on discovery of concepts, teacher-directed instruction, and/or group-directed class and group discussions. In addition, classes will include laboratory activities and projects focused on content and relevant science and engineering practices.

The honors-level options uses significantly less teacher-directed instruction, and relies more on independent and group learning and is at an accelerated pace. Students are required to apply knowledge to completely new situations in their work, in the lab, and on exams. Reading or math, depending on the pathway, has increased expectations and intensity. Consider a student's entire schedule when deciding to take an honors-level science course so they are not overwhelmed academically.