District 86 Freshman Science Information & Placement

District 86 offers two science pathways, both designed to provide students with a well-rounded science experience.

- The **Physics-Chemistry-Biology (PCB)** pathway starts with a physics course, followed by Chemistry and Biology in subsequent years. Core courses include coverage of Earth Science standards relevant to the content. Most Illinois Learning Standards will be met within three years.
- The **Biology-First** pathway starts with a biology course, then students choose courses to take in future years. Most Illinois Learning Standards will be met in four years if all core sciences (Biology, Earth Science, Chemistry, Physics) are taken.

Biology First Pathway

9th grade: Biology/Biology Honors

10th grade:

11th grade:

choose to take courses from Chemistry, Earth Science, and Physics

12th grade: AP or science electives

PCB Pathway (Phys-Chem-Bio)

9th grade:
Physics 9/9H

10th grade:
Chemistry 10/10H

11th grade:
Biology 11/AP Bio

Earth Science is interwoven in these courses where applicable

12th grade: AP or science electives

Pathway	Freshman	Sophomore	Junior	Senior
PCB	Physics 9 ---- OR ---- Physics Honors 9	Chemistry 10 ---- OR ---- Chemistry Honors 10	Biology 11 ---- OR ---- AP Biology	PCB only: Earth Science Capstone Bio-First only: MAGO Physics Either pathway: Anatomy & Physiology Earth Science Honors AP Biology AP Chemistry AP Environmental Science AP Physics 1 AP Physics C AP Physics C-M
Biology - First	Biology ---- OR ---- Biology Honors	MAGO/ Earth Science Honors ---- OR ---- Chemistry/ Chemistry Honors	MAGO/ Earth Science Honors* ---- OR ---- Chemistry/ Chemistry Honors --- OR --- Physics/ AP Physics 1	

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

What is Biology like?

In Biology, labs are typically done to explore/reinforce concepts learned in class. Biology utilizes reading comprehension, concepts, diagrams and knowledge of facts.

What is Physics like?

In Physics, labs are typically done to introduce/explore concepts and develop math models. Physics utilizes algebra, algebraic reasoning, data analysis and problem-solving.

MAGO = Meteorology/Astronomy and Geology/Oceanography and is a regular-level Earth Science course.

How are students recommended for D86 Science courses?

Placement Option: Freshman Biology	Placement Option: Freshman Physics
Freshman courses in this pathway are designed to introduce students to the life sciences in a class that covers the skills, lab experiences, and content of a first-year biology course.	Freshman courses in this pathway are designed to provide hands-on experiences in a class that covers the skills, lab experiences, and content of a first year physics course while including relevant Earth and Space Science topics.
Topics include: Scientific Method, Ecology, Evolution, Homeostasis, Genetics, Molecular Biology, Photosynthesis and Cellular Respiration.	**Topics include:** Science Practices, Waves, Big Bang, Motion, Plate Tectonics, Forces, Energy, Momentum, Gravity, and Orbital Motion.
Placement in standard or honors-level biology is based on a student's MAP scores and their 8th grade science teacher's recommendation.	**Placement** in standard or honors-level physics is based on a student's freshman year math course. ● Physics 9 is designed for students who are taking Algebra 1. Physics 9 Honors is designed for students who have mastered Algebra 1. As a result, we do not recommend a student in Algebra 2/Trig or higher to choose our standard Physics 9.

How to choose pathways

There is no right or wrong answer. Read what the 9th grade course is like, and consider what your student might like to take in 11th or 12th grade. Both pathways allow for a wide range of 12th grade courses!

Once a student starts a pathway, they continue that pathway. Students may not move between pathways.

Finding the Right Fit: The difference between standard- and honors-level science courses

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

Honors classes are a higher degree of challenge and difficulty than standard-level courses and are a big jump from middle school. These course options use less teacher-directed instruction, rely more on independent and group learning, and proceed at an accelerated pace. Students are required to apply knowledge to new situations in their work, in the lab, and on exams. Reading or math, depending on the pathway, has increased expectations and intensity.

Level changes are only approved in certain circumstances when a student is truly misplaced in a course. If a level change is approved during the year, a course change will be dependent on whether there are available seats in the course and if it works with your child's schedule. As a result, there are no guarantees for level changes.