

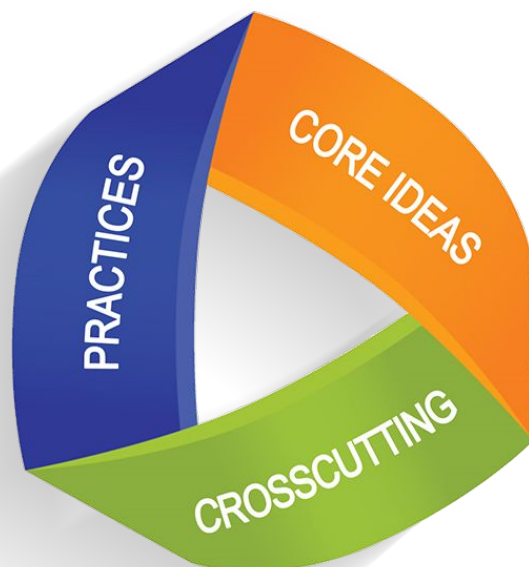
# Course Offerings (in each Disciplinary Core Ideas)

## Life Science (LS)

- Biology 1
- Advanced Placement Biology
- Forensics
- Genetics
- Anatomy & Physiology

## Physical Science (PS-C, PS-P)

- Chemistry 1
- Physics 1
- Advanced Placement Chemistry
- Advanced Placement Physics 1
- Advanced Placement Physics C
- Introduction to Engineering
- Engineering Innovation
- Exercise Science



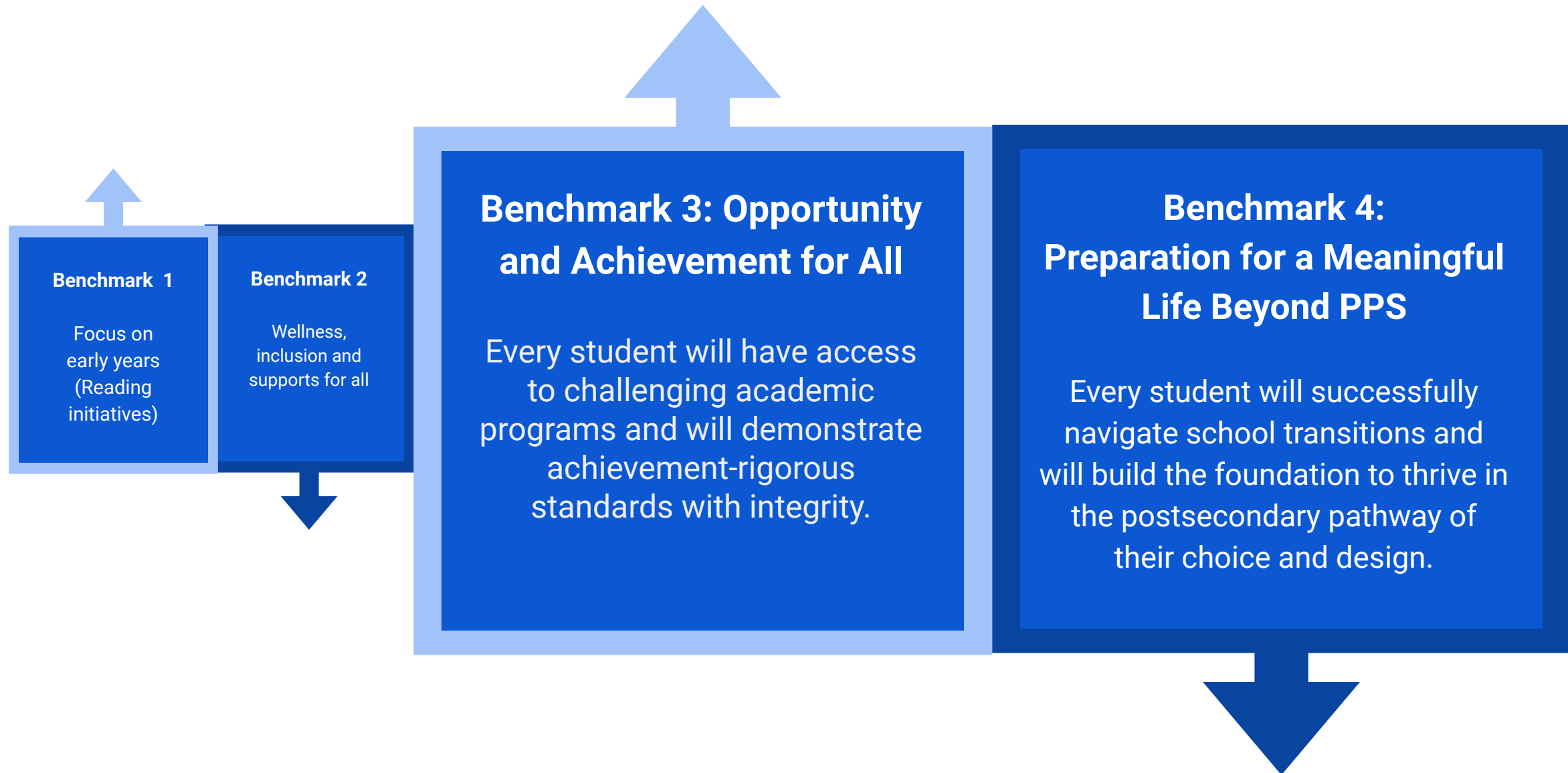
## Earth & Space Science (ESS) | Engineering, Technology & Applications of Science (ETS)

- Environmental Science
- Advanced Placement Environmental Science
- Sustainable Horticulture
- Planetary Science Accelerated

# Parent Communication: Introduction to HS Science

Biology I is a first-year life science course that meets the NJ high school graduation requirement. Biology I is offered as a traditional course, with in-class resources or as an accelerated course. We strongly recommend that students complete the lab-based life science requirement for graduation during their ninth-grade year. Attached you will find information and guidelines related to student placement into Accelerated Biology I for the 2023-2024 school year. The Princeton High School Biology teachers in collaboration with Princeton Middle School science teachers have developed a selection process for the Accelerated Biology I course at Princeton High School. We are working with feeder schools to follow a similar protocol that will allow for fairness and transparency. The process involves a placement test, analyses of 7th and 8th grade performance (Science, Math, and English), as well as teacher feedback about students' demonstrated learning and qualities of their performance. It is our hope that this multi-dimensional view (M.A.A.P.) of students' performance in school allows for appropriate placement to support students' learning and personal interests.

# Benchmarks on our way to goals...



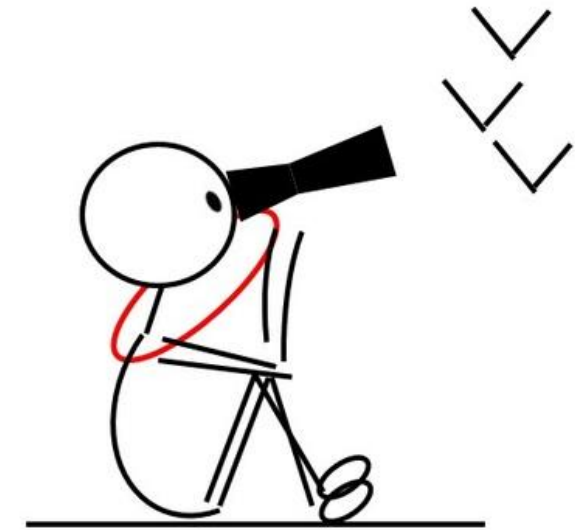
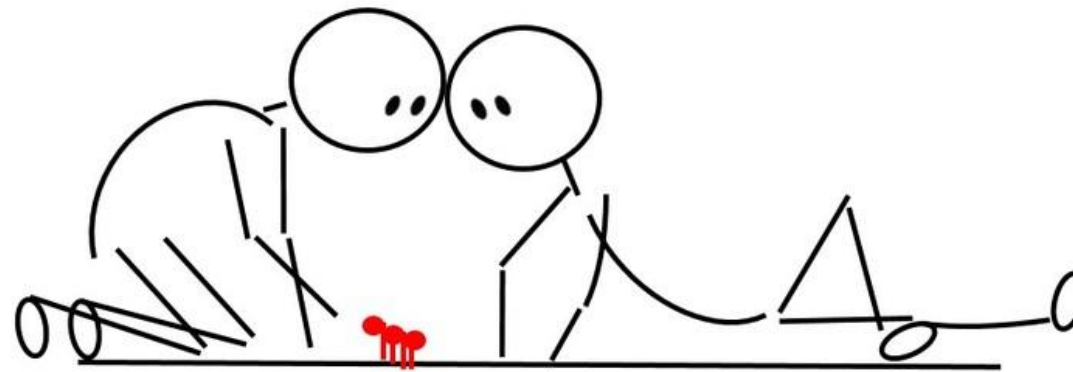
# General Philosophy on Science @ PHS

Princeton High School offers **college preparatory** experiences to all students of science. There are multiple “on ramps” to successful **science citizenship** in an everyday way or as an academic.

(Image [source](#))

## Story of Citizen Science

WE ALL MAKE OBSERVATIONS  
WE ARE ALL CURIOUS



Caren Cooper @CoopSciScoop

# HS Science 2023-2024 PoS

\*Prerequisites in Math and multiple science disciplines

\*\*Second year

College Preparatory Core Subjects →  Designations↓	Life Science	Physical Science, Chemistry	Physical Science, Physics	Earth & Space Science/ETS (Applications of science)
<b>Traditional (General, ICRP)</b>	Biology 1	Chemistry 1	Physics 1 Engineering Innovation	Environmental Science
<b>Accelerated</b> (Higher degree of independent learning and traditional assessment required)	Biology 1, Accelerated*  *Placement test in January of 8th grade	Chemistry 1, Accelerated	Physics 1, Accelerated <i>Advanced Topics in Physics (Anticipated in PoS for 24-25)</i>	Planetary science, Accelerated
<b>ELL</b>	Biology 1-E Horticulture La Horticultura (DLI)	Chemistry 1-E <i>STEM-21 (Anticipated back in PoS for 24-25)</i>	Introduction to Engineering	Environmental science
<b>Electives</b>	Forensics Exercise science Anatomy & Physiology* Genetics* <i>Anthropology (Anticipated back in PoS for 24-25)</i>	Organic Chemistry*		
<b>Advanced Placement (2nd year)</b>	AP Biology**	AP Chemistry**	AP Physics 1 AP Physics C	AP Environmental Science

# Math-Science Alignment Recommendations

**Recommended placement for 9th grade students** co-enrolled in Algebra 1 or Geometry is non-accelerated Biology 1, Horticulture, Introduction to Engineering or Environmental Science

NJSLS Disciplinary Core Idea	Traditional (w/ or w/o ICRP)	ELL	Accelerated*	Advanced placement
Life Science ( <b>Biology 1, Horticulture</b> , Genetics, Anatomy & Physiology, Forensics)	Algebra I, Geometry	Algebra 1, Geometry	Accelerated Geometry	Algebra 2 or higher
Physical Science (Chemistry 1, Organic)	Algebra 2, <i>Geometry</i>	Algebra 2, <i>Geometry</i>	<b>Precalculus (co-enrollment) or higher</b>	Precalculus or higher
Physical Science (Physics 1)	Algebra 2	Algebra 2	Accelerated Algebra 2 or higher	Precalculus or higher; AP Physics C requires Calculus
Environmental/Earth and Space Science (Environmental science, Planetary science)	Algebra 2	Algebra 2		Algebra 2 or higher

# Translated Infographics

Our BIG Hairy Audacious Goal is to  
**M.A.A.P. Every Child**

## Acceleration Process **Advancement Criteria:**

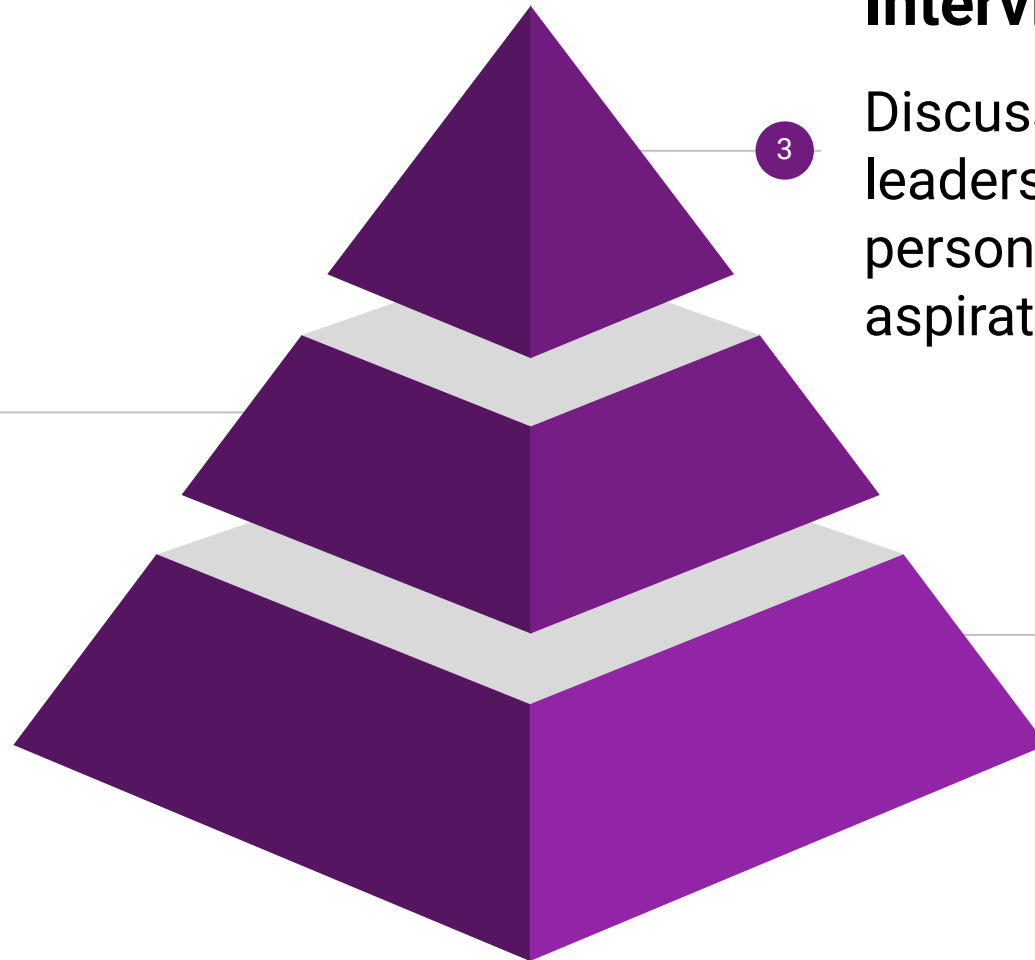
- Placement/diagnostic assessments (85%+)
  - Relevant mathematics
  - Demonstrated laboratory skills (safety and technique)
- Previous course taking with successful completion (B+ or higher)
  - Relevant mathematics
  - Relevant science

### **Activities & Passions**

**Shared self reflection and personal inventories**

Create an activities list and summary of extra- and intra-curricular activities; research interests and plan for independent inquiry

2



### **Motivation and Aspirations Interview & Recommendation**

Discuss with departmental leadership and classroom teachers personal motivations and aspirations

3

### **Previous Preparation and Proficiencies Guide discussion**

Demonstrate understanding in mathematics, science and technical subjects through placement tests, diagnostics and writing in enrollment year

1



我们的大目标是

## M.A.A.P. 每个孩子

加速过程进阶标准：

- 安置/诊断评估 (85%+)
- 相关数学

证明实验室技能(安全和技术)

- 成功完成以前的课程(B+ 或更高)
- 相关数学
- 相关科学

### 活动与激情

分享自我反思和个人清单

创建活动列表和课外活动和课内活动摘要；研究兴趣和独立调查计划



Nuestro GRAN objetivo peludo y audaz es

**M. A. A. P. Cada niño**

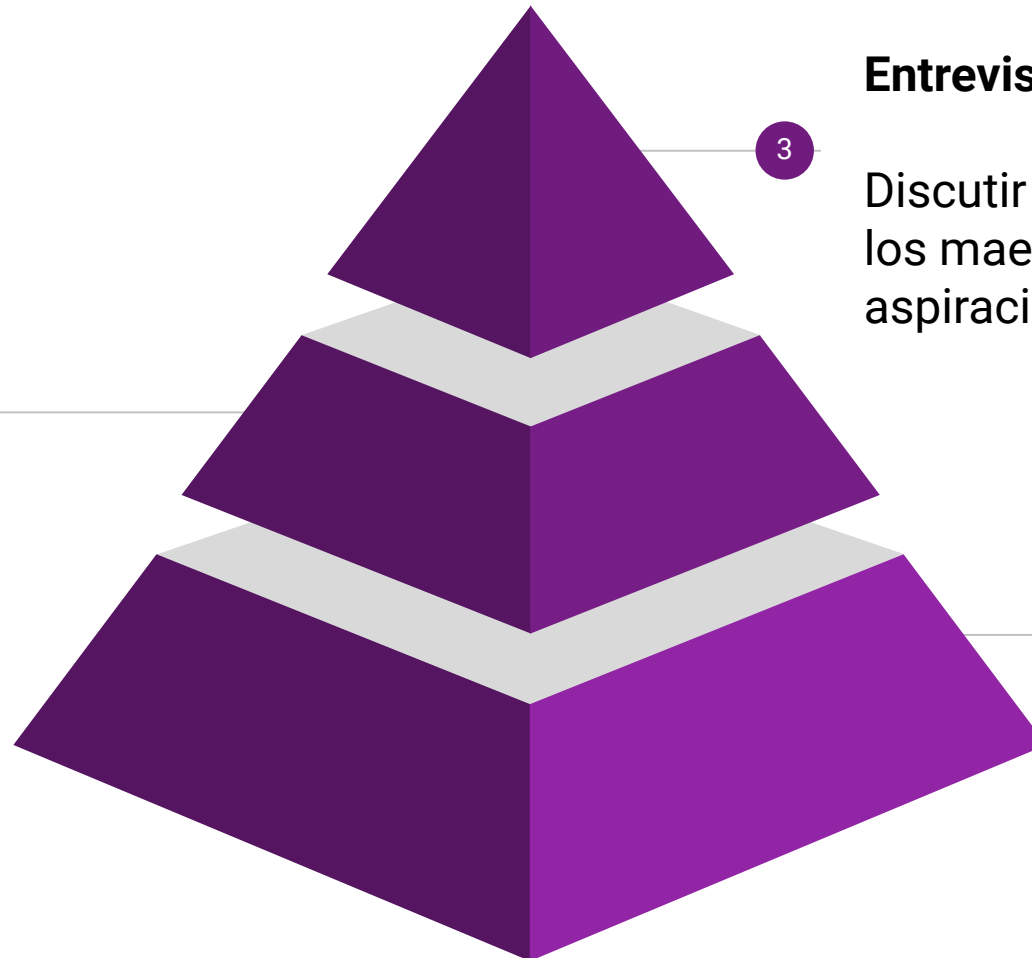
Criterios de avance del proceso de aceleración:

- Evaluaciones de colocación/diagnóstico (85%+)
  - Matemáticas relevantes
  - Habilidades de laboratorio demostradas (seguridad y técnica)
- Curso previo tomado con finalización exitosa (B+ o superior)
  - Matemáticas relevantes
  - ciencia relevante

## Actividades y pasiones

### Auto-reflexión compartida e inventarios personales

Crear una lista de actividades y un resumen de las actividades extracurriculares e intracurriculares; intereses de investigación y plan para la investigación independiente



## Motivación y Aspiraciones

### Entrevista y Recomendación

Discutir con el liderazgo departamental y los maestros de aula las motivaciones y aspiraciones personales.

## Preparación Previa y Competencias

### 1 Guía de discusión

Demostrar comprensión en matemáticas, ciencias y materias técnicas a través de pruebas de ubicación, diagnósticos y escritura en el año de inscripción

**Disciplinary Core Ideas/  
Content Area Courses:**

Life Science (LS)  
Physical Science (PS)  
Earth & Space Science (ESS)  
Engineering, Technology &  
Applications of Science  
(ETS)

Do you have strong interest in  
STEM beyond HS?

**After Completing HS Life Science**  
**Recommendation: All students take a first-year Life Science Course in 9th grade**  
15 (Graduation requirement) to 24+ credits

*Solid lines show pathways, dashed lines are suggested/ recommended pathways; bold lines are strongly recommended*

No

**Research  
Independent Study  
Extra-curricular &  
Summer Intensives**

Yes

**Strong Math Proficiency/Achievement**

Physical  
Science

ESS/ETS

Physical  
Science

ESS/ETS

Chemistry

Physics

Chemistry

Physics

**Strong Math Proficiency/Achievement**

Advanced  
Placement (AP)

+ Electives

- AP Options:**
- **Biology**
  - **Chemistry**
  - **Physics (Algebra and/or Calculus-based)**
  - **Enviro. Science**

# 完成 HS 生命科学后

建议:所有学生都在9年级学习第一年的生命科学课程  
15(毕业要求)至24+学分

实线表示路径,虚线表示建议/推荐路径;  
强烈推荐粗线

学科核心思想/内容领域课程:

- 生命科学(LS)
- 物理科学(PS)
- 地球与空间科学(ESS)
- 工程、技术和科学应用(ETS)

您对 HS 以外的 STEM 有浓厚的兴趣吗?

不

是的

研究  
自主学习  
课外活动和暑期强化班

强大的数学能力/成就

物理科学

ESS/ETS

物理科学

ESS/ETS

化学

物理

化学

物理

强大的数学能力/成就

大学先修课程(AP)

+ 选修课

- 美联社选项:
- 生物学
- 化学
- 物理学(基于代数和/或微积分)
- 环境科学

# Después de completar HS Ciencias de la vida

Recomendación: todos los estudiantes toman un curso de ciencias biológicas de primer año en el noveno grado 15 (requisito de graduación) a 24+ créditos

*Las líneas continuas muestran los caminos, las líneas discontinuas son los caminos sugeridos/recomendados; se recomienda encarecidamente las líneas en negrita*

**Ideas básicas disciplinarias/Cursos de áreas de contenido:**  
 Ciencias de la vida (LS)  
 Ciencias Físicas (PS)  
 Ciencias de la Tierra y el Espacio (ESS)  
 Ingeniería, Tecnología y Aplicaciones de la Ciencia (ETS)

¿Tiene un gran interés en STEM más allá de HS?

No

**Investigar Estudio independiente Extracurriculares e intensivos de verano**

Sí

**Fuerte dominio/logro en matemáticas**

Ciencia física

ESS/ETS

Ciencia física

ESS/ETS

Química

Física

Química

Física

**Fuerte dominio/logro en matemáticas**

**Colocación Avanzada (AP)**

+ Electivas

- Opciones de punto de acceso:**
- Biología
  - Química
  - Física (basada en Álgebra y/o Cálculo)
  - Ciencia medioambiental