

## 8<sup>th</sup> Grade AP Science Curriculum

Concept	Content (DCI)	SEP	Assessment	Standard
<p>From Molecules to Organisms: Structures and Process</p> <p>Heredity: Inheritance and Variation of Traits</p>	<ul style="list-style-type: none"> <li>● cell structure</li> <li>● cell functions               <ul style="list-style-type: none"> <li>○ diffusion</li> <li>○ osmosis</li> <li>○ cellular respiration</li> <li>○ photosynthesis</li> </ul> </li> <li>● multicellular function</li> <li>● maintenance of homeostasis</li> <li>● DNA to protein</li> <li>● DNA to chromosome to inheritance</li> <li>● genetic variation</li> <li>● probability of genetic transmission</li> </ul>	<ul style="list-style-type: none"> <li>● asking questions and defining problems</li> <li>● analyzing and interpreting data</li> <li>● plan and carry out investigations</li> <li>● develop and use models</li> <li>● constructing explanations and design solutions</li> <li>● engaging in argument from evidence</li> </ul>	<ul style="list-style-type: none"> <li>● test/quizzes</li> <li>● labs/student directed investigations</li> <li>● diffusion and osmosis models</li> <li>● respiration model</li> <li>● photosynthesis model</li> <li>● discussions/feedback</li> </ul>	<p>Middle School</p> <ul style="list-style-type: none"> <li>● MS LS1 – 1</li> <li>● MS LS1 – 2</li> <li>● MS LS1 – 6</li> <li>● MS LS1 – 7</li> </ul> <p>High School</p> <ul style="list-style-type: none"> <li>● HS LS1 – 1</li> <li>● HS LS1 – 2</li> <li>● HS LS1 – 3</li> <li>● HS LS1 – 5</li> <li>● HS LS1 – 7</li> <li>● HS LS3 – 1</li> <li>● HS LS3 – 2</li> <li>● HS LS3 – 3</li> </ul>

For more information on DCI or Disciplinary Core Ideas:

<https://www.nextgenscience.org/sites/default/files/resource/files/AppendixE-ProgressionswithinNGSS-061617.pdf>

For more information on Science and Engineering Practices:

<http://www.nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20ONGSS%20-%20FINAL%20060513.pdf>

For more information on the Next Generation Science Standards:

Middle School:

<http://www.nextgenscience.org/msls1-molecules-organisms-structures-processes>

High School:

<http://www.nextgenscience.org/hsls1-molecules-organisms-structures-processes>