

**Genetics**  
**Ages: 11+**  
**Tuesdays 11:00am-12:00pm**  
Dr. Tonya Shearer  
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Students learn the basics of genetics and inheritance, including DNA structure and function, cellular processes involving DNA, how DNA influences physical traits of individuals and why genetic diversity is important in populations.

Course fee: \$250. Maximum of 15 students.

### **Tentative Syllabus**

(Exact timing of topics will be determined by student progress.)

Week 1 – Introduction to Genetics and DNA

Week 2 – DNA Structure and Extraction

Week 3 – Codons and Translation

Week 4 – Genotypes and Phenotypes

Week 5 – Mutation

Week 6 – DNA Replication

Week 7 – Mitosis

Week 8 – Meiosis

Week 9 – Heredity

Week 10 – Laws of Inheritance

Week 11 – Genetic Modification

Week 12 – Population Genetics

Week 13 – Conservation Genetics

Week 14 – Bioinformatics

Week 15 - Review