

# **TEACHER RESOURCES AND LINKS**

https://go.edc.org/epm-teacher-resources/



# **Chapter 1: What's the Right Medicine?**

- Article: "Ten Tips for Facilitating Classroom Discussions on Sensitive Topics"
- Video: Personalized Medicine: The Science Behind Genomics (1:52)
- Video: <u>Simple Genetic Test Shows Promise for Better Outcomes in Heart Stent Patients</u> (2:05)
- Form: Consent Form

## Chapter 2: Is My Sense of Taste Controlled by My Genes?

- Article: "Genetic Taste Markers and Food Preferences"
- Video: <u>How Do We Taste?</u> (5:35)
- Video: What Is PCR? (2:49)
- Article: "Mamas, Don't Let Your Babies Grow Up to Be Broccoli-Haters"
- Video: Umami: The 5th Taste, Explained | Food52 + Ajinomoto (2:28) (optional)
- Article: Genetic Taste Markers and Food Preferences
- Video: What Is a Gene?
- Article: "A De-escalation Exercise for Upset Students" (optional)
- Article: <u>"Random Sampling Creates a Representative Sample of the Target Population</u> <u>When Sample Size is Large Enough"</u> (optional)

#### **Chapter 3: Exploring Our DNA**

Video: <u>How Does Your Body Process Medicine?</u> (4:12)

## Chapter 4: How Is DNA Sequenced, and What Can We Learn?

- Video: The Sanger Method of DNA Sequencing (2:50)
- Article: "How Your Genes Influence What Medicines Are Right for You"
- Website: NCBI-BLAST
- Video: BLAST tutorial (1:58)
- Video: <u>Protein Structure and Folding (</u>7:45) or <u>Protein Structure and Organization</u> (12:00)
- Website: SNPedia

- Article: "Genetic, Functional, and Phenotypic Diversity in TAS2R38-Mediated Bitter Taste Perception" (optional)
- Article: "Exploring the Impact of Single-Nucleotide Polymorphisms on Translation"

## **Chapter 5: Restriction Enzyme Digestion of TAS2R38 PCR Products**

• Video: Restriction Enzymes in DNA Testing (1:43)

#### **Chapter 6: Gel Electrophoresis and Genotyping**

- Video: What is Gel Electrophoresis?
- Article: "Genes Give Africans a Better Sense of Taste"
- Video: Making an Agarose Gel
- Sequences: Exons 4 and 5 of CYP2C19
- Article: "Why Can We Taste Bitter Flavors? Turns Out, It's Still a Mystery" (optional)
- LabXchange: "How Does Taste Work?" (optional)
- Website: miniPCR (optional)

#### **Chapter 7: SNPs and Drug Metabolism**

• Article: <u>"Privacy in Genomics"</u>

#### **Appendix**

- Video: The Biology of Race in the Absence of Biological Races (16:54)
- Video: <u>Is Race Genetic or Socially Constructed?</u> (6:10)
- Article: "Why Race Is Not a Thing, According to Genetics"
- Curriculum material: "Is It In Our Genes: Race and Health"
- Curriculum material: "What Can DNA Tell Us About Race?"