



## Course: Biology

We hope that you, your families and loved ones are well! During the COVID-19 pandemic school closure, we will be doing our best to provide you engaging activities that will enrich your understanding of Biology. During term 4, you will be exploring topics in Genetics and Evolution.

### Goal for this week

#### Learning Objectives:

Students will be able to ...

1. explain the role of DNA in a cell.
2. understand that genes encode proteins.
3. describe how proteins carry out essential functions for life.
4. understand DNA mutations can lead to defects in protein function and genetic disease.

(2016 MA STE Standard: HS-LS1-1)

#### Literacy Objectives:

1. Reading: to understand a concept and construct meaning
2. Writing: to take notes
3. Writing: to generate a response to what one has read, viewed, or heard

(<https://www.bpsma.org/schools/brockton-high-school/about-us/mission-literacy-charts>)

#### Lesson:

Biology Buffet: Structure and Function of DNA

- See the page(s) below for a complete description of what to do and the resources you will need.
- ***Your science teacher will be in contact to clarify expectations (like when and how to submit your work for credit) for your class.***

#### **WHY THIS MATTERS**

DNA contains the information for all life. Understanding its structure and function will help you understand mysteries like where your ancestors came from and why some people have genetic diseases. Scientists are now able to [change the DNA in cells to fix mutations](#) and cure disease. Maybe a career as a [molecular biologist](#) is in your future!

#### **Additional Support**

##### Email:

- Please reach out to your science teacher with specific questions about the lesson.

##### Office Hours:

- Here is a list of the [science teachers' office hours](#). Please email your teacher to set up meeting times.

##### Other questions:

- Science Department Head  
Dr. David Mangus  
[davidmangus@bpsma.org](mailto:davidmangus@bpsma.org)



# Biology Buffet

## Topic: Structure and Function of DNA

### Assignments to do:

Click on the link to view the resource ...

1. [Introduction to DNA Structure and Function Reading with Questions](#)
2. Choose 3 assignments from the buffet below to complete:  
You should select 1 appetizer, 1 main course, and 1 dessert

#### Appetizer

[Amoeba sisters DNA, chromosomes, genes and traits video](#) with [WORKSHEET](#)

[Structure of DNA Active Reading with questions](#)

Watch TEDEd "[The Book of You](#)" video and take the quiz on the "Think" tab

#### Main Course

[DNA review worksheet #1](#)

[DNA review worksheet #2](#)

[DNA review worksheet #3](#)

#### Dessert

[DNA Structure Short Answer](#)

[DNA Structure and Function Short Answer](#)

[DNA MCAS Multiple Choice Review](#)

### Recommended Pacing

**Monday:** Pre-work assignments, **Tuesday:** Finish pre-work assignments, **Wednesday:** Complete an appetizer, **Thursday:** Complete a main course, **Friday:** Complete a dessert