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## **Biology**

**Mr. Bess**

**2022-2023**

**Phone 740-547-7570**

### **Room 140**

**Course Description-** Biology is the study of life. This course will help you better understand the creatures around us, the marvel of the human body, and the process of life.

### **Course Work/Learning Objectives**

#### **★ HEREDITY**

- **Cellular genetics**
- **Structure and function of DNA in cells**
- **Genetic mechanisms and inheritance**
- **Mutations**
- **Modern genetics**

#### **★ EVOLUTION**

- Mechanisms
  - Natural selection - Mutation - Genetic drift - Gene flow (immigration, emigration)
  - Sexual selection
- Speciation
  - Biological classification expanded to molecular evidence
  - Variation of organisms within species due to population genetics and gene frequency

#### **★ DIVERSITY AND INTERDEPENDENCE OF LIFE**

- Biodiversity
  - Genetic diversity - Species diversity
- Ecosystems
  - Equilibrium and disequilibrium - Carrying capacity
- Loss of Diversity
  - Climate change - Anthropocene effects - Extinction - Invasive species

#### **★ CELLS**

- **Cell structure and function**
  - **Structure, function and interrelatedness of cell organelles**
  - **Eukaryotic cells and prokaryotic cells**
- **Cellular processes**
  - **Characteristics of life regulated by cellular processes**
  - **Photosynthesis, chemosynthesis, cellular respiration, biosynthesis of macromolecules**

#### **★ Human Body Systems**

**Some of the coursework is subject to change. Implementing new coursework this year. Course work will be on Google classroom. Students will get class code for the class during the first week of school. Course work will be added weekly or bi-weekly depending on the subject matter.**

**Online Resources:** [www.khanacademy.org](http://www.khanacademy.org) (Recommended site for additional tutoring)

### **Attendance Policy**

-Regular and prompt class attendance is a vital part of the educational process. Students are expected to attend every scheduled class on time. Exceptions may be made for illnesses or emergencies. The student is responsible for providing proof of excused absences as well as making up any missed work. Scheduled quizzes and tests must be made up upon the student's return to the classroom.

### **Classroom materials**

Pencil/Pens

Water bottle

Chromebook

### **Grading**

Grading Scale: Letter grades will be determined based upon the district adopted grading scale. The grade received is broken down in the following manner with all being weighed as tests:

- Tests
- Quizzes
- Class Work

- The type of assignment will determine how it affects your grade. Quizzes can range from as low as 15 points to as much as 100 or more. Most lab activities will count towards class work grade. Tests will be over 120 points. Students will be given a classroom grade at the end of each 9 weeks. This will be based on class participation and behavior and is calculated into the class work portion of your grade. Most lab assignments are evaluated as class work unless told otherwise. **If you get caught cheating you will get a 0 for that assignment. NO EXCUSES or EXCEPTIONS.**

### **Behavior/Discipline**

**RESPECT** is the key word in this class.

Respect your classmates and teacher.

Respect yourself.

Respect school property.

— Bold indicates the 9 weeks material we are projected to go over.