LITERACY SCIENCE

- Lesson Text Reading
- Lesson Notes What happens to air before it reaches the lungs
- Worksheet Mediated Shared Writing
- Lesson Sample Quiz

INTRODUCTION TO BIOLOGY

Topic- Digestive system

Standard- HS-LS1-2. Develop and use a model to illustrate the key functions of animal body systems, including (a) food digestion, nutrient uptake, and transport through the body; (b) exchange of oxygen and carbon dioxide; (c) removal of wastes; and (d) regulation of body processes.

Digestive System Worksheet

Digestive system Game

Digestive System Game

Digestive system

BIOLOGY

Week of May 11-15

- **Topic- DNA, RNA and Proteins – Part 1**

Standard- HS-LS1-1. Construct a model of transcription and translation to explain the roles of DNA and RNA that code for proteins that regulate and carry out essential functions of life. (Two week lesson- week 1 will look at the structure of DNA and RNA and in week 2 we will look at the actual models of transcription and translation)

The Structure of DNA and DNA Replication

a. Build a DNA molecule (try this game); requires flash, will not work on cell phones or tablets. It's ok if you can't do it, it's just a fun way to start
b. Read this text about DNA and DNA replication

c. Watch these videos about DNA and Replication. Answer the questions embedded in the videos (use the link in your email to sign up for edpuzzle before you watch the videos so I can give you credit for them)

Edpuzzle- DNA Structure

Edpuzzle- DNA Stated Clearly

Edpuzzle- DNA Replication

d. Chose 5 review questions to answer after reading and watching the videos. Answer the questions in a notebook. Indicate which question you are answering

Review Questions (choose 5)

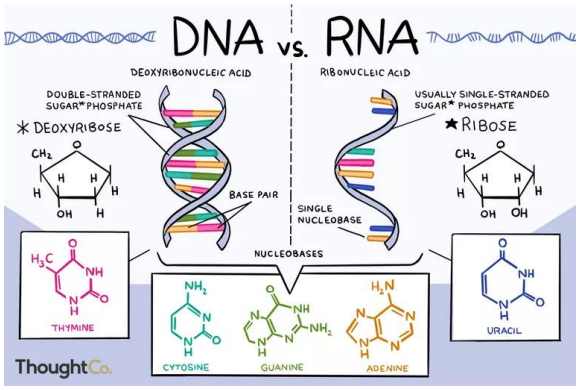
1. Where is nuclear DNA located in a eukaryotic organism?
2. Describe the structure of DNA.
3. What are Chargaff's rules?
4. Identify the structure of the DNA molecule.
5. What are nucleotides? What makes up a nucleotide?
6. Why is DNA replication said to be semi-conservative?
7. Create a diagram that shows how DNA replication occurs.
8. If one DNA strand reads CCGTAATGCAT, what will be the sequence of the complimentary strand?
9. What is complementary base pairing? Explain why complementary base pairing is necessary to maintain the double helix shape of the DNA molecule.

e. **Choose one** of the following question to research further. Write the answer in your notebook

10. How long does it take a human cell to copy the DNA in its nucleus before it divides?
11. How many new cells does your body produce every day?
12. What steps does the cell take to speed the rate of DNA replication?

Structure of RNA

f. look at the picture below. It shows DNA and RNA. Write down 2 differences you can see between the two molecules



g. Read this text about RNA

h. Watch this video about DNA and RNA. Answer the questions embedded in the video

Edpuzzle- DNA vs RNA

i. Chose 3 review questions to answer after reading and watching the videos. Answer the questions in a notebook. Indicate which question you are answering

Review Questions (choose 3)

1. Compare and contrast DNA and RNA
2. List the 3 main types of RNA
3. What does the m in mRNA stand for?
4. Which type of RNA helps form the ribosome?
5. What is the function of tRNA?

j. **OPTIONAL**- Draw a model of DNA OR a model of RNA; color your model and make a key indicating which molecule each color represents. You can also choose to make a 3D model instead. There are many videos on YouTube that show DNA models you can make with materials at home. Have fun and be creative. Below are some videos that show different types of models you can make.

DNA model- paper

DNA model- origami

DNA model- food

DNA model- pipe cleaners

DNA model- straws

- **Topic: THE PROCESS OF FERTILIZATION IN SEXUAL REPRODUCTION**

Standard: HS-LS3-1. Develop and use a model to show how DNA in the form of chromosomes is passed from parents to offspring through the processes of meiosis and sexual reproduction.

1. **Reproduction and Gene Transfer- Interactive Activity**

In this interactive activity, you will learn about the processes of sexual and asexual reproduction, and their pros and cons.

a. Copy and paste the link below in a web browser (Go to):
https://games.legendsoflearning.com/games/WyJnYW1lcyIsMTI1M10=

b. Click on the green arrow to continue.
c. To complete this activity, you must follow all the directions.
d. Answer the questions.

2. **Sexual Reproduction-Active Reading**

e. Click on the link below, Read the text, and answer the questions in complete sentences.

Sexual Reproduction- Active reading Text

3. **Review Fertilization**

f. Watch the short video below to review fertilization in humans:
https://www.youtube.com/watch?v=_5OvgQW6FG4

MCAS BIO REVIEW

Week of May 11-15

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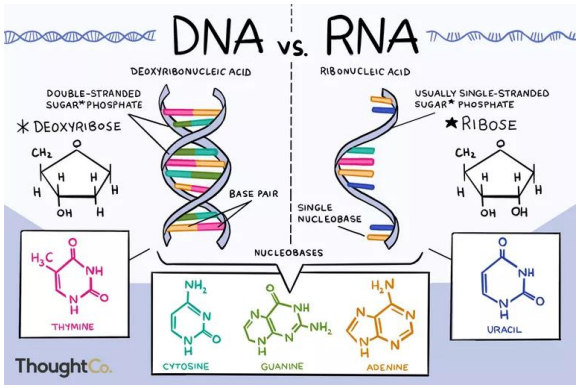

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Standard- HS-LS1-1.

Part 1- DNA Structure, Replication, and RNA Structure

CHEMISTRY

PS1. Matter and Its Interactions: HS-PS1-1.

- LESSON Notes TRENDS IN THE PERIODIC
- Worksheet Trends in the Periodic Table