



Stamford Public Schools

Science Department

District Midterm Examination - **REVIEW**

2018-2019

Grade 7 **Honors Science**

Student Name: _____

School/Teacher: _____

Date: _____



Dear 7th Grade Science Student,

The district-wide 7th grade science midterm exam for the 2018-2019 school year will focus on the concepts covered in the first two quarters of science. Students will have 50 minutes for this exam.

Enclosed is a list of the skills and concepts from your science course. Next to each main topic is the number of questions that will appear on the midterm exam and also the way questions will be formatted (Selected Response or Constructed Response).

Please see your science teacher if you feel you need more help or have questions.

Wishing you success on your exam,

Natalie McClarty
Director for Curriculum & Instruction, PreK-12

Grade 7 Honors Science Midterm 2019
BLUEPRINT

20 Selected Response, 60 pts. total

5 Constructed Response, 21 pts. total

4 drag and drop, 19 pts. total

100 Total Points

Concepts/Topics	Number of Questions
Biomedical Engineering	2 selected responses 1 drag and drop 1 constructed responses
Body Systems and Experimental Design	14 selected responses 3 constructed response
From Cells to Organisms	4 selected responses 3 drag and drop 2 constructed response

Science Process

You should be able to:

- Design experiments that test specific science questions
- Know how variables relate to testing a hypothesis
- Read and interpret graphs, tables and diagrams
- Analyze data and observations to form reasonable conclusions
- Apply mathematics to solving quantitative problems as applied to science
- Use common science language and vocabulary correctly
- Find logical connections between science concepts and applications in the real world.
- Explain how science understanding changes as we discover new things

Science Content

Biomedical Engineering and Body Systems

List 4 components of the engineering design cycle.

What is the difference between qualitative and quantitative data? Provide some examples.

Using your experiment for Observing Organisms (Body Systems Activity 6), identify the independent, dependent and constant variables (be able to identify variables when reading other experiments as well).

Summarize and explain the main ideas/results that came from Dr. Goldberger's experiment on Pellagra.

Describe the function of the sensory neurons.

Describe the pathway of nerve signals.

What are the four main functions of the skeletal system?

Compare and contrast ligaments and tendons.

Differentiate between the 3 types of muscles.

What is the main function of the circulatory system? Explain how the heart helps to complete this function. Explain how a heart valve works.

List the three types of blood vessels and describe their function in the circulatory system.

List the organs of the respiratory system.

Explain how gas exchange occurs in the respiratory system. Be sure to include the names of the organs involved.

List the order of the organs in the digestive system through which food passes and specify whether mechanical or chemical digestion happens in each.

Explain the effect that mechanical digestion has on chemical digestion.

How does the breakdown of carbohydrates & proteins give energy to cells?

List the levels of organization in the human body.

Feel the Beat

What is a pulse? Explain how the pulse changes during exercise.

Cell Biology & Disease

Describe the tradeoffs associated with using one power of magnification over another.

Explain the function of the four most common organelles.

Compare and contrast bacteria, animal, and plant cells.

Compare and contrast single vs. multi-celled organisms and provide examples of each.

Biomedical Engineering

Explain the similarities and differences of conducting a science investigation and following the design cycle for engineering.