

11.1 What is Biology?



Summarize main points from each video.

Video Title / topic _____

Video Title / topic _____

Video Title / topic _____

Topic Introduction



Summarize your understanding of each paragraph.

Biology is the study of living organisms. Biology can be divided into many specialized fields. Examples of ways to divide biology into different fields include morphology, physiology, anatomy, behavior, origin, and distribution.

This year, in biology class, we will study a broad set of ideas. There will be several complicated words with most of the topics. For example, the first paragraph on this page lists some unfamiliar terms for most students.

The first paragraph above uses the words “morphology” and “physiology.” While these words do not need to be memorized at this time, these words are good examples of how **there will be some new words introduced to you this year.**

The word “anatomy” in the first paragraph is branch of science concerned with the bodily structure of humans, animals, and other living organisms. **Some of the lessons this year will include concepts from anatomy.**

Read/Summarize Text



1. Read the passage.
2. Underline key expressions in each sentence.
3. Re-write each word (or expression) you underlined.
4. Summarize the passage.

Title of Passage.

1

Definition of a Scientific Law. A scientific law is a statement that describes an observable occurrence in nature that appears to always be true. It is a term used in all of the natural sciences (astronomy, biology, chemistry and physics, to name a few).

2

The “cell” is an important concept in biology.

Cell is called the fundamental unit of life. In biology, cell theory is the historic scientific theory, now universally accepted, that living organisms are made up of cells. Cells are the basic unit of structure in all organisms and also the basic unit of reproduction.

https://en.wikipedia.org/wiki/Cell_theory

Re-write words you underlined

3

Using a complete sentence, summarize or rephrase the passage

4

Read Text for Comprehension

Read this article for deeper understanding. No summary is required, although you may want to circle, underline, or mark key ideas and words.

Wikipedia

The Next Generation Science Standards is a multi-state effort to create new education standards that are "rich in content and practice, arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education.

Overall, the guidelines are intended to help students deeply understand core scientific concepts, to understand the scientific process of developing and testing ideas, and to have a greater ability to evaluate scientific evidence.

The Next Generation Science Standards (NGSS) are based on the "Framework K–12 Science Education" that was created by the National Research Council.

Over 40 states have shown interest in the standards, and as of December 2016, 18 states, along with the District of Columbia (D.C.), have adopted the standards.

Oklahoma Department of Education

The Oklahoma Academic Standards (OAS) for Science focus educators and students on the priority of scientific literacy, so they both appreciate and understand the exceptional nature of science in their everyday lives. This knowledge base and set of skills are essential for our students, so they may be careful consumers of scientific and technical information and have the skills to enter careers in science, engineering, and technology if they so choose. In Oklahoma, the science standards for High School are categorized into three major groups:

- ***Physical Science (Physics and Inorganic Chemistry)***
- ***Life Science (Biology and Organic Chemistry)***
- ***Earth and Space Science (Earth Science and Space Science)***

Honeycutt Science

There are many shared concepts across each of the three major OAS categories. Students reviewing this handout are studying Biology which is part of Life Sciences. Academic standards associated with Life Sciences are addressed in the curriculum you will be studying this year. (Refer also to [OAS Science Standards](#))

Draw Illustration



Copy and Label the Illustration in the Space Provided

Find more at Topic Biology 14 HoneycuttScience.com

CELL THEORY:

1. All living things are composed of cells.
2. Cells are the basic units of structure and function in living things.
3. All cells are produced from other cells.

<http://slideplayer.com/slide/771778/>

Draw (Copy) the Illustration Here

Interpret a Graph



Write the title of the graph _____

Circle the type of chart this represents

Bar Chart Line Chart Pie Chart Other

If applicable,

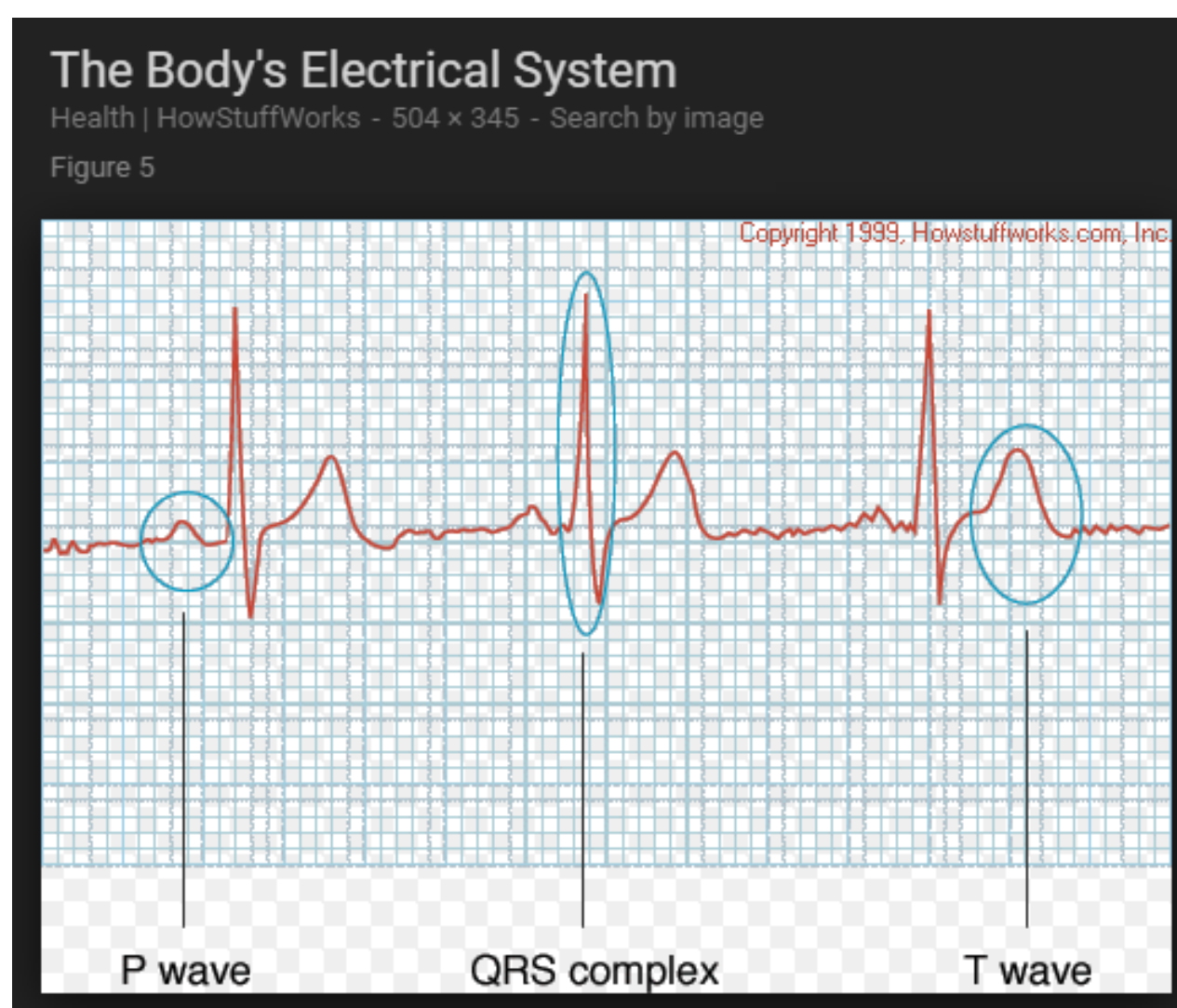
What does the X-axis represent _____

What does the Y-axis imply _____

Summarize what this graph represents or conveys

Reference URL.

Human Heartbeat



P wave - coincides with the spread of electrical activity over the atria and the beginning of its contraction.

QRS complex - coincides with the spread of electrical activity over the ventricles and the beginning of its contraction.

T wave - coincides with the recovery phase of the ventricles.

Show-Off Your Smarts!



Instructions

- Complete as an individual or small group.
- Discuss your ideas/answers/responses in a small group.
- Select one person to present your responses to the class.

Q1. How can this information be applied to a young-person's life?

Q2. How does this information apply to (or impact) communities?

Q3. When do scientists need to apply this information? How?

Q4. How would a person from 100 years ago view this information?

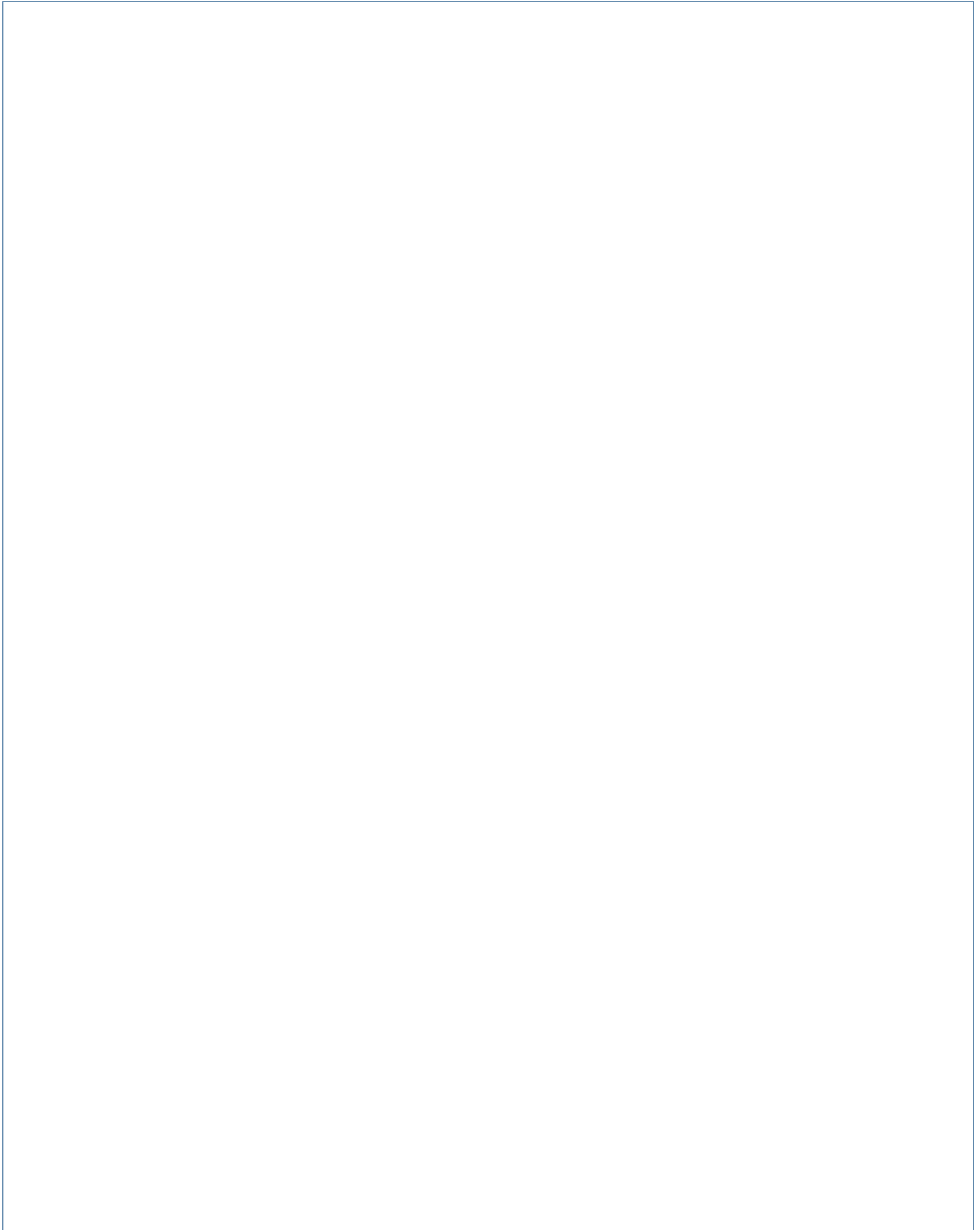
Q5. How does this topic connect to other science topics or math?

Write down at least three words introduced or covered by this topic.

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Make a Poster

In the space provided here, create/draw a poster which conveys the concepts you have learned on this topic.

A large, empty rectangular box with a thin blue border, intended for the student to create a poster. The box occupies most of the page below the instructions.