38.1 Using Natural Resources (part I)

Physical Science

Summarize main points from each video.

Video Title / topic _____

Video Title / topic _____

Video Title / topic _____

Topic Introduction

Summarize your understanding of each paragraph.

Natural resources are part of the environment that people can extract, make use of, and even exploit. The general assumption is that people do not make natural resources – rather, we gather them.

Examples of natural resources include wood, water, coal, iron, oil, hydro-electricity, and uranium. A closely related field to the study of natural resources is aptly called natural resource management.

Natural resource management refers to the administration and stewardship of natural resources. The discipline often examines effects on quality of life for both present and future generations

Natural resource management brings together land use planning, water management, biodiversity conservation, and the future sustainability of industries like agriculture, mining, tourism, fisheries and forestry.

Paragraphs adapted from: https://www.eui.eu
https://en.wikipedia.org

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.**

What are natural resources?

1

2

Natural resources are materials or substances such as minerals, rocks, forests, water, and fertile land that occur in nature and can be used for economic gain. Natural resources exist without actions of humankind. Examples include:

- A mineral is a naturally occurring chemical compound.
- A rock can be an aggregate of different minerals.
- A forest is a large area dominated by trees.
- Freshwater is in lakes, streams, precipitation, and aquifers.
- Fertile land can supply essential nutrients to plants.

Honeycutt Science.

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.

Extract of Soil Fertility (Adapted from Wikipedia)

Bioavailable phosphorus is the element most often lacking from soil needed for agriculture. Nitrogen and potassium are also needed. For this reason these three elements are generally identified in commercial fertilizer.

As an example, a 10-10-15 fertilizer has 10 percent nitrogen, 10 percent (P_2O_5) available phosphorus and 15 percent (K_2O) water-soluble potassium.

Sulfur is another element that may be identified in a commercial fertilizer. For example, 21-0-0-24 would contain 21% nitrogen and 24% sulfate.

Note that inorganic fertilizers are generally less expensive than organic fertilizers. Also, nitrogen, phosphorus and potassium generally must be in the inorganic forms to be taken up by plants.

Even so, some have criticized the use of inorganic fertilizers. They claim water-soluble nitrogen doesn't provide for the long-term needs of plants and creates pollution.

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

Extract of Soil Depletion (Adapted from Wikipedia)

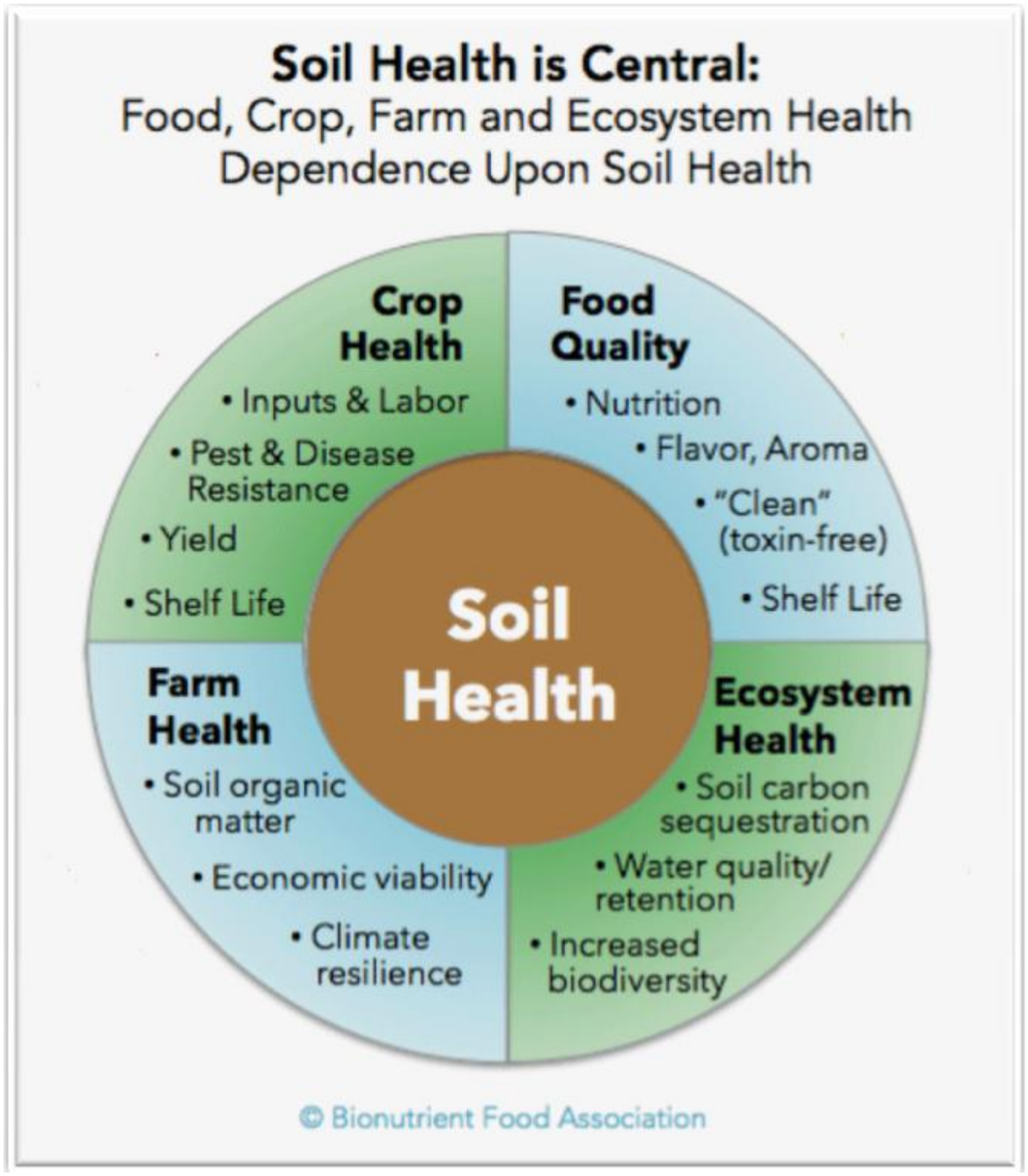
Soil depletion occurs when the components contribution to fertility are removed, not replaced, or rapidly changed. More generally, soil depletion may happen when conditions supporting fertility are not maintained. This often leads to poor crop yields.

In agriculture, depletion can be due to excessively intense cultivation and inadequate soil management. Soil fertility can be severely challenged when land use changes rapidly. Examples include:

- Soil compaction and close-cropping by grazing animals
- Failure to replenishing soil with manure
- Allowing herd animals to wander freely
- Removal of the forest and trees
- An increase in destructive floods
- Excessive plowing.

Draw Illustration

Copy and Label the Illustration in the Space Provided



Draw (Copy) the Illustration Here

http://soilhub.org

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,

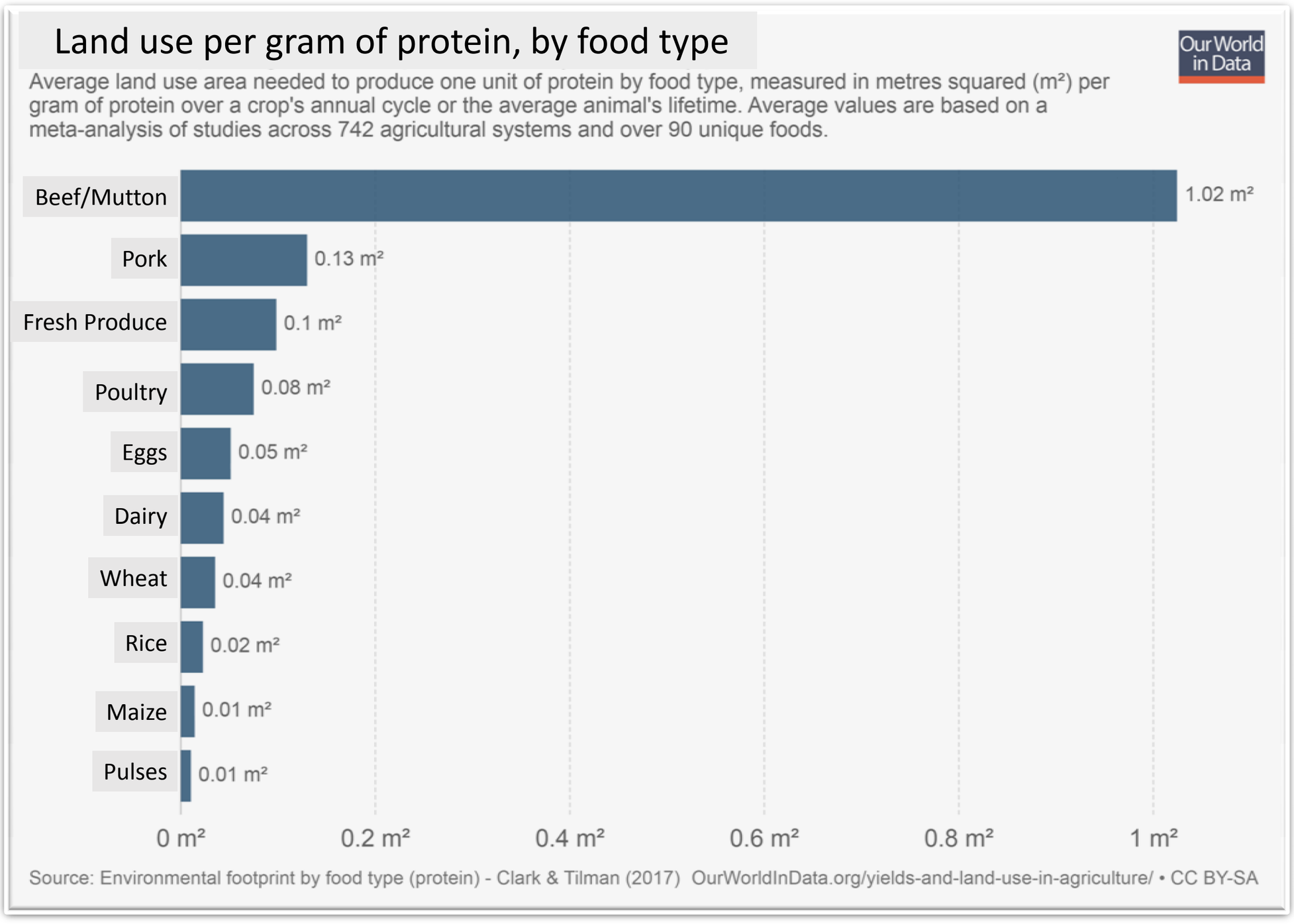
What does the X-axis represent _____

What does the Y-axis imply _____

Summarize what this graph represents or conveys

_____

https://ourworldindata.org



Show-Off Your Smarts!

Instructions

- Complete as an individual.
- Prepare to share/discuss in class.

Q1. Using a complete sentence, describe how naturally occurring rocks and minerals impact or affect your life.

Q2. Using a complete sentence, describe how forests and trees directly impact or affect your life.

Q3. Using bullet points, list six ways freshwater sources directly affect or impact your life.

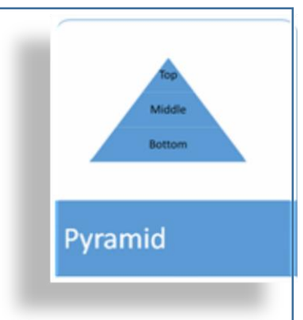
Q4. Using complete sentences, describe your current opinion regarding the use of inorganic fertilizer to improve soil fertility.

Make a Poster

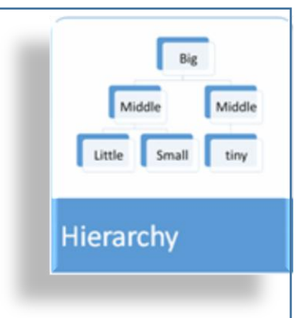
In the space provided, illustrate concepts presented in *Using Natural Resources* through the use of four diagram-types suggested.

List

Pyramid



Hierarchy



Process