

Extension Student Worksheet

What's the Smallest Thing You Know?

Materials

Reference material located in the media center

Computer with Internet service

Introduction to lesson

Measuring an object or assigning a numerical value to the length or height of an object allows you to compare one object's size to another object's size. In this activity you will be using measurement of length or height to compare the objects mentioned in the book.

Procedure:

1. Using reference material fill in the following information for the objects below:

African Savannah Elephant

Average height of male elephants _____ feet

Average age when they reach adulthood _____ years

Two interesting facts about elephants that you did not know:

- 1.
- 2.

Source of answers provided _____

American Pygmy Shrew

Length of a pygmy Shrew including its tail _____ inches

Average weight _____ grams

Where is the Pygmy Shrew usually found in North America _____

Source of answers provided _____

Ladybug

Range in length from _____ inches to _____ inches

Why do scientist increasingly refer to these insects as ladybird beetles or lady beetles? _____

Source of answers provided _____

Amoeba

Average length of an amoeba is _____ mm to _____ mm

Why does this length vary? _____

The amoeba was first discovered by _____

Source of answers provided _____

Paramecium

Average length of a paramecium is _____ mm to _____ mm

Paramecium are covered by small hair like projections called _____
which help the paramecium _____

Source of answers provided _____

Bacteria

Average length of bacteria is _____ mm to _____ mm

Bacteria can range in shape from _____, _____, and _____

Bacteria were first observed by _____ using a single-
lens microscope of his own design.

Source of answers provided _____

Atom

Diameter of atoms can vary from _____ nm to _____ nm

The atom is the basic unit of _____.

Atoms are made up of _____, _____, _____,
and _____.

Source of answers provided _____

Analysis:

Convert the following

1. Your elephant height in feet to meters
2. Your Pygmy Shrew length from inches to centimeters
3. Your ladybug length from inches to centimeters
4. How much larger than the Pygmy Shrew is the elephant (set up a ratio)
5. Which is larger the average length of an amoeba or the average length of a Bacteria?

Bonus: How much larger is the average bacterium than an atom?

Draw Conclusions

What is the largest object that you know?

What is the smallest object that you know?