

DAY 1: 7th Grade

ELA

MATH

SCIENCE

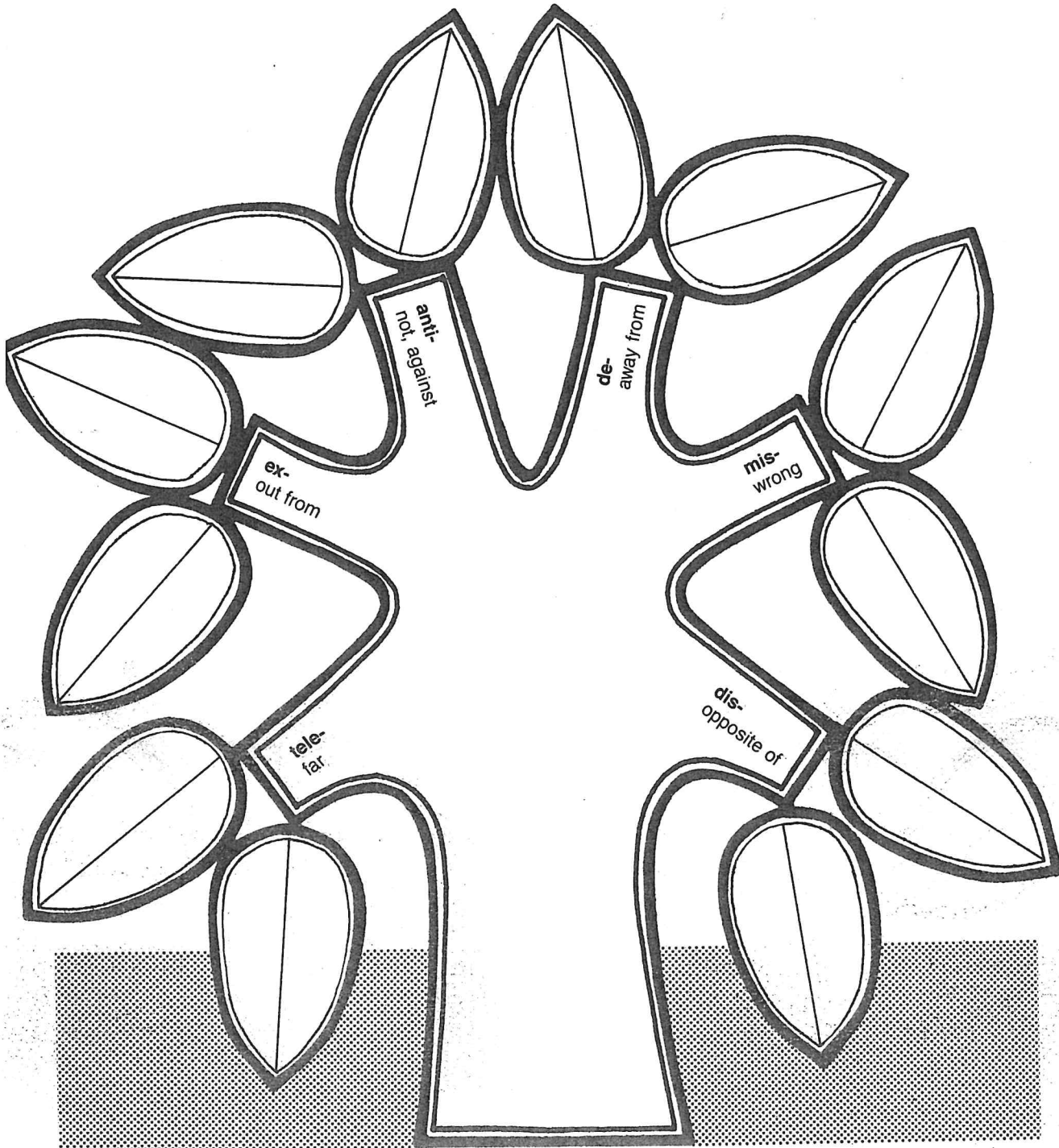
SOCIAL STUDIES

ELA 7
1

Pick a Prefix

A **prefix** is a word part that is added to the front of a base or root word to change its meaning.

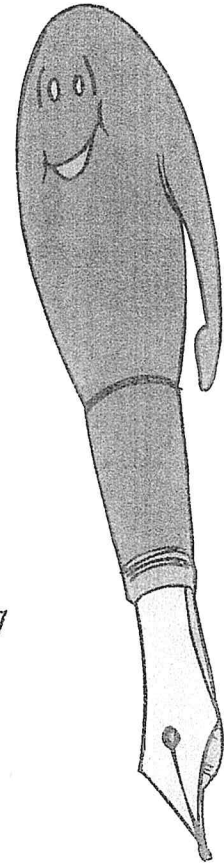
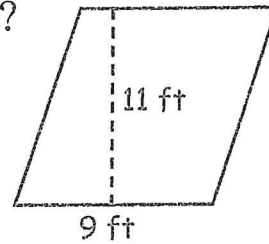
Help your vocabulary branch out. On the leaves at the ends of each prefix limb, write words that have been created by combining that prefix with base or root words.



Lesson #1

Math 17

1. Give the estimated difference between 3,475 and 7,652.
2. Draw intersecting lines.
3. $32,896 + 44,973 = ?$
4. If $9x = 18$, what is the value of x ?
5. Michael bought four packs of pens. Each pack contains 12 pens. Mark bought twice as many pens as Michael. How many pens did Mark buy?
6. $35 \times 27 = ?$
7. Round 4,876,213 to the nearest ten thousand.
8. How many sides does a pentagon have?
9. Find the GCF of 8 and 16.
10. $3,429 \div 9 = ?$
11. Find the area of the parallelogram.
12. A rectangular shaped waiting room has an area of 120 square feet and a perimeter of 44 feet. What are its dimensions?
13. $6.2 + 4.75 = ?$
14. Put $\frac{14}{16}$ in simplest form.
15. Water freezes at _____ degrees Celsius.
16. $\frac{3}{5} + \frac{2}{3} = ?$
17. $8 - 6\frac{4}{5} = ?$
18. Figures with the same size and shape are _____.
19. What is the probability of rolling an odd number on one roll of a die?
20. $\frac{5}{8} \bigcirc \frac{6}{7}$



Lesson 1

7th - NTI Day 1

Measuring Matter: Mass, Volume, and Density

Everything that you see around you is made of something we call **matter**. Matter includes stuff like your pencil, a snowball, orange juice, and even the air we breathe. If something has weight and fills up space, it's matter. We can measure different characteristics of matter, like how heavy it is (its **mass**), how much room it takes up (its **volume**), how heavy it is for the size it takes up (its **density**), and how much gravity pulls it (its **weight**).

When we talk about mass, we're talking about how much matter is in something. Let's say you have a book. That book's mass is how much matter the book is made of. You might think mass and weight are the same thing, but they're not. Weight is how strongly gravity pulls on something. If you were to take that same book to the moon, its weight would change because the moon's gravity is weaker than Earth's. But its mass would stay the same because the book is still made of the same amount of matter. Scientists usually measure mass in grams. For example, a typical textbook might have a mass of about 1,000 grams, which is also known as 1 kilogram.

Volume is a different thing. Volume is about how much space something takes up. For instance, you could fit more dimes in your pocket than nickels because dimes are smaller and take up less space. So, we say a nickel has a greater volume than a dime. We usually measure volume in cubic centimeters or milliliters. If you have a box and you want to know its volume, you need to measure how long it is, how wide it is, and how tall it is. Then, you use a formula to figure out the volume.

To measure the volume of a three-dimensional object such as a box, you first need to measure the length, width, and height of the box. Use the formula in the *Box Volume* table (**On Page 2**) to review the volume of Box A and then find the volume of Box B.

For some things, like liquids or objects with irregular shapes like rocks, it's better to use a tool called a graduated cylinder to measure volume. This tool works by showing how much water level rises when you put the object in it. This rise in water level equals the volume of the object. The unit for measuring volume in a graduated cylinder is a milliliter (mL), which is equal to 1 cm³.

Name: _____

Lesson 1

Measuring Matter: Mass, Volume, and Density

1. What is **matter**?

- A. Something that weighs nothing.
- B. Anything that has weight and takes up space.
- C. Only things that you can see.
- D. Things that don't have a shape.

2. What's the difference between weight and mass?

- A. Weight is how much matter is in something, and mass is how strongly gravity pulls on it.
- B. Weight and mass are the same thing and can be used interchangeably.
- C. Mass is how much matter is in something, and weight is how strongly gravity pulls on it.
- D. Mass changes when you go to the moon, but weight stays the same.

3. Which one of these is a unit used to measure volume?

- A. Grams
- B. Kilograms
- C. Milliliters
- D. Newtons

4. How can the volume of an irregularly shaped object like a rock be measured?

- A. Using a ruler
- B. Using a scale
- C. Using a graduated cylinder
- D. It cannot be measured

5. What happens when you put oil and water together in a container?

- A. They mix together.
- B. The oil sinks to the bottom.
- C. The oil floats on top of the water.
- D. The water evaporates.

Prehistory and Early Humans

COMPLETE UNIT GUIDE PACKET

OVERVIEW

The time before written records were kept is considered "Prehistory." This term loosely means the beginning of life on earth, but more commonly is used in reference to the time when human-like beings first appeared.

Prehistory is divided into three consecutive time periods, each one named for their predominant tool-making material. The first time period is the Stone Age, followed by the Bronze Age, and then the Iron Age.

Most of the information gathered from this time period is the result of archaeology, which is the scientific study of the human past. Various methods, including Radiocarbon Dating, have been employed to help scientists accurately date artifacts, human remains, and fossils.

These time periods are also marked by the hominid creatures that lived during them. Prehistory begins with "Lucy," who is the oldest hominid ever found.

Her species, Australopithecus, dates to about 3.2 million years ago. Hominids that follow are homo habilis, homo erectus, Neanderthals, Cro-Magnon man, and then Neolithic Man.

Each of these species mark major changes in human evolution, from their physical structure and brain size, to their improving technologies and culture.

Prehistory concludes with the Neolithic Revolution, which is the invention of farming and domestication by man. Before the Neolithic Revolution, early hominids were nomadic hunter-gatherers, who followed food sources in small familial groups called clans. However, the invention of farming and domestication led to the development of permanent societies, which then lead to further inventing and innovating, which resulted in specialization of labor, the development of an economy, and culture diffusion.



ESSENTIAL QUESTIONS

- a) Who are archaeologists and what do they study?
- b) How does the development of new technology, movement of people, and the way humans interact with their environment affect the world?
- c) How did early man adapt to his environment for survival?
- d) What is a revolution? Does the Neolithic Revolution deserve to be called one?
- e) How did man develop and change over time?
- f) How do scientists determine the age of ancient artifacts and human remains?

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GEOGRAPHY OF THE WORLD

Directions: On the map, label the continents and major bodies of water, then trace the migration routes of early humans out of Africa.

- A. Africa
- F. Arctic Ocean
- K. Mediterranean Sea

- B. Antarctica
- G. North America
- L. Pacific Ocean

- C. Asia
- H. South America
- M. Arabian Sea

- D. Australia
- I. Atlantic Ocean
- N. Bay of Bengal

- E. Europe
- J. Indian Ocean
- O. Red Sea

