DAY 2: 7th Grade

ELA

MATH

SCIENCE

SOCIAL STUDIES

Name _____

Cases in Conflict

A **conflict** is a struggle. Every story includes at least one of the four main types of conflicts.

1. **Man vs. Man** involves a direct struggle between two of the characters in a story. Examples include a man and wife who disagree about how their money should be spent; two little boys engaged in a fistfight; a boss who is firing an employee.
2. **Man vs. Nature** involves a struggle between a character and elements of nature that are beyond his control. Examples are a family stranded by a snowstorm; a woman who is unable to function because of illness; a man stalked by a wild animal in the forest.
3. **Man vs. Society** involves the struggle between a character and the rules or laws that govern the society in which he lives. Examples are a woman who runs a red light; a child who plays hooky; a burglar who breaks into a house.
4. **Man vs. Himself** involves the struggle between the character and his conscience. Examples are a woman who is tempted to steal money from her employer; a child who cannot decide whether or not to lie to his mother about his reason for arriving home late; a man who would like to quit his job.

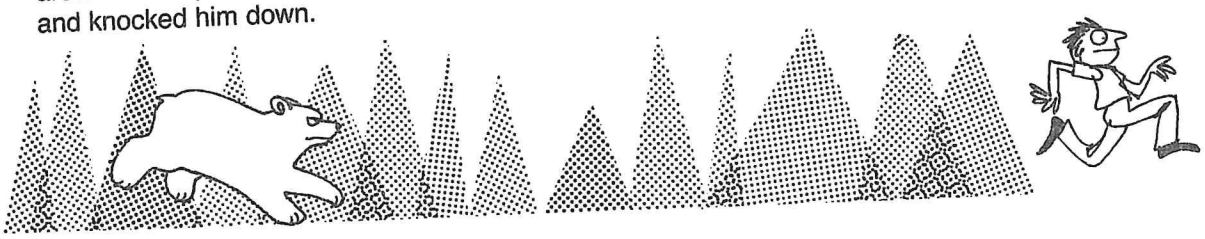
Identify the type of conflict in each of the following paragraphs.

1. _____ After only two days of summer vacation, Joshua and Sam were already bored, so they decided to kill some time by walking down to Judson's Variety, Smithfield's five-and-ten-cent store. Because Sam had no money with him, he could only eye the rack that held the Chocolate Craters, his favorite candy bar. Maybe no one would notice if he slipped one into his pocket.

2. _____ The big day had finally arrived, and Ron was on his way to see Mr. Desmond for an interview. This was the chance of a lifetime; he might actually be appointed vice-president of Desmond Diamonds, International. After donning his rain coat and kissing his wife good-bye, he raced through the rain to his car. As he neared the Chester Corners Bridge, he could see that traffic was at a standstill. The bridge was out! What would Mr. Desmond think when Ron didn't show up for the interview?

3. _____ The house was perfect, totally hidden from prying eyes. After checking to be sure that the garage was empty, Rusty stole around to the back of the house, where he had no trouble jimmying the sliding glass door. He found nothing of value on the living room shelves; but at the back of the closet in the master bedroom, he discovered the prized coin collection. This single discovery might make it possible for him to retire from his life of crime.

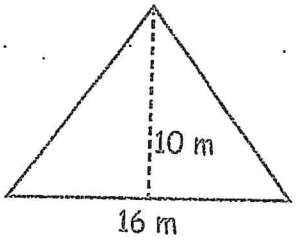
4. _____ "This is silly," thought Sandy to himself as he started to walk a little faster down Fifth Street. "Who would possibly want to follow me?" But the harder he listened, the more positive he became that someone was approaching him from behind. Suddenly, a strong arm spun him around. Sandy stared in disbelief but had no time for a response before the masked stranger slugged him and knocked him down.



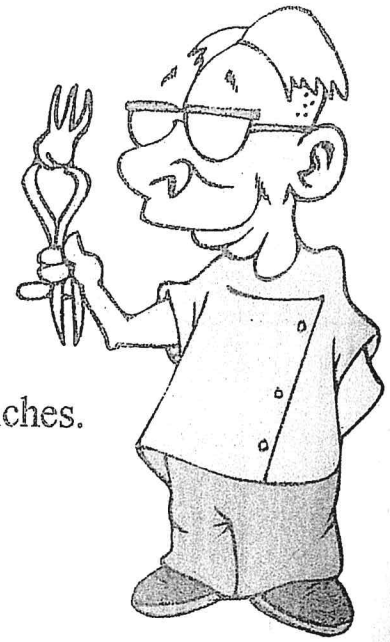
Lesson #2

1. List the factors of 24.
2. $1\frac{1}{3} + 3\frac{3}{4} = ?$
3. Put these decimals in order from least to greatest.

   0.56 0.056 0.5 0.65
4. Write $9\frac{1}{2}$ as an improper fraction.
5. Is 25 a prime or a composite number?
6. $86 + ? = 104$
7. Make a factor tree for 12.
8. $\frac{3}{4} - \frac{3}{8} = ?$
9. Find the area of the triangle.



10. $\frac{3}{10} \times \frac{5}{9} = ?$
11. Closed figures made up of line segments are _____.
12. Julie's bill for her last dentist appointment was $240. Her dental insurance will pay 60% of the bill. What amount will Julie have to pay after the insurance pays its part?
13. Find $\frac{2}{5}$ of 25.
14. Write 0.22 as a percent.
15. How many feet are in a mile?
16. $\frac{8}{10} \div \frac{4}{10} = ?$
17. Find the area of a square if a side measures 12 inches.
18. $8.841 \div 2.1 = ?$
19. What is 60% of 70?
20. Write the ratio *three to seven* in two other ways.



1.	2.	3.	4.
5.	6.	7.	8.
9.	10.	11.	12.
13.	14.	15.	16.
17.	18.	19.	20.

Name: Science

Mth - NTI Day 2

Lesson 2
Physical and Chemical Properties of Matter

Understanding **matter** is all about knowing its two main features - it has weight and it fills up space. There's a variety of physical and chemical characteristics, called **properties**, which help us identify different types of matter and tell them apart. Just like your favorite superhero has unique powers, every kind of matter has its unique properties that scientists use to understand it better.

Imagine you're in your kitchen, and you see a lemon on the table. How do you know it's a lemon? It's because of its color, shape, and smell, right? These characteristics are examples of **physical properties**, and you can spot them using your senses without altering the substance's makeup. By smell, touch, sight, taste, and in some cases hearing, we observe physical properties such as texture, density, buoyancy, shiny appearance or luster, solubility, and how well it conducts heat or electricity.

Physical properties are like clues for scientists to identify and compare different materials, like rocks and minerals. If you think about a diamond, you probably imagine a clear, hard, shiny gem, while talc, another mineral, feels very soft and appears whitish-gray. These physical properties help us tell them apart.

Density and **buoyancy** also help us in identifying matter. These properties talk about how close together the particles of a substance are. Buoyancy is a property that describes if an object can float or not. If something is less dense than another substance, it will float on top of the denser substance. Think about water, which has a density of 1 gram per milliliter, while cork has a much lower density of 0.24 grams per milliliter, making it float on water. But what about iron, with a density of about 8 grams per milliliter? What do you think will happen if you drop an iron ball into water?

Let's take the example of copper, which is great for making electrical wires. Why? Because of its physical properties, including its ability to conduct electricity, known as **conductivity**. Copper is also **ductile**, meaning we can heat it and pull it into thin wires. Glass is another ductile substance, which can be stretched into thin fibers to make fiber optics.

Whether a substance is solid, liquid, or gas at different temperatures is another important property. Pure water freezes into a solid at 0°C, but saltwater needs a colder temperature to freeze. More salt in the water means a lower freezing point. Despite changing its physical state from liquid to solid or gas, water remains chemically the same.

The **solubility** of a substance is another physical property. It describes whether a substance can dissolve in other substances. Have you ever mixed sugar or salt into a drink? Both dissolve easily in water, demonstrating their high solubility. Yet, this doesn't change their chemical makeup.

Chemical properties, on the other hand, describe how a substance changes when it comes into contact with elements like water, air, or fire. A good example is flammability or the ability to burn. We all know wood burns easily but water doesn't. When wood burns, it permanently changes into ash and gasses. This burning is a chemical reaction.

Metals show their chemical properties when they react with substances like acid. Zinc, when it comes in contact with hydrochloric acid, produces hydrogen gas. Iron reacts with oxygen to create **rust**, and copper reacts with oxygen to create a mineral called **cuprite**. These reactions change the substance's chemical makeup, demonstrating their chemical properties. To understand these properties better, take a look at the table below showing the properties of silver and potassium.

Metal Properties

Metal	Physical Property	Chemical Property
Silver	very ductile and malleable	tarnishes with exposure to air containing sulfur
Potassium	silvery white	catches fire when exposed to water

Density of Substances

Substances	Grams per Milliliter
Gasoline	0.73
Silver	10.49
Lead	11.34
Ethyl Alcohol	0.79
Diamond	3.5

Name:

Lesson 2
Physical and Chemical Properties of Matter

1. What are the two main features of matter?
   - **A.** It is heavy and solid.
   - **B.** It has mass and takes up space.
   - **C.** It is soft and hard.
   - **D.** It is light and transparent.

2. What are physical properties?
   - **A.** Changes that occur when substances react with each other.
   - **B.** Characteristics that can be observed without changing the composition of a substance.
   - **C.** The taste of different foods.
   - **D.** The sound that different objects make.

3. What can you tell about a diamond from its physical properties?
   - **A.** It is a clear, hard crystal with a shiny luster.
   - **B.** It is a soft texture and a whitish gray color.
   - **C.** It can conduct electricity very well.
   - **D.** It can dissolve in water easily.

4. What is buoyancy?
   - **A.** The ability of an object to sink.
   - **B.** The ability of an object to float.
   - **C.** The ability of an object to dissolve in water.
   - **D.** The ability of an object to conduct electricity.

5. Which substance will float on water?
   - **A.** Copper
   - **B.** Iron
   - **C.** Cork
   - **D.** Diamond

Name:

Lesson 2
Physical and Chemical Properties of Matter

6. What does it mean if a substance is ductile?
   - **A.** It can conduct electricity.
   - **B.** It can be heated and pulled into thin wires.
   - **C.** It can float on water.
   - **D.** It can dissolve in water.

7. What happens when wood burns?
   - **A.** It changes into water and gasses.
   - **B.** It changes into salt and gasses.
   - **C.** It changes into ash and gasses.
   - **D.** Nothing happens, it stays the same.

8. What is solubility?
   - **A.** The ability to burn.
   - **B.** The ability to conduct electricity.
   - **C.** The ability to dissolve in other substances.
   - **D.** The ability to float on water.

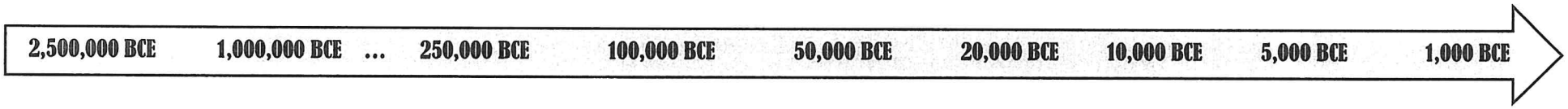
9. Which of the following is a chemical property?
   - **A.** Hardness
   - **B.** Buoyancy
   - **C.** Flammability
   - **D.** Conductivity

10. What happens when zinc reacts with hydrochloric acid?
   - **A.** It produces oxygen gas.
   - **B.** It produces hydrogen gas.
   - **C.** It produces carbon dioxide.
   - **D.** Nothing happens.

Timeline of the Prehistoric Era

Directions: Place the following events on the timeline and draw images or symbols for at least 4 of them. Note that the timeline spacing is not to scale due to the vast number of years covered.

Paleolithic Age
First stone tools made
"Lucy" (Australopithecines) Hominid
Homo Erectus Hominids
First Documented Use of Fire
Neanderthal Hominids Emerge
Lascaux Cave Paintings
Neolithic Revolution
Cro-Magnon Hominids
Çatalhöyük Founded
Stonehenge Built
Bronze Age Begins



Which event on this timeline do you feel like had the biggest impact on early humans and why?

Types of Hominids

Directions: Use the bank of names below to put the hominids in the correct evolutionary order. Then, identify important technologies and cultural notes/achievements from each group.

Cro-Magnons	Neanderthal	Homo Erectus
Homo Habilis	Neolithic Man	Australopithecus

Early Hominids

1) Name: _____ Technology: Cultural Notes/Achievements:	2) Name: _____ Technology: Cultural Notes/Achievements:	3) Name: _____ Technology: Cultural Notes/Achievements:
4) Name: _____ Technology: Cultural Notes/Achievements:	5) Name: _____ Technology: Cultural Notes/Achievements:	6) Name: _____ Technology: Cultural Notes/Achievements: