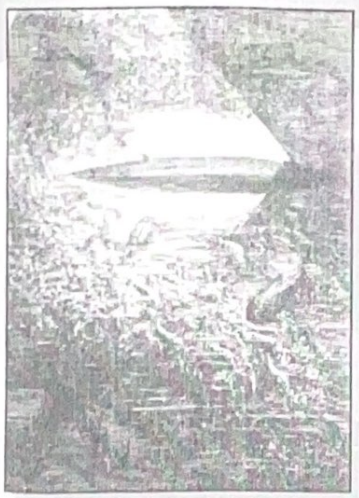
8th Grade ELA NTI Day 1 Name: _____

Finding the Main Idea



Captain Nemo's submarine, Nautilus

20,000 Leagues Under the Sea

by Jules Verne

Jules Verne wrote 20,000 Leagues Under the Sea in 1870. The narrator is Pierre Aronnax, a French marine biologist, who has been taken prisoner by Captain Nemo in his submarine called Nautilus. *This passage describes the submarine's library.*

Chapter X: The Man of the Seas

It was a library. High pieces of furniture, of black violet ebony inlaid with brass, supported upon their wide shelves a great number of books uniformly bound. They followed the shape of the room, terminating at the lower part in huge divans, covered with brown leather, which were curved, to afford the greatest comfort. Light movable desks, made to slide in and out at will, allowed one to rest one's book while reading. In the centre stood an immense table, covered with pamphlets, amongst which were some newspapers, already of old date. The electric light flooded everything; it was shed from four unpolished globes half sunk in the volutes of the ceiling. I looked with real admiration at this room, so ingeniously fitted up, and I could scarcely believe my eyes.

The Main Idea and Supporting Ideas

Write the main idea of the paragraph in your own words.

_____

_____

Write two supporting ideas for the main idea.

1. _____

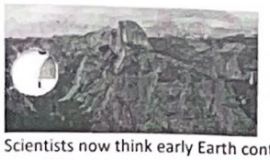
_____

2. _____

_____

Scientists say they are getting closer to determining Earth's birth date.

Day 1 8th grade Science



Scientists now think early Earth contained light-colored rocks, like the granite within Yosemite's Half Dome. Such rocks likely formed via plate tectonics. Photo from Wikimedia.

Early Earth might have looked much like Iceland, according to geologists. In that country, jet black lava fields extend as far as the eye can see. Dark inky mountains rise steeply above the clouds and bare black-sand beaches outline the land.

But slowly, over a long period of time, the world became less bleak and dark. Today, Earth also harbors light-colored rocks. The granite that composes Half Dome in Yosemite National Park is one such example. But scientists remain uncertain as to when the world started to transition from the one that looked like Iceland to that which we know today.

A new study published last week in the journal called Science suggests a date. The study believes the shift occurred more than 3.5 billion years ago. The finding tells scientists the color of the world's early beaches. It might also help them to understand when tectonic plates started to wake up and shuffle around. Tectonic plates are the interlocking slabs of Earth's crust. They fit together like puzzle pieces far beneath our feet.

Rocks And Tectonic Plates The lighter-colored rocks are known as felsic rocks and dark colored rocks are mafic rocks. But, light colored felsic rocks are actually dark, or mafic, rocks that have "come back to life." In short, felsic rocks form when mafic ones are pushed deep inside Earth.

It possibly happens when one tectonic plate slips under another in a process called subduction. Given that light-colored felsic rocks were abundant billions of years ago, plate tectonics had likely already kicked into action. To reach that conclusion, Nicolas Greber, a geologist at the University of Chicago, and his coworkers analyzed 78 different layers of sediment. Sediments are small stones or sand that was once carried off by wind or water and sank to the bottom of a liquid. They collected the sediment to pin down the ratio of felsic to mafic rocks. This was not as simple as counting light versus dark rocks. Both had long ago eroded into tiny particles.

Instead, Greber's team looked at titanium. This metallic element is present in both felsic and mafic rocks. However, the proportion of its isotopes shifts as the rock changes from mafic to felsic. Isotopes are atoms which are chemically the same. They have the same number of protons but a different number of neutrons.

Surprise In The Sediment Suppose you mix something that turns out both salty and sweet, Greber says. An analysis like this gives you "an idea of how much salt you added and how much sugar you added." He had expected the earliest sediments in his sample, which date back 3.5 billion years, would be composed mostly of mafic particles. But to his surprise, roughly half of the particles locked within were felsic.

Assuming those rocks formed within subduction zones, that means tectonic plates were already moving by that time. This conclusion just might help solve an age-old mystery: the birth date of plate tectonics. Scientists have long argued over the precise date these crustal plates started to wake up from their slumber. Estimates range from 1 billion to 4.2 billion years ago. That range is far too large if scientists want to understand the evolution of early Earth.

Shifting plates have the ability to dramatically reshape the planet by sculpting ocean basins and thrusting up mountain ranges. They also alter the composition of the atmosphere and oceans. This would have affected the supply of nutrients available to the fledgling life on our young planet.

Getting Closer To Earth's Birth Date With such a vast time range involved, it is easy to see why scientists cannot agree on a firm date. Paul Tackley, a geophysicist at the Swiss Federal Institute of Technology, disagrees with the latest birth date. He contends felsic rocks can form anytime mafic rocks sink deep within Earth—and not only along subduction zones. In fact, he argues this process can occur on a motionless plate.

Should a volcano erupt, for example, the newly released lava will push down on mafic rocks until they become so deeply buried that they melt under the high subterranean pressures and temperatures, transforming into felsic rocks.

Greber agrees that felsic rocks can certainly form like this. However, he argues such a high felsic ratio cannot be explained by Tackley's rock-sinking explanation alone.

Take Iceland, for example. Because the northern island is far from any subduction zones, high numbers of light-colored rocks simply do not form. This is the reason for the island's endless black lava fields and black-sand beaches. So Greber argues the high [illegible]s of light-colored rocks discovered in his old sediments can only mean plate tectonics began early in our planet's history.

But 3.5 billion years is just a lower limit. In the future he hopes to find even older rocks, allowing him to pinpoint an exact birth date.

Quiz

1 Read the sentence from the section "Rocks And Tectonic Plates." Then, fill in the blank.

Given that light-colored felsic rocks were abundant billions of years ago, plate tectonics had likely already kicked into action.

The word "abundant" in the sentence above tells the reader that ____.

(A) felsic rocks have changed color
(B) there were fewer felsic rocks than now
(C) felsic rocks were very hard to find
(D) there was a large number of felsic rocks

2 Read the sentence from the section "Surprise In The Sediment."

Shifting plates have the ability to dramatically reshape the planet by sculpting ocean basins and thrusting up mountain ranges.

Why does the author use the word "dramatically"?

(A) to highlight the beauty of watching shifting plates
(B) to emphasize the huge changes that can take place
(C) to show the speed with which oceans and mountains form
(D) to illustrate the different shifts that form oceans and mountains

3 Which of the following MOST influenced Nicolas Greber's conclusions about plate tectonics?

(A) mafic rocks sinking in subduction zones
(B) supplies of nutrients available on the planet
(C) counting the number of light and dark rocks
(D) titanium isotopes found in sediment layers

4 Why did Greber study mafic and felsic rocks?

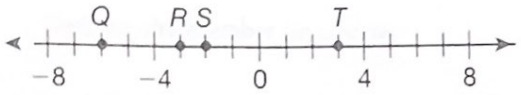
(A) to determine how layers of sediment formed
(B) to explain how subduction began
(C) to determine when plate tectonics began
(D) to explain when Earth's crust formed

Math 8th NTI Day 1

Lesson Practice

Choose the correct answer.

1. Which point on the number line best represents $-\frac{6}{2}$?



A. point Q
B. point R
C. point S
D. point T

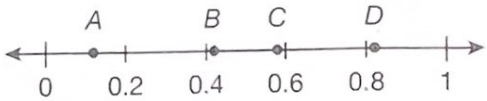
2. Which is the decimal expansion of $\frac{3}{11}$?

A. $0.\overline{34}$
B. 0.3434
C. $0.\overline{27}$
D. 0.02727

3. Which shows how -2.65 can be written as the ratio of two integers?

A. $-\frac{265}{20}$
B. $-\frac{213}{20}$
C. $-\frac{53}{20}$
D. $-\frac{2}{25}$

4. Which point on the number line below best represents 42%?



A. point A
B. point B
C. point C
D. point D

5. Which fraction is equivalent to 0.35?

A. $\frac{1}{5}$
B. $\frac{7}{20}$
C. $\frac{11}{20}$
D. $\frac{3}{5}$

6. Which point on the number line best represents $-2\frac{2}{3}$?

A. point J
B. point K
C. point L
D. point M

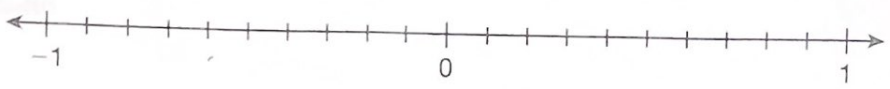
7. A gymnast is $4\frac{5}{12}$ feet tall. Which decimal is equivalent to $4\frac{5}{12}$?

   A. 4.416
   B. $4.41\overline{6}$
   C. 4.512
   D. $4.51\overline{2}$

8. The metal composition of a penny is 97.5% zinc and only 2.5% copper. How would 2.5% be written as a decimal?

   A. 2.500
   B. 2.05
   C. 0.25
   D. 0.025

9. Consider the number line below.



   A. Write 65% as a decimal. Show your work. Then plot and label a point for it on the number line.

   B. Write $-\frac{2}{9}$ as a decimal. Show your work. Then plot and label a point for it on the number line.

Duplicating any part of this book is prohibited by law.

Part A DAY 1 Return to Art, P.E., Computers, Practical Living teacher.

Get a clean sheet of paper. Sketch the image large using the steps provided. Add a background. Shade the artwork or color it.

100pts

-Uses most of the paper

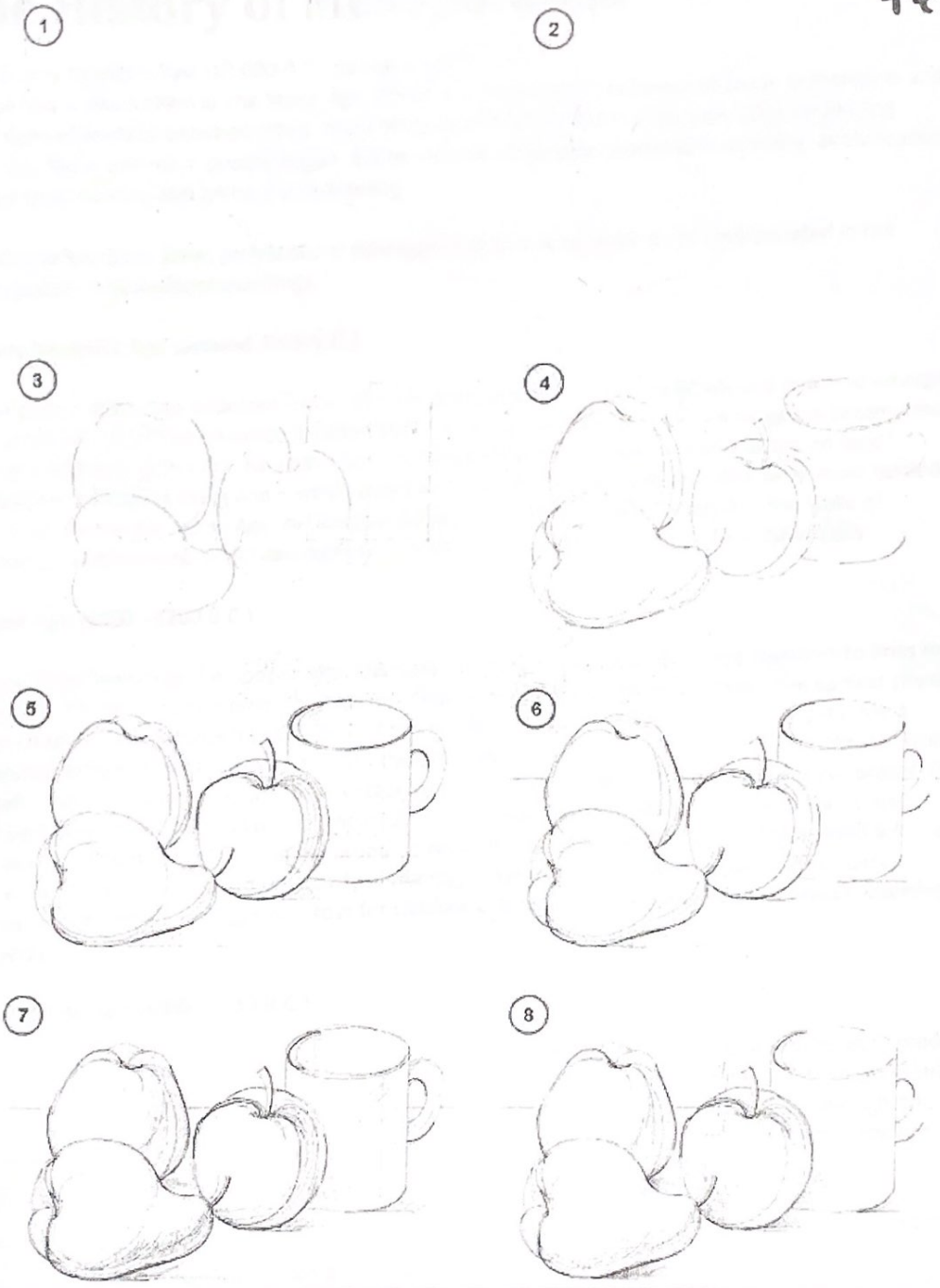
-Effort

-Colored or shaded

-Background

Part B Co-Curricular DAY 1

Return to Art, P.E., Computers, Practical Living teacher



Maynard/[illegible]: DAY 1

The History of Mesopotamia

Pre-Pottery Neolithic Age (10,000 B.C., possibly much earlier)
This period is also known as the Stone Age. There is archaeological evidence of crude settlements and early signs of warfare between tribes, most likely over fertile land for crops and fields for grazing livestock. More and more people began raising animals, or practicing animal husbandry, as civilizations shifted from hunting and gathering to farming.

As more settlements grew, architectural developments slowly became more sophisticated in the construction of permanent dwellings.

Pottery Neolithic Age (around 7000 B.C.)

In this period there was widespread use of tools and clay pots, and a specific culture began to emerge in the Fertile Crescent. The historian Stephen Bertman writes that stone tools and weapons became more sophisticated during this era. He adds that "the Neolithic economy was primarily based on food production through farming and animal husbandry." For this reason, communities were more settled than they were in the Stone Age. Architectural advancements naturally followed in the wake of permanent settlements, as did developments in the manufacture of ceramics and stone tools.

Copper Age (5900 - 3200 B.C.)

This period is known as the Copper Age, after the transition from stone tools and weapons to ones made of copper. The rise of cities began in this era, most notably in the regions of Sumer. The earliest city is often cited as Uruk, although Eridu and Ur have also been suggested. Mesopotamia was the most urbanized region in the ancient world, and the cities that grew up along the Tigris and Euphrates rivers, as well as those founded further away, established systems of trade which resulted in great prosperity. This period saw the invention of the wheel (3500 B.C.) and writing (3000 B.C.), both by the Sumerians. It also saw the first war in the world, recorded between the kingdoms of Sumer and Elam (3200 B.C.), with Sumer as the victor. Increased prosperity in the region gave rise to ornate temples and statuary, sophisticated pottery and figurines, toys for children and the use of personal seals to mark ownership of property.

Early Bronze Age (3000 - 2119 B.C.)

During this period, bronze replaced copper as the material from which tools and weapons were made. The rise of the city-state laid the foundation for economic and political stability which would eventually lead to the rise of the Akkadian Empire (2350 B.C.). This period saw the invention of the plough, the chariot and the sailboat, along with the cylinder-seal, the single most distinctive art form of ancient Mesopotamia.

The Akkadian Empire of Sargon was the first multinational realm in the world and Sargon's daughter, Enheduanna, the first author of literary works known by name. The library in the city of Mari contained over 20,000 cuneiform tablets (books), and the palace there was considered one of the finest in the region.

Middle Bronze Age (2119 - 1700 B.C.)

This period saw the expansion of the Assyrian Kingdoms (Assur, Nimrud, Sharrukin, Dur and Nineveh) and the rise of the Babylonian Dynasty (centered in Babylon and Chaldea). This growth created an atmosphere conducive to trade and, with it, increased warfare.

Hammurabi, King of Babylon (1792 - 1750 B.C.), rose from relative obscurity to conquer the region and rule for 43 years. Among his many accomplishments was his famous code of laws, inscribed on a large stone slab. Babylon became a leading center at this time for intellectual pursuit and high accomplishment in arts and letters. This cultural center was not to last, however, for it was sacked and looted by the Hittites, who were then succeeded by the Kassites.

Late Bronze Age (1700 - 1100 B.C.)

The collapse of the Bronze Age followed the discovery of how to mine ore and make use of iron, a technology which the Kassites made singular use of in warfare. However, the Kassites were later defeated by the Elamites and driven out. After the Elamites gave way to the Aramaeans, the small Kingdom of Assyria took over the region. Most Mesopotamian states were either destroyed or weakened following the Bronze Age Collapse around 1200 B.C., leading to a short "dark age."

Iron Age (1000 - 500 B.C.)

The Iron Age saw the rise and expansion of the Neo-Assyrian Empire under Tiglath-Pileser III. However, the Empire suffered a decline as rapid as its rise due to repeated attacks on central cities by Babylonians, Medes and Scythians. King Nebuchadnezzar II of Babylon destroyed Jerusalem during this period and forced the inhabitants of Israel into the "Babylonian Exile." He was also responsible for extensive construction in Babylon, creating famous buildings such as the Ishtar Gate and the Great Ziggurat (the "Tower of Babel"). The fall of Babylon to Cyrus II of Persia in 539 B.C. effectively ended Babylonian culture.

Classical Antiquity (500 B.C. - Seventh century A.D.)

After Cyrus II took Babylon, the bulk of Mesopotamia became part of the Persian Empire. This period saw a rapid cultural decline, most notably in the loss of the knowledge of cuneiform script. In 331 B.C. Alexander the Great conquered the Persians, bringing the culture and religion of ancient Greece to the region. After his death, Alexander's general Seleucus took control of the region and founded the Seleucid Dynasty, which ruled until 126 B.C.

By the time of the conquest by the Roman Empire in 116 A.D., Mesopotamia had largely adopted Greek culture and forgotten its old ways. The Romans improved the infrastructure of their colonies significantly through their introduction of better roads and plumbing and brought Roman law to the land. The entire culture of the region once known as Mesopotamia was swept away in the final conquest of the area by Muslim Arabs in the seventh century A.D., which resulted in the unification of law, language, religion and culture under Islam.

Answer the following and return

Day 1

1. How does the main idea that power was often shifting in Mesopotamia develop in the article?
    a. by describing the cultural advances made in literature, art and technology
    b. by describing the technological advances that were used for weapons and war
    c. by describing the different kings and what they contributed to civilization, especially in government
    d. by describing the ruling empires in the different ages and the violent changes in rule following each age

2. Which of the following sentences from the article BEST develops a central idea of the article?
    a. Architectural advancements naturally followed in the wake of permanent settlements, as did developments in the manufacture of ceramics and stone tools.
    b. This period saw the invention of the plough, the chariot and the sailboat, along with the cylinder-seal, the single most distinctive art form of ancient Mesopotamia.
    c. Among his many accomplishments was his famous code of laws, inscribed on a large stone slab.
    d. The collapse of the Bronze Age followed the discovery of how to mine ore and make use of iron, a technology which the Kassites made singular use of in warfare.

3. Which section of the article represents a major shift in the article's development? Why?
    a. "Pottery Neolithic Age (around 7000 B.C.)" because it is the first section that discusses notable changes to everyday life, including the move toward farming and raising animals.
    b. "Copper Age (5900 - 3200 B.C.)" because it is the first section that does not discuss developments in architecture, highlighting inventions that changed the world instead.
    c. "Early Bronze Age (3000 - 2119 B.C.)" because it is the first section that discusses economic issues as well as the introduction of literary works and libraries.
    d. "Middle Bronze Age (2119 - 1700 B.C.)" because it is the first section that does not discuss the advancement of tools and other technologies, emphasizing leadership and social growth instead.

4. Significance: Why is the event described in the article taught in schools today? What are the lasting lessons that we can learn from studying this event? Support your response with evidence from the text.

NTI Day 1 - Writing - Grade 8, Enix

Grammar: Punctuate Dialogue Correctly

Keep these rules in mind when writing dialogue

- Put quotation marks before and after a speaker's exact words.
- Place punctuation marks such as periods and commas inside the quotation marks
- If a speaker tag like *he said* comes before the quotation, place a comma after the speaker tag
- If a speaker tag follows dialogue, set a comma after the quotation (before the closing quotation mark) and a period after the speaker tag.

Original: Margot said I have seen the sun
Revised: Margot said, "I have seen the sun."

Directions: Rewrite the following sentences. Correct misplaced punctuation marks and insert any missing marks. Read the rules above and use them for reference.

1. "It's been raining for years", the girl said.
2. "Let's go outside, the teacher said".
3. The boy said "What are you waiting for?"
4. The sun looks like a penny Margot said.
5. No it's not, the children cried.
6. "It's like a fire, she said, in the stove."
7. "You're lying, you don't remember"! cried the children.
8. "What are you looking at? said William.
9. Now don't go too far," called the teacher.
10. Are we all here? the teacher asked.