8th Grade AMI Packet #16

AMI Day 16 - Write Notes Twice then read aloud to the grass, dirt, or an animal! ☺

* Scientific Notation

Small to large	large to small
.000000001 76 =	6,379,000,000.
1.76×10^{-8}	6.379×10^{9}
Small #'s are negative + # comes from times you move decimal.	large #'s are pos + # Comes from the times you move dec.

examples:

Small to large

- .00000001 768 to Sc No.
  move dec. 8 times to right, so
  7.68×10^{-8} is Sc No.

large to small

- 7,689,423,987,6 to Sc No.
  move dec. 10 times left, so
  $7.689423987\,6 \times 10^{10}$ is Sc. No.

Convert to Sc. No

1) .00012

2) 4million

3) 7 thousandths

4) .0000000003

5) 6,420,000,000

6) .00000000111

Small #'s have neg. exponent
(like #1, 3, 4, +6)

Large #'s have pos exponent
(like 2 + 5)

The Phone Call

Paul looked out the window and sighed. The driveway was still empty and it was getting dark. He checked the clock and sighed again, deeper this time. His dad had said that he would pick him up by 5:30, but it was almost seven and Paul hadn't heard a word from him. He walked up the stairs to his room and put away his baseball glove. Paul figured that even if his Dad did miraculously show, it wouldn't be much fun playing catch in the dark. Paul sat down on the couch and tried to do some of his reading homework, but he couldn't get his dad off of his mind.

The phone rang at about 8:00 and Paul let it go to the machine. It was his Dad: "*Hey Paul, I'm so sorry that I couldn't make it tonight. I had to finish up a big project at work. Maybe we can catch a baseball game this weekend. Oh wait, this weekend's no good. How about next weekend? That should work. You and I are going to the stadium for sure, Paulie. I hope all is well...*"

Paul listened to the machine in disgust. He knew that his dad had a job and a life, but he couldn't understand why he was always flaking out on him. Paul thought to himself: *Couldn't someone else get one of these bad news speeches once in a while? Why does it always have to be me?* Paul crashed on the couch with his book opened to the first page and fell asleep.

The next day at school, Paul didn't turn in his math or science homework and he failed a pop quiz in reading class. Paul's homeroom teacher, Mr. Mathews, noticed Paul's uncharacteristically poor performance and asked him to stay after class. Paul sort of murmured a response that sounded like "Ok." When the bell rang, the other children filed out of class. Paul huffed and waited with his head on his desk. Mr. Matthews pulled up a chair next to him.

"What's up, Paul? You're not doing your homework, you're not studying for tests, and this isn't like you. Something must be bothering you. What is it?" Paul didn't want to tell him. He knew that if he started talking a flood of emotions would pour out of him. He just wanted to be alone with his pain, so he sat there quietly, not even looking at Mr. Matthews. "Well Paul, if you don't want to talk, I will. I know that something's bothering you and you've got to get it out. You don't need to tell me, but you need to tell someone or this thing is going to eat you up. Paul, you've got to feel your best to do your best. The sooner you get this thing off of your chest, the sooner you can heal."

As Paul walked home from school, he reflected on the things the Mr. Matthews had told him. He knew that he hadn't been himself recently. Maybe he stopped doing his work because he was looking for attention from his father. He hadn't really thought about it too much up until now, but as he walked home that night he realized that he wasn't just letting his dad spoil his plans: he was letting him spoil his life. Paul figured that Mr. Matthews was right. He couldn't do his best until he felt his best. He decided to take his advice and talk to someone about it.

That night when Paul got home from school, he called his Dad. The call went to voicemail after ringing seven or eight times. Paul had heard his Dad's answering machine message more times than he cared to remember, but this time things were different. When it ended, he would say what he really felt. When the phone beeped, Paul began talking: "*Dad, it's Paul. I can't go to the stadium with you next weekend. I've got a lot of homework to catch up on. Also, I don't really want to spend another day looking out the window and waiting. When you break plans with me, Dad, it hurts me, and I'm sick of getting hurt. It's not too late to rebuild our relationship, but we're going to have to start small. Maybe you can help me with my homework sometime or something. Dad, I love you, but that's how I feel.*"

As Paul ended the call, he felt as though a tremendous burden had been lifted off of his shoulders. He didn't know whether his dad would change. He didn't even think that he would, but it didn't matter. Paul had changed. He had expressed his feelings to the right person, rather than just bottling them up inside of himself and he had a clear head as he worked though his assignments that night.

Name: _____

The Phone Call - Reading Skill Sheet

1. Author's Purpose: **entertain** **inform** **persuade**
Why did the author write this?

2. Genre: _____ Subgenre: _____
Ex: Nonfiction, fiction, or folklore Ex: Autobiography, science fiction, fable, informational writing, etc.

3. Narrator's Point of View: _____
1st-person, 2nd-person, 3rd-person objective, 3rd-person limited, or 3rd-person omniscient

4 & 5. Summarize the text:
Five key events from beginning, middle, & end.

6. **Exposition**

A.
Setting: _____
When and where does the story take place?

B. Conflict: _____
Describe the conflict in the story.

7. **Rising Action:** List some events that occur before the climax.

1. _____
2. _____
3. _____

Climax:
The turning point

Falling Action: List some events that occur after the climax.

1. _____
2. _____

Resolution:
When the conflict is solved

Day 10

NAME _____ DATE _____ CLASS _____

WAVES AND ELECTROMAGNETIC SPECTRUM

Use the notes provided to you as well as the previous days worksheets to complete the following questions.

Choose the answer that best completes each statement.

1. A disturbance that transfers energy from place to place is called a _____.
   a. Wave
   b. medium
   c. vibration
   d. compression

2. The highest parts of a transverse wave are called _____.
   a. troughs
   b. Crests
   c. nodes
   d. wavelengths

3. The distance between two corresponding parts of a wave is the wave's _____.
   a. Amplitude
   b. Wavelength
   c. frequency
   d. speed

4. Frequency is measured in units called _____.
   a. Amps
   b. hertz
   c. nodes
   d. antinodes

5. Electromagnetic waves can transfer energy without a (an) _____.
   a. Medium
   b. electric field
   c. magnetic field
   d. change in either a magnetic or an electric field

6. When a police officer uses radar for speed control, the officer is using what kind of electromagnetic waves?
   a. radio waves
   b. gamma rays
   c. ultraviolet rays
   d. x-rays

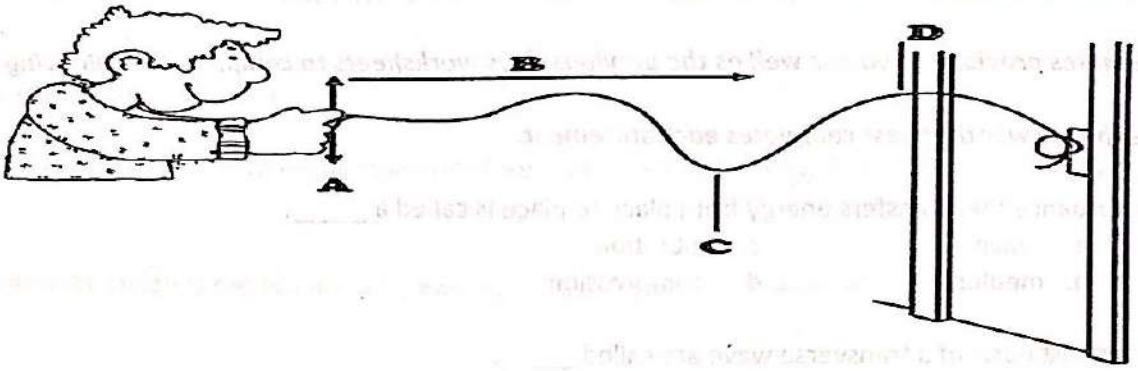
7. Global Positioning System signals can tell you _____.
   a. what television station you are tuned to
   b. your exact location on Earth
   c. how many satellites are in orbit
   d. who is sending a message to your pager

Fill in the Blank – Complete each statement with the correct vocabulary term.

8. The material through which a wave travels is called a (an) _____.
9. The part of the electromagnetic spectrum you can see is called _____ light.
10. _____ are used to make images of bones inside the human body.

Day 16

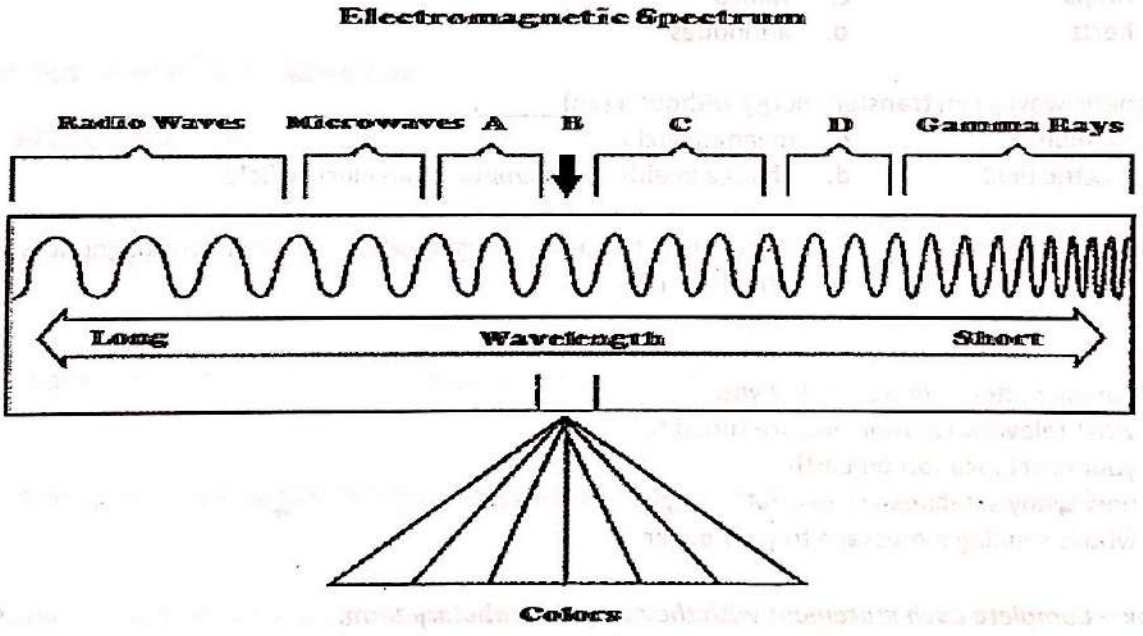
Use the following diagrams to answer each question.



11. What does the person transfer to the rope by pulling it up and down at point A? _____

12. What does the direction of arrow B indicate? _____

13. What kind of wave is being generated? _____



14. Name the type of wave that has the highest frequency. _____

15. Name the type of wave labeled C. _____

16. Which letter shows the type of wave that can be seen by the human eye? _____

17. Name the type of wave labeled A. _____

18. Which letter indicates X-rays? _____

8th Grade Arkansas History AMI Day 16 (4/15/2020)

Directions: Use the reading passage on the next page to answer the following questions. The questions go in order with the passage. You do not have to write in complete sentences, but make sure you thoroughly answer each question.

Questions from **Transportation**

1. What was another effort to modernize the state that nearly collapsed in the face of the Great Depression?

2. The state complicated the situation by passing a law in 1907 that did what?

3. How did the state attempt to adapt to the evolving transportation situation?

4. What was the Martineau Road Plan?

5. How much was the stat's highway debt by 1933?

Questions from **Crisis in Agriculture**

6. What was agriculture in the state saved by?

7. Most of the limited expansion in the manufacturing sector came as a result of what?

8. What did historian Carl Moneyhon suggest was the most significant problem facing agriculture?

9. What placed a particularly loathsome system of debt on those least able to support it?

10. What was the difference between a sharecropper and a tenant farmer?

Transportation

Improved transportation was another effort to modernize the state that nearly collapsed in the face of the Great Depression. The construction of roads had always been the province of local governments, and this had worked reasonably well until the advent of the automobile, which demanded a much more comprehensive system of roads and the construction of roads that would tolerate automobile traffic. The state complicated the situation by passing a law in 1907 that allowed counties to create road improvement districts, sell bonds to pay for the construction of the roads, and then tax the citizens who were to benefit. This seemed like a logical way to proceed, but in fact, it led to the problem of poorly coordinated and unsupervised construction. Acting without supervision or coordination, many counties constructed roads that were inadequate or simply ended at the county line. Still, the state attempted to adapt to the evolving situation, requiring automobile drivers to purchase licenses in 1911 and creating a state highway commission in 1913. The commission, however, had little control over the widely scattered road improvement districts, and the passage of the Alexander Road Improvement law in 1913 further intensified the localized nature of road construction.

Although the state was able to qualify for federal aid to roads in 1917, by 1921, the road system was in such disarray that its ability to qualify for matching funds in a federal roads program was in question. In order to participate in the program, the state needed to abolish the road improvement districts and centralize road construction in the Arkansas Department of Transportation. When the legislature balked, federal funds were withdrawn, and the improvement districts faced bankruptcy. Only then did the legislature pass the Harrelson Road Act in October 1923, giving the highway commission supervisory responsibility. However, the separate road districts continued to exist, and the commission exercised little significant influence. By 1927, the county road districts were either bankrupt or close to it. Governor John E. Martineau secured legislation that allowed the state to assume the debts and responsibilities of the road improvement districts and launched the Martineau Road Plan, an ambitious state highway construction program. His successor in office, Harvey Parnell, secured passage of legislation authorizing $18 million in bonds to continue the expansion of the Martineau Road Plan, and additional legislation permitted the sale of $7.5 million in bonds to finance a highway toll-bridge construction program. However, Parnell's ambitious plans for expansion of the highway system in Arkansas were largely undermined by the deteriorating economic situation and the drought of 1930–1931.

By 1933, the state's highway debt reached a staggering $146,000,000, and Gov. Marion Futrell devised a strategy for refunding the highway debt. To consolidate all the highway debts into one, he called a special

session in 1934 and pushed his Highway Refunding Act through. The highway debt problem had been temporarily solved.

Crisis in Agriculture

Agriculture, which dominated the state's economy at the beginning of the century and continued to do so throughout the era, was also saved by New Deal programs. Although it was not the sector of the economy that New South advocates of the late nineteenth century championed, it was the one that expanded most dramatically in the twentieth century. In fact, most of the limited expansion in the manufacturing sector came as a result of the processing of agricultural or timber products. From apple orchards in the northwest to the cotton plantations of the Delta, agriculture fed the manufacturing sector. The orchard industry in the state, however, fell victim to a blight in the 1920s, and the cotton economy nearly crumbled under the burden of a precipitous decline in cotton prices following World War I.

As historian Carl Moneyhon suggests, the most significant problem was that too many people were trying to make a living on too few farms. Between 1900 and 1930, the number of farmers in Arkansas increased from 178,694 to 242,334, while the acres in farms actually decreased slightly, from 16,636,719 in 1900 to 16,052,962 in 1930. This statewide total masked a trend occurring in the Delta, where an expansion of the plantation system was transforming the landscape. With the advent of railroads in the late nineteenth century and the emergence of the lumber industry in many previously overlooked Delta counties, the plantation system supplanted forests and swamps. One particularly striking index of the plantation's arrival was the increase in tenancy. During a period when the number of farmers had increased significantly, the number of farm owners remained almost steady, from 84,138 in 1900 to 85,842 in 1940. The number of share tenants increased in that period from 53,837 to 83,835.

The particularly loathsome systems of tenancy and sharecropping placed an extraordinary burden of debt upon those least able to support it. Although both are forms of tenancy, the common vernacular characterized them as sharecropping or tenancy. In the sharecropping arrangement, a man without implements and mules secured a contract, typically a verbal one, with a land owner. The sharecropper was provided mules, implements, a place to live, and advances from the land owner's commissary. At the end of the year, the planter paid the sharecropper about one third of the cotton crop in exchange for his labors. Given the high interest rates at the company store, many sharecroppers found themselves owing the planter at the end of the year. The tenant farmer was only marginally better off. He brought more to the bargaining table—mules and implements—but he, too, lived in a house owned by the planter and secured advances from the company store. Although he received half of the cotton crop in exchange for his labor, he often found himself in debt at the end of the year.

Source: https://encyclopediaofarkansas.net/entries/early-twentieth-century-1901-through-1940-403/