

Taylor County Schools

Day 1

Eighth Grade



1. Complete this packet on the first ICE Day.
2. Write your name on the booklet.
3. Return this completed packet after the ICE Pack Day. You will keep the others in the envelope for future ICE Pack Days.

Name: _____

Student Name: _____ Teacher: _____

- 1 **Which statement is *not* true?**
 - A All fractions are real numbers.
 - B A number can be both rational and irrational.
 - C All whole numbers are integers.
 - D All natural numbers are real.

- 2 **Which statement is true?**
 - A All integers are irrational numbers.
 - B A number can be both rational and irrational.
 - C All real numbers are integers.
 - D All integers are rational numbers.

- 3 **Which sentence is *not* true about rational numbers?**
 - A Integers and fractions are rational numbers.
 - B Whole numbers are rational numbers.
 - C π is a rational number.
 - D $\sqrt{25}$ is a rational number.

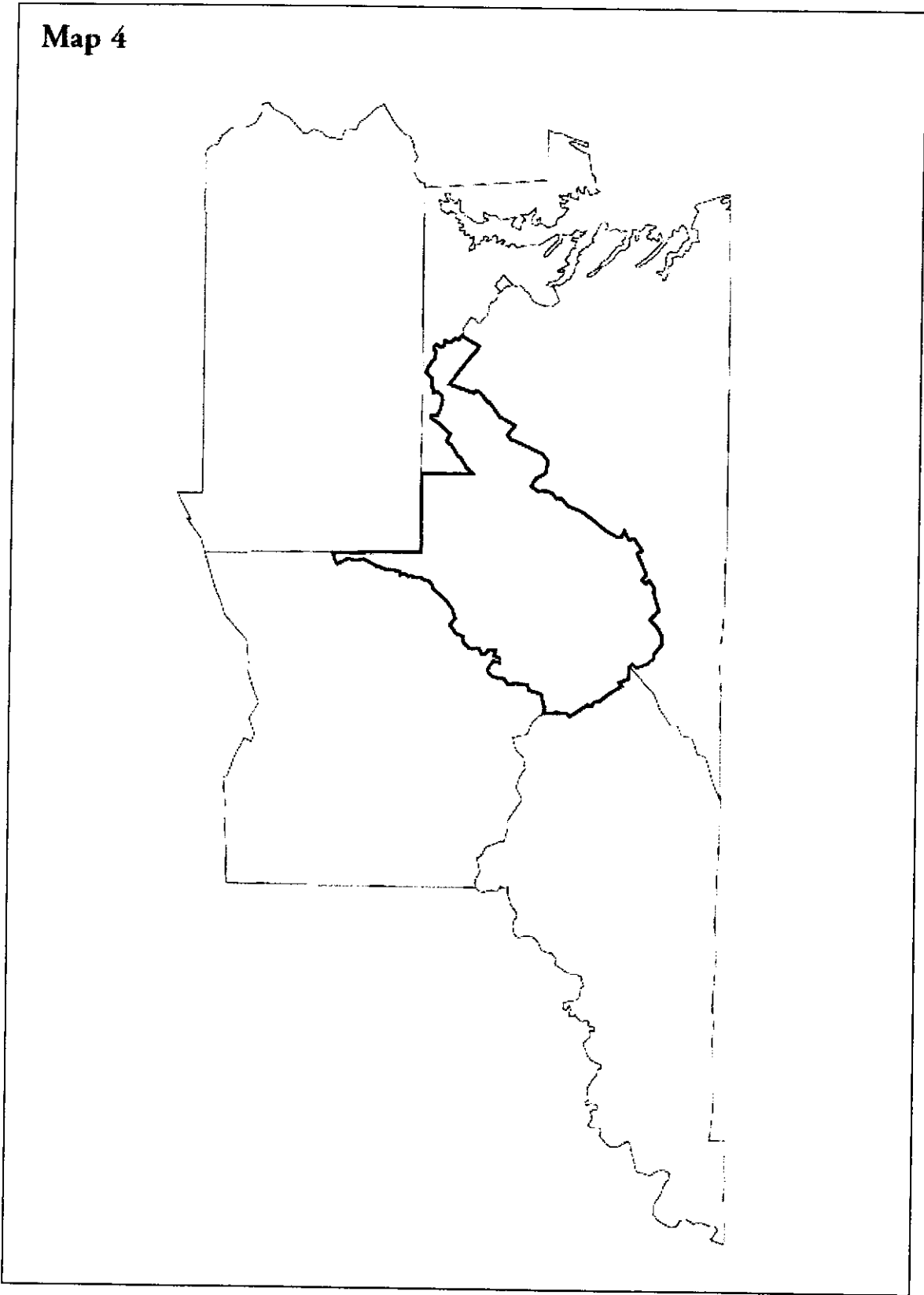
- 4 **Which of the following is NOT a rational number?**
 - A 0. $\overline{2}$
 - B 4. $\overline{7}$
 - C $\sqrt{8}$
 - D 3

- 5 **Which fraction is equivalent to a repeating decimal?**
 - A $\frac{1}{10}$
 - B $\frac{1}{15}$
 - C $\frac{1}{16}$
 - D $\frac{1}{20}$

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- 6 **Between which two whole numbers is $\sqrt{91}$?**
- A 10 and 11
 - B 9 and 10
 - C 8 and 9
 - D 91 and 92
- 7 **What is $\sqrt{45}$ estimated to the nearest tenth?**
- A 6.2
 - B 4.5
 - C 6.7
 - D 6.5
- 8 **Which of the following best represents $\sqrt{99}$? A number between —**
- A 7 and 8
 - B 8 and 9
 - C 9 and 10
 - D 3 and 4
- 9 **A square has an area of 29 square inches. Which choice below is the BEST estimate for the side length of the square?**
- A More than 5 inches but less than 6 inches.
 - B More than 7 inches but less than 8 inches.
 - C More than 14 inches but less than 15 inches.
 - D More than 25 inches but less than 36 inches.
- 10 **Order the following from LEAST to GREATEST: $\frac{7}{5}, \sqrt{5}, \frac{7}{9}$**
- A $\sqrt{5}, \frac{7}{5}, \frac{7}{9}$
 - B $\sqrt{5}, \frac{7}{9}, \frac{7}{5}$
 - C $\frac{7}{9}, \sqrt{5}, \frac{7}{5}$
 - D $\frac{7}{9}, \frac{7}{5}, \sqrt{5}$

Student Name: _____ Teacher: _____



Label the four geographic areas and the five states that border West Virginia

Student Name: _____ Teacher: _____

Scientists hatch 4 new super-heavy elements, earn place on periodic table

By Los Angeles Times, adapted by Newsela staff on 01.12.16

Word Count 715

The periodic table is getting a little bit longer, thanks to the addition of four new elements.

The discoveries of elements 113, 115, 117 and 118 were confirmed last week by an international scientific group. The group makes sure that the newly discovered elements are real and deserve a permanent spot on the periodic table. The periodic table is a chart listing all the elements. It hangs in science classrooms around the world.

Elements, which cannot be separated into smaller substances, make up all matter. Atoms are the building blocks that make up elements. At the center of each atom is a nucleus made of small particles called protons and neutrons. Nuclei is the plural of nucleus.

The new elements are known as super-heavy elements because the nuclei of their atoms are so enormous. Element 118, for example, is the heaviest element to date, with 118 protons and 176 neutrons.

Most elements are found in nature. Huge, super-heavy elements are not normally found in nature, and it can take years to make them in special laboratories.

Not Found In Nature

"Probably the only other place where they might exist in a short period of time could be a supernova," said scientist Dawn Shaughnessy. In a supernova "you have so much energy and so many particles that are really heavily concentrated," Shaughnessy is the lead researcher for the Heavy Element Group at Lawrence Livermore National Laboratory. The group had a part in three of the discoveries.

Super-heavy elements are also highly unstable. They exist for just a fraction of a second before they begin to decay, or break down.

Scientists never observe unstable elements directly. Rather, they know they briefly existed because they are able to measure what is left when they decay.

The heaviest known elements are made by smashing two particles together and hoping they will stick. It's a game of chance with extremely long odds. Scientists first create a target out of a carefully chosen atom with a particular number of protons and neutrons. The process can take months.

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A Matching Game

Then they purify it and blast it with another special atom. They use an atom that they think has the best chance of recombining with the target.

“It’s really hard to smash two things together and get them to stick,” Shaughnessy said.

“There is so much positive charge — they want to repel each other.”

It takes several months to try this smashing experiment roughly 10 quintillion times (10 followed by 18 zeros). If just one of those attempts works, the experiment is considered a success.

“And we’re not always successful,” Shaughnessy said. At most, it will work about three times in 10 quintillion tries, she said.

There are only a few laboratories around the world equipped to do this work. The experiments generate so much information that supercomputers are required to search through it all and find signs of a successful mash-up.

Scientists At Work All Over World

Elements 115, 117 and 118 were created in Russia at the Joint Institute for Nuclear Research. Scientists from Lawrence Livermore worked on all three discoveries. The association that created element 117 also included researchers from a laboratory in Tennessee and the University of Nevada, Las Vegas.

The international chemistry group credited a Japanese group with the discovery of element 113. They are the first Asian scientists to find a new element.

Until now, these elements have been known by the generic Latin names ununtrium, ununpentium, ununseptium and ununoctium. Their confirmation paves the way for them to get permanent names. Traditionally, that honor falls to the researchers who first found them.

From 116 To Livermorium

The team from Lawrence Livermore and their Russian teammates had previously named element 116 Livermorium in honor of the Northern California lab. No word on what 115, 117 and 118 might be called.

With last week’s announcement, 26 elements have been added to the periodic table since 1940. Shaughnessy said her team isn’t done yet.

The scientists will continue trying to make heavier elements until there are just so many protons that they won’t stick together.

“These super-heavy elements help us understand how the nucleus functions and redefines our ideas of matter and how it behaves,” she said. They are studying “what the extreme limits of matter might be.”

Student Name: _____Teacher: _____

Quiz

- 1 Read the section "Not Found in Nature." Select the paragraph that explains how scientists examine the results of their tests.

- 2 Which sentence from the article BEST explains why scientists are sometimes not successful in creating super-heavy elements?
 - (A) Most elements are found in nature. Huge, super-heavy elements are not normally found in nature, and it can take years to make them in special laboratories.
 - (B) Super-heavy elements are also highly unstable. They exist for just a fraction of a second before they begin to decay, or break down.
 - (C) It takes several months to try this smashing experiment roughly 10 quintillion times (10 followed by 18 zeros). If just one of those attempts works, the experiment is considered a success.
 - (D) There are only a few laboratories around the world equipped to do this work. The experiments generate so much information that supercomputers are required to search through it all and find signs of a successful mash-up.

- 3 What is the summary of the section "A Matching Game"?
 - (A) Scientists are now able to create new elements; it requires a very large laboratory with supercomputers.
 - (B) Scientists will be able to create more elements in the future; they will need new targets for atoms.
 - (C) Scientists can make new elements by smashing two particles together; they need new equipment to learn more.
 - (D) Scientists are able to create super-heavy elements in a specialized lab; it requires an enormous number of attempts before one is successful.

- 4 Which sentence BEST supports the main idea of the section "From 116 To Livermorium"?
 - (A) With last week's announcement, 26 elements have been added to the periodic table since 1940.
 - (B) Shaughnessy said her team is not done yet.
 - (C) The scientists will continue trying to make heavier elements until there are just so many protons that they will not stick together.
 - (D) They are studying "what the extreme limits of matter might be."

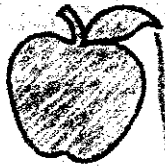
Student Name: _____ Teacher: _____

Please write a Narrative about your Snow Day at home. You need to include dialogue, characters, setting, and point of view. It needs to be three paragraphs, five sentences each.

Student Name: _____

Teacher: _____

**Hands-On
HEALTH**



ACTIVITY

**Stress
Chasers**

When you're feeling stress, your whole body is affected. You may feel stiffness in your shoulders or neck. Your mind may be cluttered with troubling thoughts. The table below lists several exercises you can do to help remove this tension from your body and mind.

WHAT YOU WILL NEED

* pencil and paper

WHAT YOU WILL DO

Estimate your current level of body tension or stress. Use a scale of 1 to 5, where 1 is "totally calm" and 5 is "very stressed." Write this number on your paper, along with the words "Starting Stress Level."

Perform the first exercise on the list below the photo. When you are done, estimate your stress level again. Write this number down, along with the name of the exercise.

Repeat the process for each of the other exercises on the list.



WRAPPING IT UP

Compare your results with those of your classmates. How did each exercise on the list affect your tension level? Which exercises worked best for your classmates in general?

- Deep Breathing Close your eyes and take a deep breath. Hold it for a moment, then slowly exhale. Repeat several times.
- Shoulder Lift Hunch your shoulders up to your ears for a few seconds, then release. Repeat.
- Elastic Jaw Open your mouth and shift your jaw as far to the right as you can without discomfort. Hold for a count of three. Repeat on the left side.
- Fist Clench Make a fist. Tense the muscles in your hand and forearm, then release. Repeat this with your other hand.
- Visualization Close your eyes. Picture a pleasant scene, such as a sunny beach or park. Hold this image in your mind for several seconds.

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Body Mass Index (BMI) Worksheet

Here is how to calculate your body mass index...

1. Convert your body weight to kilograms by dividing your weight by 2.2.
2. Convert your height measurement to meters by multiplying your height in inches by 0.0254.
3. Square the height measurement.
4. BMI equals body weight in kg divided by height in meters squared.
5. Now you should have your BMI.

Here is a sample for a person who weighs 100 lbs and is 60 inches tall...

- 100 / 2.2 = 45.36 kg
1. 60 * 0.0254 = 1.52 m
 2. 1.52m * 1.52m = 2.31 m²
 3. 45.36kg / 2.31 m² = 19.6
 4. BMI = 19.6

Now your try yours...

1. _____ / 2.2 = _____ kg
Your weight in pounds divided by your weight in kg
2. _____ x 0.0254 = _____ m
Your height in inches multiplied by your height in meters
3. _____ m x _____ m = _____ m²
Your height in meters multiplied by your height in meters squared
4. _____ kg / _____ m² = _____
Your weight in kg divided by your height in meters squared your BMI
5. **Your Body Mass Index (BMI) = _____**

Still having trouble calculating it...

The following website may help.

1. Go to www.healthatoz.com
2. Click on tools
3. click on healthy weight tools
4. click on Body Mass index and fill in the boxes

Where should I be...

According to the Cooper Institute to be considered healthy your BMI should be in the following ranges.

	Girls
11	16.9 - 24
12	16.9 - 24.5
13	17.5 - 24.5
14	17.5 - 25
15	17.5 - 25

	Boys
11	15.8 - 21
12	16.0 - 22
13	16.6 - 23
14	17.5 - 24.5
15	18.1 - 25

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staff to the top. Look



t the first letter in each word A - C

- E - G. The lines can

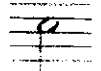


e remembered by saying Good Boys Do Fine Always. Look

at the



irst letter in each word G - B - D - F - A. The fiv

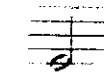


lines are counted from the bottom of the staff to the top. Now I know what the notes

re!



After the girls finished their son



, they played it on the keyboard. Then they

sequenced a LOT of drums to ad



to their song. When they played it back, they

loved it so much that they danced aroun



the room. The only problem with that

was our music la



was too small for dancing. They decided to record the music

to a C



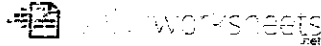
and take it home. They danced to their



omposition for

the rest of the day. Music composition is a lot of fun!

Student Name: _____ Teacher: _____



More Art Terms

Date: _____

unscramble the below art terms

- | | | | | | |
|------------|---|-------|---------------|---|-------|
| rrmkea | m | _____ | iasmehsp | e | _____ |
| neil | l | _____ | nabcela | b | _____ |
| apces | s | _____ | nuiyt | u | _____ |
| omrf | f | _____ | lcya | c | _____ |
| eahsp | s | _____ | rcacmeis | c | _____ |
| reuxett | t | _____ | azleg | g | _____ |
| lcoro | c | _____ | diumme | m | _____ |
| aevul | v | _____ | pemaprae ch | p | _____ |
| ranptte | p | _____ | acrolhca | c | _____ |
| etriyav | v | _____ | ti etpneapma | t | _____ |
| opornriotp | p | _____ | iprnctycal ai | a | _____ |
| metoevmn | m | _____ | eucitpsru | s | _____ |
| tracston | c | _____ | licytrteva | c | _____ |

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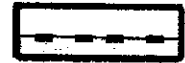
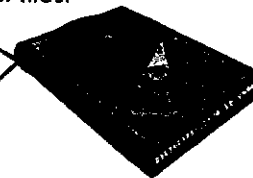
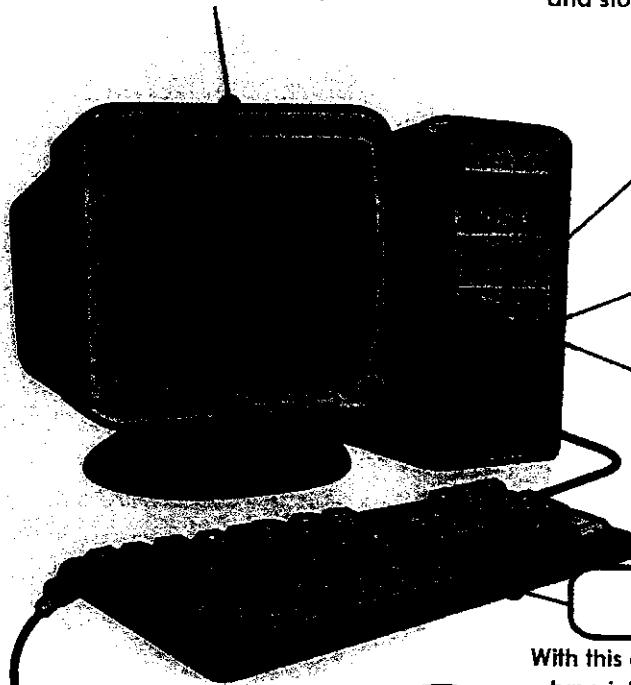
Computer Parts

Can you name all these computer parts? Use the words below and the descriptions for clues.

mouse hard drive CD rom monitor
USB port keyboard printer

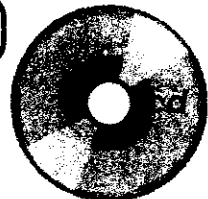
This is the screen that lets you see what you're doing on the computer.

This is inside your computer and stores all your files.



You can plug your keyboard and other computer devices into this.

This lets you play CDs that can hold music, video and other types of files.



With this device you can type information into the computer.

This device is your digital hand inside the computer.

This device lets you print your pictures, stories or artwork.

