

Non-traditional Snow Day Packet Part 2
Mrs. Loudin
7th and 8th Grade Science and Experimental Science Classes

IMPORTANT!! Each page that you do as a NTID needs to be completed and returned Mrs. Loudin the **first day** you are back at school.

Parents, please note that if a student does not complete the teacher assigned pages, his/her grade will result in a 0% in the gradebook, and the student will be marked as absent for the day during Science class.

Assignments: 8th Grade

Lessons for Days 1-3 were previously uploaded, and back pages were added, to the PPJSHS Homepage

Lesson for Day 4-5-Cooking with Elements Assignment (Due to its lengthiness students should complete the first side on day 4 and second side on day 5. (Periodic Table Review)

7th Grade

Lessons for Days 1-3 were previously uploaded, and back pages were added, to the PPJSHS Homepage

Lesson for Day 4-Forms of Energy Review Pg. 14 (Content Practice B)

Day 5-Energy (multiple choice and a paragraph)

Name: _____ Date: _____ Period: 7th

Energy

Multiple Choice

- 1) Of the following units, the one that is a unit of energy is
 - a. Newton
 - b. Joule
 - c. Meter
 - d. Liter
- 2) A stationary object may have
 - a. potential energy
 - b. velocity
 - c. kinetic energy
 - d. acceleration
- 3) Which is the best example that something has kinetic energy?
 - a. a car parked on a steep hill
 - b. a tennis ball rolling across the court
 - c. a picture hanging on the wall
 - d. a piece of coal before it's burned
- 4) Conservation of energy means that
 - a. energy can be created but not destroyed
 - b. energy can be destroyed but not created
 - c. energy can both be created and destroyed
 - d. energy can neither be created nor destroyed
- 5) When coal is burned to produce electricity, the electrical energy produced is less than the potential energy of the coal. Which best explains this observation?
 - a. as the coal is heated, the molecules move so fast that they are destroyed
 - b. some of the energy in the coal is destroyed by the intense heat required to release its potential energy
 - c. some of the potential energy in the coal is converted into forms of energy other than electricity
 - d. the amount of energy in the coal is not known

6) Describe the energy transformations that occur during the process of coal being used to power your hairdryer.

(At least 6-7 sentences).

Content Practice B

LESSON 1

Forms of Energy

Directions: *On the line before each definition, write the letter of the term that matches it correctly. Some terms may be used more than once or not at all.*

- | | |
|---|--|
| <p>_____ 1. This is the term for the distance between similar points on a wave.</p> <p>_____ 2. This is carried by electromagnetic waves.</p> <p>_____ 3. A lightbulb becoming lit is an example of this.</p> <p>_____ 4. This type of energy is obtained through food.</p> <p>_____ 5. Gamma rays are an example of this.</p> <p>_____ 6. A disturbance that transfers energy is called this.</p> <p>_____ 7. This type of energy is related to the mass and the speed of an object.</p> <p>_____ 8. This is stored energy released from the nucleus of an atom.</p> <p>_____ 9. This type of wave carries sound energy.</p> <p>_____ 10. This is a collection of parts working together.</p> <p>_____ 11. This is energy stored and released in bonds between atoms.</p> <p>_____ 12. This type of energy moves your arms and legs.</p> <p>_____ 13. This type of energy is in an electric current.</p> <p>_____ 14. This type of energy is based on mass and height.</p> <p>_____ 15. This type of energy is due to motion.</p> <p>_____ 16. This is the sum of the potential energy and the kinetic energy.</p> <p>_____ 17. This is the term for waves that are electric and magnetic.</p> | <p>A. potential energy</p> <p>B. gravitational potential energy</p> <p>C. nuclear energy</p> <p>D. kinetic energy</p> <p>E. electric energy</p> <p>F. chemical energy</p> <p>G. mechanical energy</p> <p>H. thermal energy</p> <p>I. sound wave</p> <p>J. radiant energy</p> <p>K. electromagnetic</p> <p>L. system</p> <p>M. environment</p> <p>N. wave</p> <p>O. wavelength</p> |
|---|--|

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Name _____ Date _____



Activity 14: Cooking with the Elements

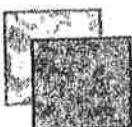
Directions: For each element combination in parentheses below, use the symbols for the elements to obtain a scrambled word. Then unscramble the letters to form the correct words. Write the symbols in the answer blank following each group of elements. This will help you complete each numbered paragraph.

Example: (boron, indium, oxygen, tantalum) = BInOTa, which unscrambles to form the word OBTAIn.

- For breakfast we (yttrium + francium) _____ eggs, (cobalt + nitrogen + barium) _____ and (hydrogen + hydrogen + arsenic) _____ (oxygen + nitrogen + tungsten + bromine) _____ potatoes, and toast (astatine + tungsten + helium) _____ or (hydrogen + tellurium + tungsten + iodine) _____ bread. Or, we can have (nitrogen + calcium + einsteinium + protactinium + potassium) _____ or waffles and sausage, or (aluminum + cerium + rhenium) _____, such as (radon + cobalt) _____ (lanthanum + potassium + fluorine + einsteinium) _____ or (nitrogen + iodine + silicon + radium) _____ (boron + nitrogen + radium) _____, with milk.
- (thorium + helium + aluminum + yttrium) _____ (potassium + actinium + sulfur + tin) _____ would be fruits, such as (sodium + sodium + barium + sulfur) _____, grapes, (sulfur + iodine + tungsten + potassium + iodine) _____, apples, and oranges and different (einsteinium + carbon + helium + einsteinium) _____ and (potassium + chromium + erbium + actinium + sulfur) _____. Of course, most of us would (erbium + radium + thorium) _____ have (hydrogen + phosphorus + sulfur + carbon + iodine) _____, (iodine + oxygen + cobalt + potassium + einsteinium) _____, or (nitrogen + dysprosium + calcium) _____.
- For drinks, we (fluorine + phosphorus + rhenium + erbium) _____ (calcium + cobalt + lanthanum + cobalt) _____ or another type of soda (vanadium + erbium + oxygen) _____ milk, juice or (erbium + astatine + tungsten) _____.
- Most people have fast food and (selenium + uranium) _____ the drive (ruthenium + sulfur + thorium) _____ for lunch. They usually have only half an hour and (oxygen + carbon + selenium + holmium) _____ (carbon + tantalum + osmium) _____ or hamburgers and French (einsteinium + iodine + francium) _____. Sometimes they will be (carbon + yttrium + lutetium + potassium) _____ and have a salad, (uranium + phosphorus + sulfur + oxygen) _____, sandwich, or (neon + iodine + hydrogen + selenium + carbon) _____ take-out. At (erbium + oxygen + thorium) _____ times, people, especially students, eat (holmium + sulfur + carbon + sodium) _____ or (carbon + lithium + iodine + hydrogen) _____ cheese (iodine + francium + einsteinium) _____.

(continued)

Name _____ Date _____

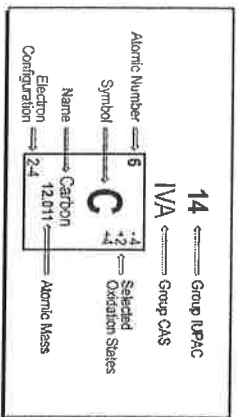


Activity 14: Cooking with the Elements (continued)

- Dinners are the big meals. (iodine + sulfur + thorium) _____ is (helium + tungsten + nitrogen) _____ families (thorium + gallium + erbium) _____ together after a long day. Dinners usually consist of a main dish containing some type of meat. The meat can be (neon + terbium + oxygen) _____, (americium + hydrogen) _____, pork (sulfur + phosphorus + carbon + holmium) _____, chicken, (boron + barium + yttrium) _____ (carbon + barium + potassium) _____ ribs, prime rib, or (iodine + hydrogen + sulfur + fluorine) _____.
- Of course, there is always some type of carbohydrate. (iodine + thorium + sulfur) _____ is usually a potato, which we can bake, mash, (yttrium + francium) _____, scallop, or boil. For variety, there is also rice or (tantalum + arsenic + phosphorus) _____.
- There usually is a (holmium + cerium + iodine + carbon) _____ of vegetables. Some (sulfur + carbon + iodine + holmium + cerium) _____ are (radon + cobalt) _____, peas, (cobalt + lithium + oxygen + bromine + carbon) _____, beans, (silver + arsenic + phosphorus + uranium + argon + sulfur) _____ or squash.
- One of my favorite (sulfur + uranium + sulfur + oxygen + phosphorus) _____ is (tungsten + neon) _____ England (americium + chlorine) _____ chowder. I (gold + sulfur + tellurium) _____ the (nitrogen + barium + cobalt) _____ and (nitrogen + oxygen + nickel + oxygen + sulfur) _____ first. Then I add (astatine + tungsten + erbium) _____, (sulfur + chlorine + americium) _____, celery, and (iodine + sulfur + sulfur + phosphorus + cerium) _____ such as (yttrium + barium) _____ leaf, thyme, and marjoram. The diced potatoes and (rhenium + carbon + americium) _____ are added about thirty minutes (oxygen + rhenium + beryllium + fluorine) _____ serving.
- The best part is dessert. There are many different (potassium + calcium + einsteinium) _____ and (iodine + einsteinium + phosphorus) _____. (uranium + rubidium + rhodium + barium) _____ looks like red celery, and is tart (helium + tungsten + nitrogen) _____ baked in (phosphorus + einsteinium + iodine) _____. Another simple dessert is (cerium + iodine) _____ (americium + carbon + rhenium) _____. (iodine + thorium + sulfur) _____ can be served with (erbium + oxygen + thorium) _____ desserts or (yttrium + boron) _____ itself, in a (neon + cobalt) _____ or a dish, (iodine + thorium + tungsten) _____ (cobalt + tellurium + carbon + lanthanum + holmium) _____ or (yttrium + neodymium + calcium) _____ toppings.
- A fancy dessert is (phosphorus + rhenium + carbon + einsteinium) _____ with a (neodymium + boron + radium + yttrium) _____ sauce. Many (neon + iodine + fluorine) _____ restaurants will (cerium + lanthanum) _____ their desserts with (nitrogen + boron + dysprosium + radium) _____ to make a flaming dessert.

8th

PERIODIC TABLE OF THE ELEMENTS



| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------------|--------------------------------|-------------------------------------|--------------------------------|----------------------------------|---------------------------------|---------------------------------|----------------------------------|---------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|--------------------------------|------------------------------|---------------------------|-------------------------------|--------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|
| 1 H Hydrogen 1.0079 | 2 He Helium 4.0026 | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 Li Lithium 6.941 | 4 Be Beryllium 9.0122 | | | | | | | | | | | 13 B Boron 10.811 | 14 C Carbon 12.011 | 15 N Nitrogen 14.007 | 16 O Oxygen 15.999 | 17 F Fluorine 18.998 | 18 Ne Neon 20.179 | | | | | | | | |
| 11 Na Sodium 22.990 | 12 Mg Magnesium 24.305 | | | | | | | | | | | 19 K Potassium 39.098 | 20 Ca Calcium 40.078 | | | 27 Co Cobalt 58.933 | 28 Ni Nickel 58.693 | 29 Cu Copper 63.546 | 30 Zn Zinc 65.39 | 31 Ga Gallium 69.723 | 32 Ge Germanium 72.64 | 33 As Arsenic 74.922 | 34 Se Selenium 78.96 | 35 Br Bromine 79.904 | 36 Kr Krypton 83.80 |
| 19 K Potassium 39.098 | 20 Ca Calcium 40.078 | 21 Sc Scandium 44.956 | 22 Ti Titanium 47.887 | 23 V Vanadium 50.942 | 24 Cr Chromium 51.996 | 25 Mn Manganese 54.938 | 26 Fe Iron 55.845 | 27 Co Cobalt 58.933 | 28 Ni Nickel 58.693 | 29 Cu Copper 63.546 | 30 Zn Zinc 65.39 | 31 Ga Gallium 69.723 | 32 Ge Germanium 72.64 | 33 As Arsenic 74.922 | 34 Se Selenium 78.96 | 35 Br Bromine 79.904 | 36 Kr Krypton 83.80 | | | | | | | | |
| 37 Rb Rubidium 85.468 | 38 Sr Strontium 87.62 | 39 Y Yttrium 88.906 | 40 Zr Zirconium 91.224 | 41 Nb Niobium 92.906 | 42 Mo Molybdenum 95.94 | 43 Tc Technetium (98) | 44 Ru Ruthenium 101.07 | 45 Rh Rhodium 102.91 | 46 Pd Palladium 106.42 | 47 Ag Silver 107.87 | 48 Cd Cadmium 112.41 | 49 In Indium 114.82 | 50 Sn Tin 118.71 | 51 Sb Antimony 121.75 | 52 Te Tellurium 127.60 | 53 I Iodine 126.905 | 54 Xe Xenon 131.29 | | | | | | | | |
| 55 Cs Cesium 132.91 | 56 Ba Barium 137.33 | 57-71 La-Lu Lanthanide | 72 Hf Hafnium 178.49 | 73 Ta Tantalum 180.95 | 74 W Tungsten 183.84 | 75 Re Rhenium 186.21 | 76 Os Osmium 190.23 | 77 Ir Iridium 192.22 | 78 Pt Platinum 195.08 | 79 Au Gold 196.97 | 80 Hg Mercury 200.59 | 81 Tl Thallium 204.38 | 82 Pb Lead 207.2 | 83 Bi Bismuth 208.98 | 84 Po Polonium (209) | 85 At Astatine (210) | 86 Rn Radon (222) | | | | | | | | |
| 87 Fr Francium (223) | 88 Ra Radium (226) | 89-103 Ac-Lr Actinide | 104 Rf Rutherfordium (261) | 105 Db Dubnium (262) | 106 Sg Seaborgium (266) | 107 Bh Bohrium (264) | 108 Hs Hassium (277) | 109 Mt Meitnerium (268) | 110 Uun Ununium (271) | 111 Uuu Ununium (272) | 112 Uub Ununium (285) | 113 Uut Ununium (284) | 114 Uuq Ununium (289) | 115 Uup Ununium (288) | 116 Uuh Ununium (291) | 117 Uus Ununium (294) | 118 Uuo Ununium (294) | | | | | | | | |

| | | | | | | | |
|---------------------------------|-------------------------------|------------------------------------|------------------------------------|------------------------------------|--------------------------------|--------------------------------|----------------------------------|
| 1 K 2 s ² | 2 L 8 2 6 | 3 M 18 2 6 10 | 4 N 32 2 6 10 14 | 5 O 32 2 6 10 14 | 6 P 18 2 6 10 | 7 Q 8 2 6 | 8 R 2 2 |
| Electron Shells | | | | | | | |
| 57 La Lanthanum 138.91 | 58 Ce Cerium 140.12 | 59 Pr Praseodymium 140.91 | 60 Nd Neodymium 144.24 | 61 Pm Promethium (145) | 62 Sm Samarium 150.36 | 63 Eu Europium 151.96 | 64 Gd Gadolinium 157.25 |
| Lanthanide | | | | | | | |
| 89 Ac Actinium (227) | 90 Th Thorium 232.04 | 91 Pa Protactinium 231.04 | 92 U Uranium 238.03 | 93 Np Neptunium (237) | 94 Pu Plutonium (244) | 95 Am Americium (243) | 96 Cm Curium (247) |
| Actinide | | | | | | | |

