NTI Day 2 Assignment
Lesson 2 Review
Content Standard A – Scientific Inquiry and Lab Safety and Tools
Class: Chemistry Teacher: K. Kelly

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1. The teacher assigns you to light a Bunsen burner using the safest technique. What sequence of events do you follow to complete the assignment?

- **A.** Fully open the valve on the burner, turn on the gas, and light the match.
- **B.** Check that the valve is half open, light the match, and turn on the gas to the appropriate level.
- **C.** Turn on the gas for one minute, check the valve, and light the match.
- **D.** Turn on the gas, sniff the burner to ensure the presence of gas, light the match, and adjust the valve.

2.

Which of these would the item shown above provide suitable protection against?

- **A.** toxic vapor
- **B.** Splashing of chemicals
- **C.** petroleum fumes
- **D.** carbon monoxide gas

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3. Prior to using a triple beam balance, it is necessary to

- **A.** make sure that the riders are all set to zero.
- **B.** make sure that the pan is clean and dry.
- **C.** make sure that the balance is calibrated to zero.
- **D.** all of these

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4. Which of these best describes when splash goggles should be worn?

- **A.** when mixing toxic liquids
- **B.** when mixing acids with bases
- **C.** when mixing highly reactive liquids
- **D.** All of the above

5. Prior to using a triple beam balance, it is necessary to

- **A.** make sure that the balance is calibrated to zero.
- **B.** make sure that the pan is clean and dry.
- **C.** make sure that the riders are all set to zero.
- **D.** all of these

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6. Raul skipped lunch before lab. He has a bag of chips from the snack machine he would like to eat. What is the safest way for him to eat his chips?

- **A.** eat his chips on an empty lab bench
- **B.** eat his chips at his lab bench after cleaning it thoroughly
- **C.** eat his chips outside the lab after his hands are washed
- **D.** eat his chips in the lab standing away from the lab benches

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7. Simone is completing an experiment with a solution of barium fluoride. Simone does not finish the experiment during the laboratory and so must store the barium fluoride solution for use the following day. What is most important for Simone to do before leaving the laboratory?

- **A.** write her name on the solution
- **B.** clearly label the solution
- **C.** hide the solution so it will not be disturbed
- **D.** place the solution out of the reach of children

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8. Paul is curious whether the weight of a lead ball would be affected if the lead ball was submerged in water. To answer this question, Paul first wants to measure the weight of the ball in air. He then wants to submerge the ball in a sink full of water and measure its weight again.

Which of the following tools should Paul use to measure the weight of the ball?

- **A.** meterstick
- **B.** balance
- **C.** spring scale
- **D.** graduated cylinder

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9. In the lab, you are thirsty and would like a drink. Can you use the beaker as a cup?

- **A.** No, not even if the beaker is new or has been thoroughly cleaned.
- **B.** Yes, if it is a new beaker that has never been used.
- **C.** Sometimes, depending on the type of laboratory and experiment at hand.
- **D.** Yes, if you clean the beaker first.

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10. Which of the following is an example of the proper use and conservation of lab materials?

- **A.** Jeff pours vinegar from a bottle directly into his beaker and approximates the amount he needs without measuring.
- **B.** Andrea weighs out twice the amount of salt that the lab requires in case she makes a mistake and needs more later.
- **C.** Kyle weighs out exactly the amount of baking soda that he needs for an experiment before taking it to his lab area.
- **D.** Sarah pours a large amount of ethanol into a beaker, measures out what she needs at her lab desk, and disposes of the rest.

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11. During a lab experiment, Mandy and her lab partner work with corrosive chemical substances. What is the proper way to dispose of these chemicals after the lab is completed?

- **A.** The chemicals should be washed down the sink with plenty of water.
- **B.** The chemicals should be poured in the trash can.
- **C.** The chemicals should be mixed together and left unmarked in the lab area.
- **D.** The chemicals should be placed in marked waste containers.

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12. Gwen would like to find out the volume of a metal screw. What tool could Gwen use in order to measure the screw's volume?

- **A.** graduated cylinder
- **B.** spring scale
- **C.** eyedropper
- **D.** balance

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13. Doug wants to find out how increasing a gas's pressure can affect the gas's temperature. What tool will Doug need in order to conduct his experiment?

- **A.** thermometer
- **B.** spring scale
- **C.** light microscope
- **D.** treadmill

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14. Harry was preparing to do his laboratory experiment when he noticed that the plastic covering over his hot plate's electrical cord was slightly torn in one area. What should Harry do?

- **A.** He should go into the lab storeroom to find another hot plate.
- **B.** He should immediately notify the principal.
- **C.** He should continue to use the hot plate if the tear is small.
- **D.** He should immediately notify the teacher.

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15. Strong acids are chemicals that can burn hands, clothes, and anything else with which they come into contact. When creating a solution of a strong acid and water, what order should the ingredients be added?

- **A.** Carefully pour the water into the bottle of acid.
- **B.** Carefully pour the water in the beaker and then cautiously add the acid.
- **C.** Carefully pour the acid and the water into a beaker at the same time.
- **D.** Carefully pour the acid into a beaker and then add water.

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16. When holding a test tube over a flame, the test tube should be

- **A.** held so it is close to horizontal.
- **B.** pointed toward the person holding it.
- **C.** pointed away from all students.
- **D.** held so it is exactly vertical.

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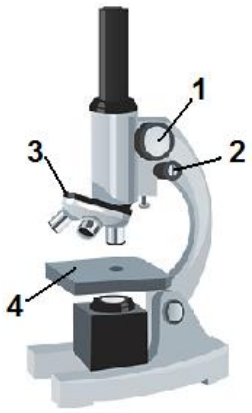
17. Examine the picture below.



What is the purpose of the part labeled with the number 1?

- **A.** makes minor adjustments when focusing specimens
- **B.** site where slides or specimens are placed
- **C.** changes the magnification of the specimens
- **D.** makes large adjustments when focusing specimens

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18. What safety precaution should be undertaken before beginning any experiment in a lab?

- **A.** Have your blood checked for viruses and bacteria.
- **B.** Drink a high protein shake to prepare for the lab experiments.
- **C.** Read all procedures thoroughly before entering the laboratory.
- **D.** Wear safety goggles for twenty-four hours before entering the laboratory.

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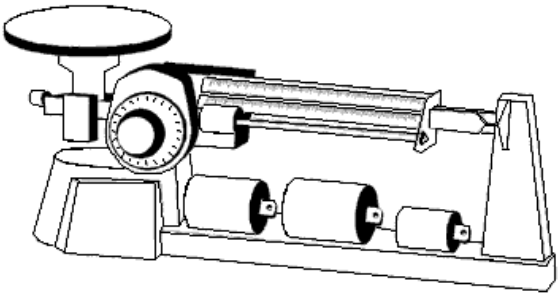
19. Examine the picture of the laboratory tool below.



For what can this tool NOT be used to measure?

- **A.** Temperature
- **B.** for distributing precise, small amounts of liquid
- **C.** for measuring masses of liquids
- **D.** for measuring masses of solids

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20. Doug wants to find out how increasing a gas's pressure can affect the gas's temperature. What tool will Doug need in order to conduct his experiment?

- **A.** spring scale
- **B.** light microscope
- **C.** treadmill
- **D.** thermometer