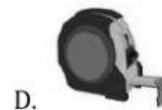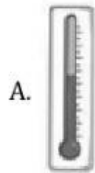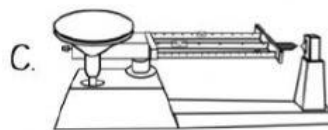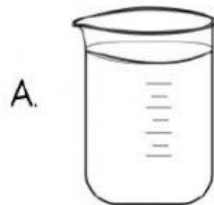Name: _____ Date: _____

Lesson 1 - SCIENCE PROCESS SKILLS QUESTIONS – Use the information in the notes to answer the following questions.

1. Which picture is a thermometer? (1)

A.   B.   C.   D.

2. Which tool is a triple beam balance? (1)

A.   B.

C.   D.

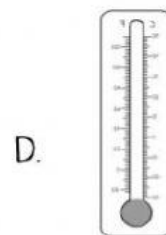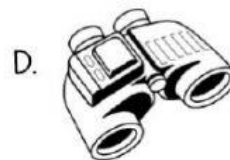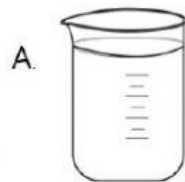3. Which picture is a tweezer? (1)

A.   B.

C.   D.
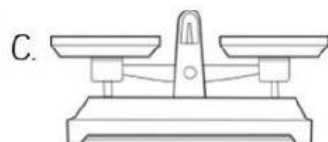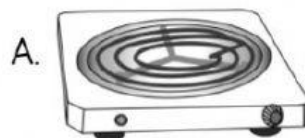
4. Which picture is a magnifying glass? (1)

A.

B.

C.

D.
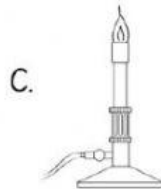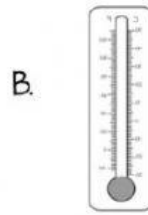
5. Which picture is a magnet? (1)

A.

B.

C.

D.
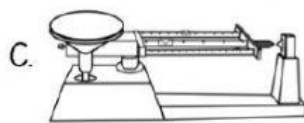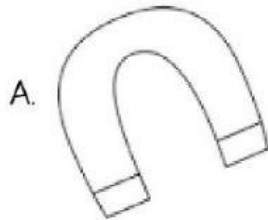
6. Which tool would a scientist most likely use to study the surface of the moon? (1)

A.

B.

C.

D.

7. Students are studying some leaves. They group the leaves by shape. Which process are the students using when they put the leaves in different groups? (1)

    A. classifying

    B. predicting

    C. measuring

    D. experimenting

8. Students want to find out if marigolds or sunflowers grow faster? Which is the best way to conduct the test? (1)

    A. Plant a sunflower seed and marigold seed in the same flower bed. Water each plant the same amount each day. Measure each plant once a week.

    B. Plant a sunflower seed in the shade and a marigold seed in the sun. Water each plant the same amount each day. Measure each plant once a week.

    C. Plant a marigold seed in the shade and a sunflower seed in the sun. Water each plant the same amount each day. Measure each plant once a week.

9. Two students are studying what makes ice melt fastest. They want to conduct an investigation. During which of these steps in their investigation will they measure the ice? (1)

    A. showing some graphs

    B. making a conclusion

    C. developing a hypothesis

    D. collecting some data

10. Which science process skill involves using your five senses to describe what is seen, heard, felt, smelt, and tasted? (1)

    A. inferring

    B. predicting

    C. measuring

    D. observing

11. Which science process skill is an explanation of an observation? (1)

    A. inferring

    B. predicting

    C. measuring

    D. observing

12. Which science process skill uses numbers to describe an object? (1)

    A. inferring

    B. predicting

    C. experimenting

    D. measuring

13. Which science process skill involves sharing ideas through talking and listening, drawing and labelling pictures, graphs, etc.? (1)

    A. predicting

    B. experimenting

    C. measuring

    D. communicating

14. Which science process skill uses a test under controlled conditions? (1)

    A. measuring

    B. experimenting

    C. collecting information

    D. inferring

15. Which science process skill involves guessing what might happen in the future? (1)

    A. inferring

    B. experimenting

    C. predicting

    D. communicating

16. What science skill are you using when you read the graphs about temperature? (1)

    A. inferring

    B. predicting

    C. analyzing data

    D. experimenting

17. The boy has on a blue jacket. This is an example of a(n): (1)

    A. inference

    B. observation

    C. prediction

    D. hypothesis

18. I think that the boy will wear his blue jacket the next time it is cold outside because he wants to be warm. This is an example of a(n): (1)

    A. observation

    B. Inference

    C. Prediction

    D. hypothesis

19. Which is the BEST testable question for a science experiment in a classroom? (1)

    A. How many students like ice cream?

    B. How many miles does a bus travel a day?

    C. Does the amount of water a plant get affect its growth?

    D. How do potatoes grow?

Darcy's Experiment:
Darcy is planning a project for her school science fair. Read Darcy's description and answer the questions below.
- What I want to know: Which brand of cereal stays crunchiest?
- What I will do:
    1. Soak 20 grams of cereal in 150 milliliters of water for 3 minutes.
    2. Pour the cereal and water through a strainer into a measuring cup.
    3. Measure the water that drains off and record the results in a data chart.
    4. Repeat steps 1 – 3 with two more kinds of cereal.

20. Which of these is missing from Darcy's description? (1)

    a. Question

    b. Hypothesis

    c. Procedure

21. What is the *independent variable* (the thing that changes) in Darcy's trials? (1)

    a. amount of cereal

    b. brand of cereal

    c. amount of water

    d. time

22. What is Darcy testing? (1)

    a. how long it takes for cereal to dissolve

    b. how much liquid each brand will soak up in a given amount of time

    c. which cereal will be the tastiest

    d. how much water is needed to soak a given amount of cereal

Cereal Soaking Results

Brand	Amount of Leftover Water
Oatie O's	145 ml
Tasty Flakes	139 ml
Graham Crunch	30 ml

23. According to the results above, which brand of cereal probably stays crunchiest? (1)

    _____

24. Darcy wants to verify her results. What should she do next? (1)

    a. Repeat the experiment with three other brands of cereal.

    b. Ask a friend to replicate the experiment and compare the results.

    c. Read the information on the labels of each box of cereal.

    d. Ask 50 people which cereal they think is the crunchiest.

Trish's Experiment
Trish wondered if salted water would boil faster than unsalted water. She filled a pan with one liter of plain water and heated it. Trish recorded how much time it took for the water to boil. Then Trish emptied the pan and cooled it to room temperature. She filled the pan with one liter of water and two tablespoons of salt. Using the same heat setting, Trish heated the water until it boiled, and she recorded the time.

25. What is the **control** in Trish's experiment? (Remember, the control is the thing that does not receive the experimental treatment.) (1)

    a. heat

    b. salted water

    c. a timer

    d. plain water

26. What is the **independent variable** (the thing that changes) in Trish's experiment? (1)

    a. boiling

    b. salt

    c. heat

    d. time

27. What is a **constant** (does not change) in Trish's experiment? (1)

    a. level of heat

    b. amount of water

    c. type of pan

    d. all of the above