EMS Science Skills Lab

Science 8

This lab has 12 stations.

Please read the instructions and complete the station activities.

Answer all station questions in this booklet.

Name _____
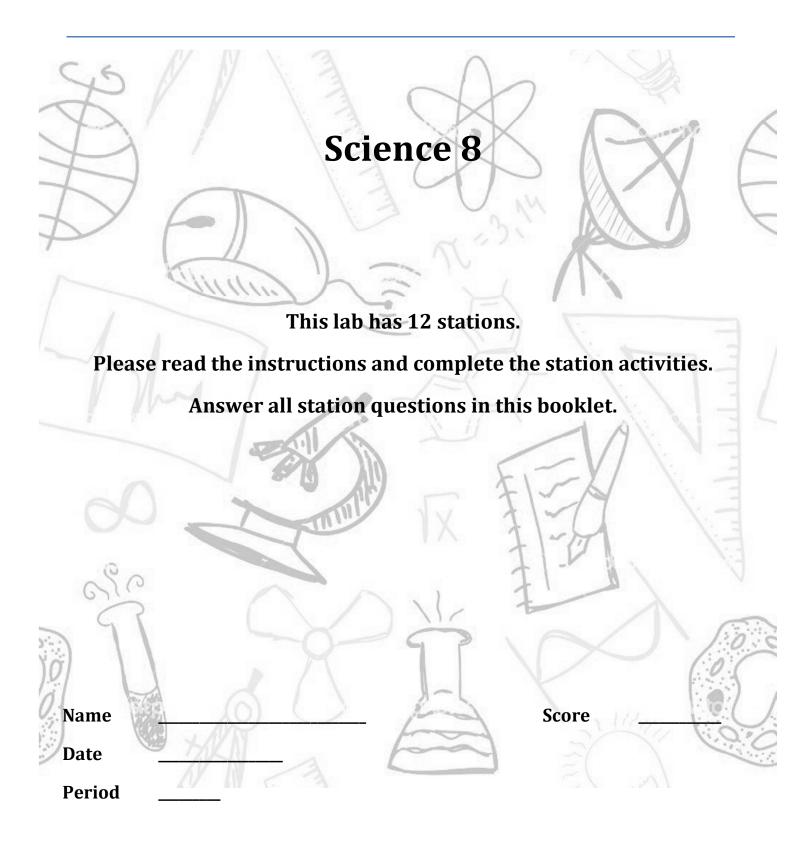
Date _____

Period _____

Score _____

1. Observations

1. ***Spot the difference:***   What Picture: _____

    10 differences – fill in the table below

1	6
2	7
3	8
4	9
5	10

2. Signs:

    Logo A: 1. _____   2. _____

    Logo B: _____

3. Olfactory (Smell) Observations:

    Container: _____   Scent Guess: _____

    Container: _____   Scent Guess: _____

2. Making a Hypothesis

Example A: _____

           _____

Example B: _____

           _____

Example C: _____

           _____

Example D: _____

           _____

3A. Estimating & Measuring - *Length*

1. Estimates:

Foot length : _____mm   Elbow to wrist :_____mm

2. Measurements:

Foot length : _____mm   Elbow to wrist :_____mm

Do you know notice any relationship between the measurements of your foot length compared to your elbow-wrist length? Explain your answer.

3B. Measuring - *Volume*

Volume

Graduated Cylinder – Maximum Volume Capacity

#1: _____ml   #2: _____ml   #3: _____ml

Measurement of Volumes in a Graduated Cylinder

#1: _____ml   #2: _____ml   #3: _____ml

4. Estimating & Measuring - *Mass*

Estimate: Blue Cart   _____100 g   Roll of Black Tape _____100g

Measurement using the beam balance:

Blue Cart   _____ g   Roll of Black Tape _____g

Measurement using the electronic balance:

Blue Cart   _____ g   Roll of Black Tape _____g

4. How close were your measurements on the beam balance and the electronic scale?

5. Making Inferences

Using a photograph:

1. Complete the following:

What I see (evidence)	What I know	My Inference
Ex. Lots of buildings	*Buildings are where you find homes, businesses & people*	*This is probably a large city*

2. Can you infer: - the place? _____

                        - the time of year? _____

6. Predicting

Object	Prediction SINK	Prediction FLOAT	Test Results
Eraser			
Aluminum foil ball			
Chain links			
Snail shell			
Rock			
Dropper			
Nail/Styrofoam			

7. Recording Info/Data

<u>Trial</u>	<u>Time (seconds)</u>
1	
2	
3	
Average	

Draw your diagram here **in pencil**, using a **ruler**. Labels should be connected to your diagram by horizontal pencil lines, drawn with a ruler. Make sure your diagram has a **title.**

8. Making/Using Models

1. How many staircases are there in the school?

2. How many Gymnasiums are there?

3. How many classrooms are there on the second floor?

4. How many science classrooms are there on the second floor?

5. What percentage of the classrooms on the second floor are devoted to science?

6. How many classrooms are there on the third floor?

7. How many science classrooms are there on the third floor?

8. What percentage of the classrooms on the third floor are devoted to science?

9. Which science classroom is the largest?

10. Which science classroom is the smallest?

9. Classifying

Part 1:

1. On what basis did you arrange your items into **two** groups?

2. How many items did you have in each group?

Part 2:

1. On what basis did you arrange your items into **two** groups this time?

2. How many items did you have in each group?

3. Looking back at your two different arrangements, do you think that one was a better way to classify than the other? Explain.

Part 3:

1. On what basis did you arrange your items into **three** groups?

2. How many items did you have in each group?

3. Can you think of **another way** that you could have classified the items into **three** groups?

4. Why do you think scientists like to classify things?

10. Organizing Data

Data Table: _____

11. Analyzing Data

1. What is the pressure at 20,000m?

2. What is the temperature at 20,000m?

3. What is the lowest temperature in the Mesosphere?

4. What is the highest temperature in the Mesosphere?

5. What is the average temperature in the Mesosphere?

6. What does an altitude of 0 m represent?

7. What range of altitudes is the Ozone layer?

8. In which layer to we find the coldest temperature?

12. Drawing Conclusions

1. _____

_____

_____

2. _____

_____

_____

3. _____

_____

_____

4. _____

_____

_____