Electromagnetic Spectrum Lab Report

Student Name:

Directions: In this experiment, you will analyze the spectrometric patterns of three newly discovered astronomical objects. You will then determine the elements present in those objects based on the patterns.

Question

How can we determine the composition of astronomical objects using the electromagnetic spectrum?

Research

Use the lesson to answer the questions.

Pre-lab Questions	Place your answers below.
1. How does the EM spectrum help us find out what stars are made of?	
2. Why do you think it is important to use different types of technology when studying space?	

Hypothesis

Create your hypotheses using the sentence starters and word bank.

Word bank of elements: hydrogen, helium, lithium, sodium, carbon, and nitrogen

Moon One contains the elements Insert choice of element and Insert choice of element.

Moon Two contains the elements Insert choice of element and Insert choice of element.

Planet One contains the elements Insert choice of element and Insert choice of element.

Planet Two contains the elements Insert choice of element and Insert choice of element.

Directions: Follow the procedures in the Electromagnetic Spectrum Virtual Lab.

Data Collection

Record the elements present in each unknown astronomical object. Be sure to indicate **yes** or **no** for each element.

	Helium	Hydrogen	Lithium	Sodium	Carbon	Nitrogen
Moon One						
Moon Two						
Planet One						
Planet Two						

Conclusion

Include each part of your conclusion statement below.

Parts of the Conclusion Statement	Place your answers below.
Describe the important findings of your experiment.	
Briefly explain why your hypothesis was correct or incorrect based on the test results.	

Lesson Connections

Use the lesson and your lab activity to answer the questions.

Questions	Place your answers below.
1. If an astronomical object had more than two elements in its spectrum, what difficulties would you expect when identifying elements?	

2. Why is it useful to determine the elements that make up a star, planet, or moon?	