I	Name:		□ 01 □ 02	
/26	Date of lab:	Due date:		□ 07 □ 08

## SNC1D

## Lab: Spectroscopy

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## Purpose

In this lab, you will be determining the spectrum of various elements, then determining the elements making up various objects seen in the night sky.

## Observations

Write the name of the element from the list on the left beside its spectrum of absorption lines on the right.

Element with selected absorption wavelengths in nm	Absorption Spectrum						
Hydrogen 433, 486, 656	1. <u>Carbon</u>		¥			• ¥ •	
Helium 447, 502, 587, 668	2.	300	400	500 K X	600 ———————————————————————————————————	700 ———————————————————————————————————	800
Example: Carbon 427, 515, 600, 678	2	300	400	<del>(                                    </del>		* <b>* '</b> 700	800
Sodium 580,589	2		*	*	<del>X</del> →	K	
Calcium 429, 527, 593, 645	3	300	400	500	<del>* * *</del> *	700	 800
Iron 417 to 433, 516,562, 619						*	
Mercury 436, 546, 579	4	300	400		600	700	800
Analysis	5.				* *		
1. Determine the composition of each of the Sun & mystery objects. /10		300	400	500	₩ * ₩ 600	700	800
Sun:	6				ZIXIN		
Suii		300	400	500 *	600 **	700	800
	7		· *·		- <u>*</u>		
#1:		300	400 ****	500	600 	700 ****	800
	Sun			<del></del>			
#2:		300	400	500	600	700	800
	Mystery #1		***	<del>· ** *</del>	***	<del>\$\$\$</del>	
		300	400	<del>· ** *</del> 500	600	700	800
#3:	Mystery #2				***	*	
	Mystery #3	300	400	<u>*'</u> 500 <u>**</u>	600 * * * *	700	800
	1	300	400	<u>* ***</u> 500	<u>* * *</u> * €00	700	800

2. Which of the mystery objects is most like the Sun? Explain.

3. Which of the mystery objects is least like the Sun? Explain.

- 4. Which mystery object, if any, contains sodium?
- 5. Suppose you were to analyse the light from the full Moon with a spectroscope. Predict the spectra that you would see. Explain your answer. /3

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