

## Spectral Types:

### Exercise 1

Group	Star(s)	Characteristics
A	346, 275, 365, 173, 314, 513	Plate number starts with 266
B	2, 157, 589, 245	Plate number starts with 273
C	4, 3, 133	Plate number starts with 281
D	538	Plate number starts with 498

1. No
2. N/A
3. N/A

### Exercise 2

657 nm/6570 angstroms

### Exercise 3

$-64.6 \times 10^{-19} \text{ J}$

### Exercise 4

$3 \times 10^{-8} \text{ m} = 300 \text{ angstroms}$

4. They are not similar at all.
5. No
6. F

### Exercise 5

1. O
2. B
3. F
4. A
5. K
6. O
7. A
8. G
9. M
10. K

7. Type O stars are very short-lived so it is not common to see them in the universe.

8. No

Exercise 9

No

Exercise 10

No

Research Question: Can we differentiate a quasar from a star from its emission spectra?