

Name _____ Date _____

Star Types – Color and Surface Temperature

Determine the color and letter of these stars:

Star Name	Luminosity	Surface Temperature Kelvin	Color	Letter
Our Sun	1	5,750	White-Yellow	G
Betelgeuse	16,000	3,100		
Polaris	5,500	5,400		
B. Centauri	1,700	25,000		
Antares	910	3,200		
Spica	760	24,000		
Aldebaran	160	3,600		
Regulus	160	13,600		
Arcturus	100	4,500		
Vega	50	11,300		
Sirius	20	10,600		
Fomalhaut	12	9,600		
Altair	10	8,400		
Procyon	6	6,600		
A. Centauri	2	6,000		
Lacaille 8760	0.03	3,500		
40 Eridani B.	0.01	9,000		

Name _____ Date _____

Star Types – Color, Surface Temperature, and Characteristics

O, B, A, F, G, K, and M. - "Oh be a fine girl (guy), kiss me."

Star Type	Color	Approximate Surface Temperature	Average Radius (Sun = 1)	Main Characteristics	Examples
O	Blue	over 25,000 K	15	Singly ionized helium lines (H I) either in emission or absorption. Strong UV continuum.	10 Lacertra
B	Blue	11,000 - 25,000 K	7	Neutral helium lines (H II) in absorption.	<u>Rigel</u> <u>Spica</u>
A	Blue	7,500 - 11,000 K	2.5	Hydrogen (H) lines strongest for A0 stars, decreasing for other A's.	<u>Sirius</u>, <u>Vega</u>
F	Blue to White	6,000 - 7,500 K	1.3	Ca II absorption. Metallic lines become noticeable.	Canopus, Procyon
G	White to Yellow	5,000 - 6,000 K	1.1	Absorption lines of neutral metallic atoms and ions (e.g. once-ionized calcium).	<u>Sun</u>, <u>Capella</u>
K	Orange to Red	3,500 - 5,000 K	0.9	Metallic lines, some blue continuum.	<u>Arcturus</u>, <u>Aldebaran</u>
M	Red	under 3,500 K	0.4	Some molecular bands of titanium oxide.	<u>Betelgeuse</u>, <u>Antares</u>

Table Source: <http://www.enchantedlearning.com/subjects/astronomy/stars/startypes.shtml>

Source: <http://www.lhs.sad49.k12.me.us/ljhs/andrew/hrdb.html>
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