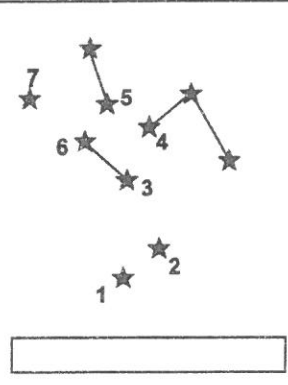
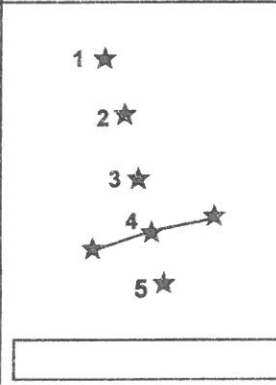
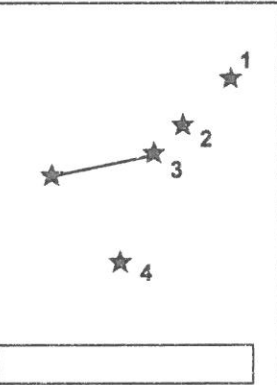
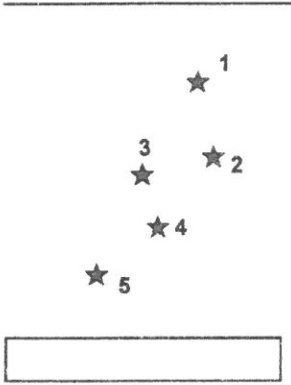
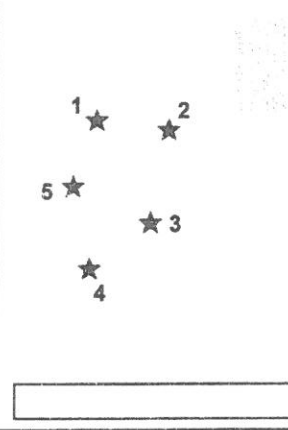
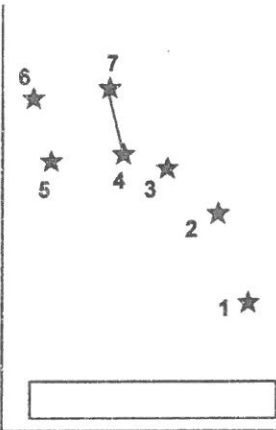
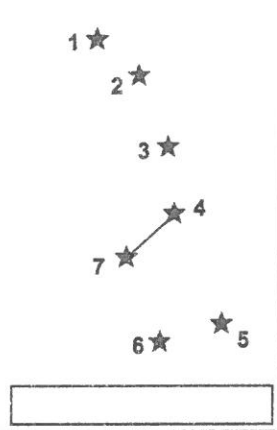
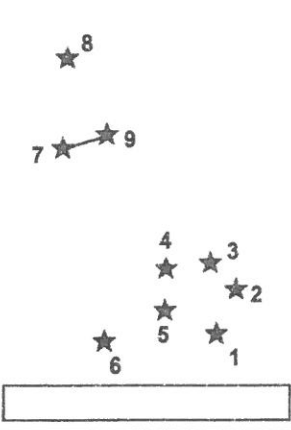


# Delgaudio

## CONSTELLATIONS

1. What is a constellation? \_\_\_\_\_



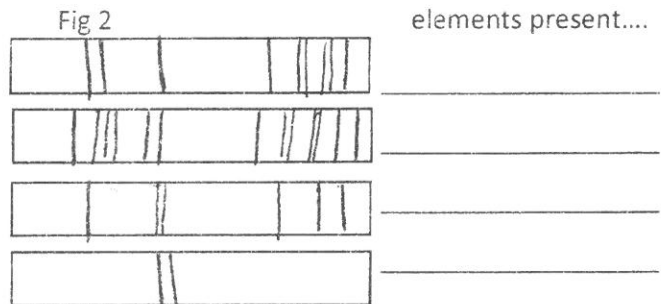
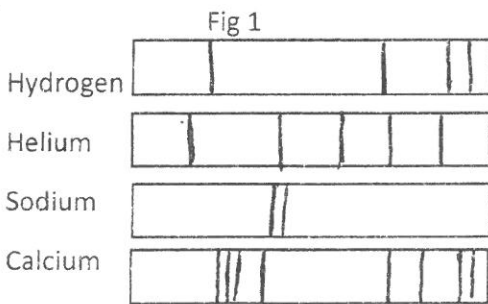
Match the picture to constellation name and research what each name means.

- Big Dipper =
- Cygnus =
- Cepheus =
- Cassiopeia =
- Leo =
- Cancer =
- Little Dipper =
- Hercules =

## Star Spectrograph

Below are the Spectrograph signatures the elements hydrogen, helium, sodium and calcium (fig. 1). These elements make up the star spectrum for many stars. Some stars are a combination of two or more elements. Determine what elements make up each star in figure 2.

*page 600 in Text book will help*



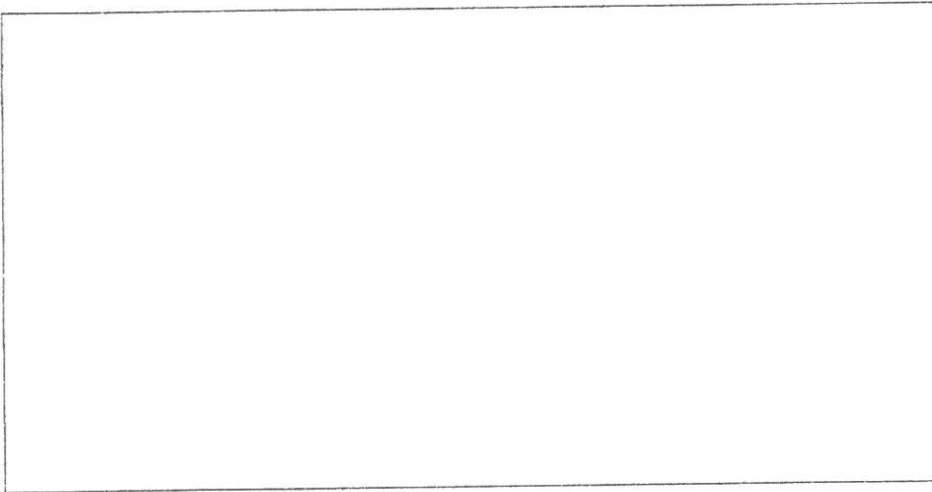
SUMMARY- Write a summary about what you just learned.

## H-R Diagram

The H-R diagram plots stars based on their luminosity and temperature. It also classifies stars based on their spectral class(OBAFGKM). When stars are plotted it is found that they fall into groups (main sequence, white dwarfs, red dwarfs, blue giants, giants and super giants). About 90% of the stars fall into the main sequence. A star's absolute magnitude is not affected by its distance from Earth. The smaller the absolute magnitude, the brighter the star (very bright stars have a negative magnitude).

**Directions:** Use your book (pg 604) to help you plot the following information.

1. Label the surface temperature (x axis), absolute brightness(y axis) and spectral class (teacher will help ) on the graph.
2. Circle the main sequence and label it.
3. Circle and label the region where white dwarfs are expected.
4. Draw a rectangle around the location of the super giants and label it.
5. Draw an oval around the region of giants and label it.
6. Draw an oval around the region of blue giants and label it.
7. Use your book as a guide to shade in the H-R diagram with the correct colors. (red, blue, yellow etc.)
8. Betelgeuse is a red supergiant star with a spectral class of M and is about 40,000 times more luminous than the Sun. Label it.
9. Rigel is a blue supergiant, with a spectral class of B and luminosity more than 50,000 times that of the Sun. Label it.
10. Label the Sun, Alpha Centauri A, Alpha Centauri B, and Sirius B.

**Questions:**

1. What color stars are the hottest?
2. What color stars are the coolest?
3. Where are most of the stars located?
4. What is the Betelgeus' spectral class?
5. Which star is hotter Rigel or Betelgeuse?
6. Which star is more like the sun, Alpha Centauri A or Alpha Centauri B? Why?
7. Our star, the sun, is a yellow star, what spectral class is that?