LIGHT FROM THE STARS NAME_____

PER_____PAGE_____

OBJECTIVE:_____

_____

RESEARCH:

Star:_____

Our Sun:_____

Visible Light:_____

_____

Spectroscope:_____

Star Composition:_____

_____

Star's Spectral Pattern:_____

_____

Star's Life Stages:

Nebula:_____

_____

Main Sequence:_____

_____

Red Giant:_____

_____

White Dwarf:_____

_____

Black Dwarf:_____

_____

Supernova:_____

_____

Black Hole:_____

_____

Neutron Star:_____

_____

ACTIVITY:

1. Look through the eyepiece of the spectroscope. Point the slit on the other end toward a fluorescent light. Draw the spectral pattern that you see: DRAWING OF SPECTRAL PATTERN:

2. There is a beaker with distilled water.
3. Dip the nichrome wire loop into the distilled water, then dip the moistened wire into the vial with the calcium chloride. The wire should have a few crystals of salt sticking to it.
4. Each student should take turns viewing the flame through the spectroscope while another student holds the loop into the flame. Hold the loop in the flame until all the salt has been burned off. DO NOT DIP THE LOOP INTO MORE THAN ONE SALT AT TIME.
5. Record in Table 1 the colors that are visible through the spectroscope with calcium chloride.
6. Repeat steps 3, 4 and 5 for each of the salts in Table 1.

TABLE 1

Source	Red	Orange	Yellow	Green	Blue	Violet
CaCl						
LiCl						
SrCl						
KCl						
NaCl						

QUESTIONS:

1. What is a spectral pattern?

2. Why do the spectral patterns from different stars vary?

3. How do spectroscopes help scientists analyze starlight?

4. What color are stars with relatively high surface temperatures?

5. What color are stars with relatively low surface temperatures?