



PROBLEM SOLVING ACTIVITY: REACHING FOR THE STARS

BACKGROUND: All elements produce characteristic sets of lines when they are heated and subject to analysis by a device known as a spectroscope. The lines are called spectral lines. Each element has its own set of spectral lines, much like a fingerprint.

TASK: Imagine that you have been given the following assignment: Determine the composition of 3 distant stars. How can you possibly do it? After all, you cannot possibly travel millions of light years to get a sample of each one. And, in addition, all you have been given is a few strips of paper with what seem like some silly lines on them. What will you do?

Examine the spectral lines of the following elements compare them with the spectral lines labeled A, B and C. Determine which elements are in the stars that produced spectral bands A, B and C. Write out a detailed explanation for your choice.

