

## STUDENT INVESTIGATION

### Activity:

Comparing Free Elements to compounds of these elements.

### Purpose:

To find that elements look and behave differently in compounds than when by themselves (free).

### Materials:

DTE CD-ROM, computer with CD-ROM drive.



### Procedure:

1. Based on its position in the Periodic Table find whether each of the following elements is a metal or a nonmetal: Calcium (Ca); Sodium (Na); Iron (Fe). Record your answers in the Table below.
2. Find the appearance of Calcium (Ca) in its **Overview** section of Discover the Elements, and record the appearance in the Table.
3. Also find and record the appearance of Sodium and Iron.

### Data Analysis:

Element	Ca	Na	Fe
Metal or Nonmetal?			
Appearance			
Can be found in:	teeth, milk, bones, seashells, limestone	salt, baking soda	nails, wire, blood

### Conclusions:

1. Which of these three elements looks more like what you would expect (metal or nonmetal?) based on its appearance you recorded in the Table above?
2. What does this tell you about the appearance of free elements compared to the compounds which contain free elements?

*Discover the Elements: The Interactive Periodic Table of the Chemical Elements*