

## Exercise 2.3

Four of the boxes in the following periodic table are colored. Which of these are metals and which are nonmetals? Which one is an alkaline earth metal? Which one is a noble gas? [Section 2.5]

The image shows a simplified periodic table grid. The grid consists of 7 rows and 18 columns. The first row has 2 boxes, the second row has 2 boxes, the third row has 18 boxes, the fourth row has 18 boxes, the fifth row has 18 boxes, the sixth row has 18 boxes, and the seventh row has 18 boxes. Four boxes are colored: an orange box in the second row, second column; a green box in the fourth row, eighth column; a blue box in the third row, tenth column; and a yellow box in the first row, eighteenth column.

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### Solution

The orange and green elements are metals, and the blue and yellow elements are nonmetals.

The orange element is an alkaline earth metal because it's in the second column (group). The yellow element is a noble gas because it's in the far right column (group).