

gridlocks – can you unlock the grid?

Flame test colours

Before you answer the puzzles below fill in the table of flame test colours using:

	pale green	yellow	crimson	no colour	potassium
Metal					
sodium				yellow	
potassium					lilac (purple)
calcium				brick red	
barium				pale green	
lithium			crimson		
copper				green/blue	
magnesium				no colour	

Problem Solving Puzzle 1

Each row, column and 2 x 2 box contains information about the first four metals listed above. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

metal		flame test colour	
sodium	potassium	brick red	pale green
calcium	barium	yellow	lilac (purple)
lilac (purple)	brick red	barium	sodium
pale green	yellow	potassium	calcium
flame test colour		metal	

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Puzzle 2

Each row, column and 2 x 2 box contains information about each of the last four metals in the table.

metal		flame test colour	
lithium	magnesium	green/blue	pale green
copper	barium	no colour	crimson
no colour	crimson	barium	copper
pale green	green/blue	lithium	magnesium
flame test colour		metal	

Puzzle 3

You will need to identify which four metals are in this puzzle.

metal		flame test colour	
calcium	sodium	crimson	no colour
magnesium	lithium	brick red	yellow
yellow	brick red	magnesium	lithium
crimson	no colour	sodium	calcium
flame test colour		metal	