

gridlocks – can you unlock the grid?

Compounds ending in 'ate'

If a compound has 3 elements in it with oxygen as one of them the names often end in 'ate' (if hydrogen is with the oxygen it can be a hydroxide rather than an 'ate'). Before you answer the puzzles below fill in the table of compounds using:

silver nitrate	copper sulfate	zinc carbonate	sodium chlorate
Name		Elements in the compound	
calcium carbonate		calcium, carbon and oxygen	
		copper, sulfur and oxygen	
		silver, nitrogen and oxygen	
sodium phosphate		sodium phosphorus and oxygen	
potassium manganate		potassium, manganese and oxygen	
		sodium chlorine and oxygen	
potassium chromate		potassium, chromium and oxygen	
		zinc, carbon and oxygen	

Gridlock 1

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

compound		made up of the elements	
calcium carbonate			sodium phosphorus and oxygen
	sodium phosphate		
			calcium carbonate
		copper sulfate	
made up of the elements		compound	

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Gridlock 2

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

compound		made up of the elements	
sodium chlorate			
		zinc, carbon and oxygen	
		potassium manganate	
	potassium, chromium and oxygen		
made up of the elements		compound	

Gridlock 3

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

compound		made up of the elements	
	zinc carbonate		potassium, manganese and oxygen
			zinc, carbon and oxygen
copper, sulfur and oxygen			silver nitrate
made up of the elements		compound	