

# gridlocks – can you unlock the grid?

## The limestone cycle

Before you answer the gridlocks below fill in the table of some of the compounds involved in the limestone cycle using:

quicklime                      calcium hydroxide                       $\text{CaCO}_3$                       limewater

common name	chemical name	formula
limestone	calcium carbonate	
	calcium oxide	CaO
slaked lime		$\text{Ca(OH)}_2(\text{s})$
	calcium hydroxide solution	$\text{Ca(OH)}_2(\text{aq})$

### Gridlock 1

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

common name		chemical name	
quicklime			calcium carbonate
	calcium hydroxide		limewater
chemical name		common name	

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## Gridlock 2

Each row, column and 2 x 2 box contains information about the four substances listed above.

common name		chemical name	
limestone			calcium hydroxide solution
	limewater		
			limestone
		quicklime	
formula		common name	

## Gridlock 3

Each row, column and 2 x 2 box contains information about the four substances listed above.

chemical name		common name	
calcium oxide			
		limewater	
		calcium carbonate	
	$\text{Ca(OH)}_2(\text{s})$		
formula		chemical name	

## The limestone cycle – answers

Before you answer the gridlocks below fill in the table of some of the compounds involved in the limestone cycle using:

quicklime                      calcium hydroxide                       $\text{CaCO}_3$                       limewater

common name	chemical name	formula
limestone	calcium carbonate	$\text{CaCO}_3$
quicklime	calcium oxide	$\text{CaO}$
slaked lime	calcium hydroxide	$\text{Ca(OH)}_2(\text{s})$
limewater	calcium hydroxide solution	$\text{Ca(OH)}_2(\text{aq})$

### Gridlock 1 – answers

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

common name		chemical name	
quicklime	limewater	calcium hydroxide	calcium carbonate
slaked lime	limestone	calcium hydroxide solution	calcium oxide
calcium carbonate	calcium hydroxide	quicklime	limewater
calcium hydroxide solution	calcium oxide	limestone	slaked lime
chemical name		common name	

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## Gridlock 2 – answers

common name		chemical name	
limestone	quicklime	calcium hydroxide	calcium hydroxide solution
slaked lime	limewater	calcium carbonate	calcium oxide
CaO	Ca(OH) <sub>2</sub> (s)	limewater	limestone
Ca(OH) <sub>2</sub> (aq)	CaCO <sub>3</sub>	quicklime	slaked lime
formula		common name	

## Gridlock 3 – answers

chemical name		common name	
calcium oxide	calcium hydroxide solution	slaked lime	limestone
calcium hydroxide	calcium carbonate	limewater	quicklime
Ca(OH) <sub>2</sub> (aq)	CaO	calcium carbonate	calcium hydroxide
CaCO <sub>3</sub>	Ca(OH) <sub>2</sub> (s)	calcium oxide	calcium hydroxide solution
formula		chemical name	