

The Blast Furnace

Before you answer the puzzles below fill in the table of the four raw materials (reactants) put into the blast furnace using:

limestone	Fe_2O_3	C	to keep coke burning
reactant	purpose		formula
coke	burns to produce heat and reducing agent		
iron ore	contains iron oxide which is reduced to iron		
hot air			O_2/N_2
	remove impurities as slag		CaCO_3

Gridlock 1

Each row, column and 2 x 2 box contains each of the four reactants. Use your problem solving skills and the answers in the table above to fill in the blank boxes.

reactant		purpose	
coke			remove impurities as slag
	limestone		
			coke
		iron ore	
purpose		reactant	

gridlocks – can you unlock the grid?

Gridlock 2

Each row, column and 2 x 2 box contains information about the four reactants.

reactant		purpose	
iron ore			
		remove impurities as slag	
		C	
	to keep coke burning		
purpose		formula	

Gridlock 3

Each row, column and 2 x 2 box contains information about the four reactants.

reactant		purpose	
	coke		remove impurities as slag
			burns to produce heat and reducing agent
contains iron oxide which is reduced to iron			O ₂ /N ₂
purpose		formula	