

## Mr Ryan's Christmas 2025 – "Open the Safe 8 – Science edition"

*Have you got what it takes? You need to crack the 10-character code to open the safe.*

### Room 1

1	What is the basic unit of life?	
2	Which organ pumps blood around the body?	
3	What are the tiny pores on leaves called that allow gas exchange?	
4	Which gas is needed for aerobic respiration?	
5	What is the name for an organism that makes its own food?	

### Room 2

1	What is the chemical symbol for oxygen?	
2	What type of bond involves the sharing of electrons?	
3	What do you call a substance that speeds up a chemical reaction without being used up?	
4	What is the smallest particle of an element?	
5	What is the chemical symbol for sodium?	

### Room 3

1	What force pulls objects towards the Earth?	
2	What unit is used to measure electric current?	
3	What do you call a material that does not allow electric current to flow easily?	
4	What is the speed of light measured in?	
5	What device is used to measure temperature?	

### Room 4

1	What part of the cell controls its activities?	
2	What is the name for the movement of molecules from high to low concentration?	
3	What microscope uses electrons to create very detailed images?	
4	Which organ system includes the heart and blood vessels?	
5	What pigment gives plants their green colour?	

### Room 5

1	What gas is produced when an acid reacts with a carbonate?	
2	What is the name for turning a liquid into a gas?	
3	What is the reaction called when an acid and an alkali produce salt and water?	
4	What metal is extracted from bauxite?	
5	What is the solvent in salt water?	

