

m o l e c u l a r

m o d e l s

Procedures: Using your periodic table and the materials at each station, complete the following data table.

Chemical Name	Chemical Formula	# of atoms of each element	Draw & Color Model	Questions
Station 1				
Water	H ₂ O	H- O-		How much of human brain is water? _____ How much of Earth's surface is water? _____
Hydrogen Peroxide	H ₂ O ₂	H- O-		What is hydrogen peroxide used for?
Oxygen Gas	O ₂	O-		What percent of Earth's atmosphere is oxygen?
Ozone	O ₃	O-		Ozone protects us from ____ .
Station 2				
Sodium Hydroxide	NaOH	Na- H- O-		Used to manufacture _____ _____
Sodium Chloride	NaCl	Na- Cl-		What is the common name for sodium chloride?
Sodium Bicarbonate	NaHCO ₃	Na- H- C- O-		What is the common name for sodium bicarbonate? Reacts with acid to produce _____
Station 3				
Iron (III) Oxide	Fe ₂ O ₃	Fe- O-		What is the common name for iron oxide?
Iron (III) Chloride	FeCl ₃	Fe- Cl-		Iron chloride is used to treat _____
Calcium Chloride	CaCl ₂	Ca- Cl-		What is calcium chloride used for?
Station 4				
Methane	CH ₄	C- H-		What is one way methane is made?
Carbon Dioxide	CO ₂	C- O-		How much of Earth's atmosphere is carbon dioxide?
Ethane	C ₂ H ₆	C- H-		Ethane is _____ than air.

Chemical Name	Chemical Formula	# of atoms of each element	Draw & Color Model	Questions
Station 5				
Calcium Carbide	CaC ₂	Ca- C-		What gas is produced when calcium carbide reacts with water?
Acetylene Gas	C ₂ H ₂	C- H-		What is acetylene gas used for?
Calcium Hydroxide	Ca(OH) ₂	Ca- O- H-		What is calcium hydroxide used for?
Station 6				
Nitrogen Gas	N ₂	N-		How much of Earth's atmosphere is Nitrogen?
Ammonia	NH ₃	N- H-		What is ammonia used for?
Nitrate	NO ₃	N- O-		What is nitrate used to preserve?
Station 7				
Sulfuric Acid	H ₂ SO ₄	H- S- O-		What is sulfuric acid used for?
Hydrogen sulfide	H ₂ S	H- S-		What is hydrogen sulfide produced from?
Sulfur Dioxide	SO ₂	S- O-		What is sulfur dioxide used to preserve?
Station 8				
Acetic Acid	CH ₃ COOH	C- H- O-		What is the common name for acetic acid?
Manganese Dioxide	MnO ₂	Mn- O-		What is manganese dioxide used for?
Hydrogen Gas	H ₂	H-		Hydrogen gas is the _____ element in the universe.
Station 9				
Glucose	C ₆ H ₁₂ O ₆	C- H- O-		Glucose is a simple _____. Glucose is a product of _____. Glucose is stored in _____.

Questions:

1. Which element is used in the most compounds?
2. Which cross-cutting concept (CCC from green sheet) is best represented by this lab?
3. Which science and engineering process (SEP from green sheet) was used in this lab?