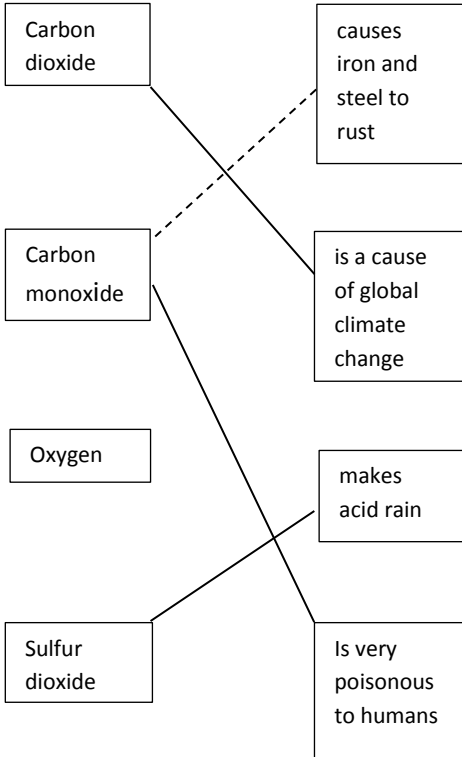


Component 4 - Chemistry: Chemistry in our world

Question	Answers	Additional Guidance	Mark
1	<p>We know crude oil is a mixture of compounds.</p> <p>We can make petrol from crude oil.</p>		<p>1</p> <p>1</p>
2		<p>one mark for each correct line from gas to effect</p> <p>use list principle for additional lines</p>	3
3	Decomposing rubbish in landfill sites		1
4 (a)	nitrogen		1
(b)	21%	allow any value from 20% to 21%	1

5 (a)	condensation	accept condense	1
(b)	Algae and plants		1
6	filtration	may be in either order accept filter	1
	sterilisation	accept sterilise accept boil or description of method to sterilise eg add chlorine allow evaporate and condense for two marks	1
7 (a)	magnesium or zinc or iron	do <b>not</b> accept Group 1 metals, eg potassium allow (small) explosion	1
(b)	pop (sound)		1
(c)	any <b>two</b> from: <ul style="list-style-type: none"> <li>• increase temperature (of acid)</li> <li>• use smaller pieces of metal</li> <li>• use more concentrated acid</li> <li>• add a catalyst</li> </ul>		2
8 (a)	copper oxide + sulfuric acid $\longrightarrow$ copper sulfate + water		1
(b)	neutralisation		1
(c)	crystallised		1
9	temperature		1
<b>Total</b>			<b>20</b>