



# Chemistry assessment activity – Student worksheet

## Chemistry assessment activity – Answer sheet

Total marks available 24

You have 30 minutes to complete this assessment activity.

Plastic is a polymer that can be used to make plastic bottles and food packaging.

Question 1 – What is a polymer [1 mark]

Plastic is important in packaging. Every year 50 megatonnes of plastic is used on different packaging.

The pie chart below shows the mass in megatonnes of packaging used in different ways.



Question 2 – How many megatonnes of plastic are used for water bottles? [1 mark]

Question 3 – Which was the lowest use packaging? [1 mark]

Question 4 – What does biodegradable mean? [1 mark]

Question 5 – A supermarket is looking to try different packaging for a new range of toiletries called eco-spa. The sustainability leads have been looking at which is the best type of packaging, plastic, glass or compostable packaging.

Place a tick (✓) or a cross (×) in the column to indicate if the type of packaging is biodegradable. [3 marks]

1 for each correct box

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Packaging ✓ or ✗

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Plastic

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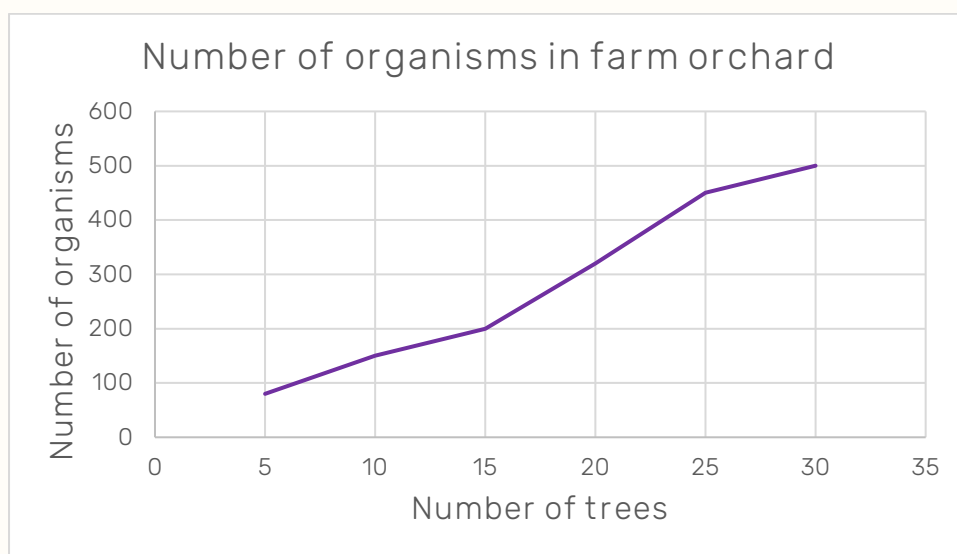
Glass

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Compostable

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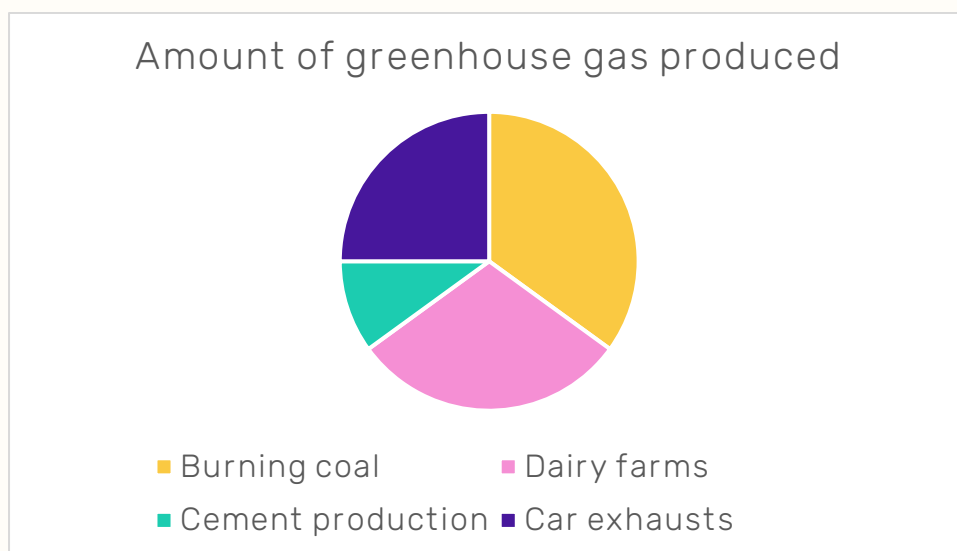
Sam has researched information about the numbers of trees he should plant in his orchard and the numbers of organisms – which is shown below.



Question 6 – What happens to the number of organisms as the number of trees increases? [1 mark]

Question 7 – Give 2 reasons for your answer to question 6. [2 marks]

The pie chart shows the amounts of greenhouse gas production by 4 different human activities.



Question 8 – Name 2 examples of greenhouse gases. [2 marks]

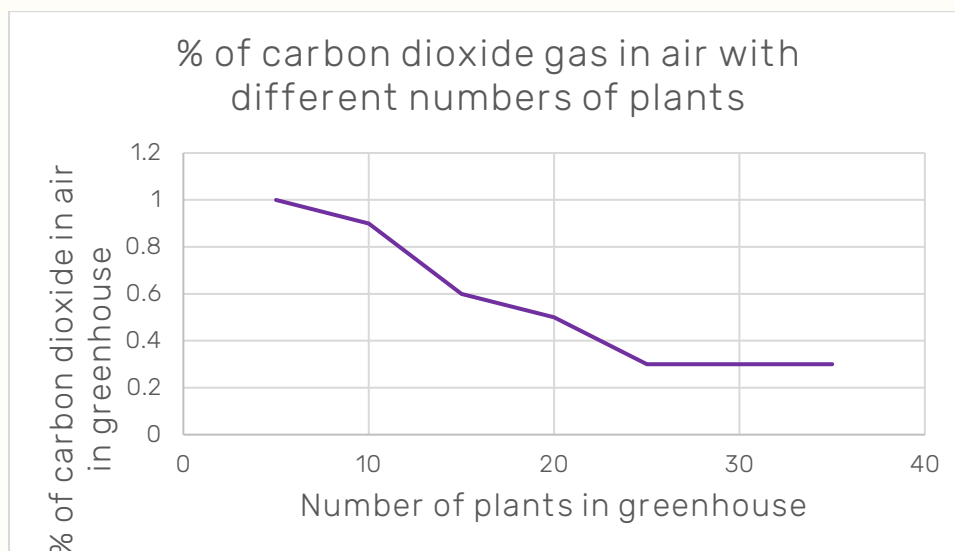
Question 9- Give two human activities which may have helped to increase the concentration of carbon dioxide in the atmosphere. [2 marks]

Question 10 - Why are greenhouse gases bad for the environment? [1 mark]

Question 11- Name the gas given off by burning coal. [1 mark]

Question 12 - Name the gas is given off by dairy farms and what it is released from. [2 marks]

Sam is a farmer who would like to make his farm more environmentally friendly. He has heard that a neighbouring farm has a greenhouse with a computer that monitors the level of carbon dioxide gas in it. The farmer then checks the monitor. The levels are shown in the graph below.



Question 13 – Describe what happens to the level of carbon dioxide with changing numbers of plants. [2 marks]

Question 14 – Explain why this happens. [2 marks]

Question 15 – Sam has told the farmer next year he should only plant 25 plants and no more. Give 2 reasons why he has advised this. [2 marks]

Question 16 – What will happen to the amount of oxygen in the greenhouse? [1 mark]

Question 17 – Sam is thinking of cutting down trees to make more room for a greenhouse at his farm. Give a reason why he should not do this and how it would affect biodiversity? [2 marks]

