

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Investigate the contribution that natural and human chemical processes make to our carbon dioxide emissions.



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| Know  1  2 | |  | Apply | |
| Ideas | |  |  |  |
| K1 | Carbon is recycled through natural processes in the atmosphere, ecosystems, oceans and the Earth's crust (such as photosynthesis and respiration) as well as human activities (burning fuels). |  | A1 | Use a diagram to show how carbon is recycled in the environment and through living things. |
| A2 | Describe how human activities affect the carbon cycle. |
| K2 | Greenhouse gases reduce the amount of energy lost from the Earth through radiation and therefore the temperature has been rising as the concentration of those gases has risen. |  | A3 | Describe how global warming can impact on climate and local weather patterns. |
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| K3 | Scientists have evidence that global warming caused by human activity is causing changes in climate. |  | A4 |  |
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| Facts | |  |  |
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| K4 | Methane and carbon dioxide are greenhouse gases. |  | A5 |  |
| K5 | Earth's atmosphere contains around 78% nitrogen, 21% oxygen, <1% carbon dioxide, plus small amounts of other gases. |  |  |  |
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| Key words | |
| K6 | **Global warming:** The gradual increase in surface temperature of the Earth. |  |  |  |
| K7 | **Fossil fuels:** Remains of dead organisms that are burned as fuels, releasing carbon dioxide. |  |  |  |
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| K8 | **Carbon sink:** Areas of vegetation, the ocean or the soil, which absorb and store carbon. |  |  |  |
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| K9 | **Greenhouse effect:** When energy from the sun is transferred to the thermal energy store of gases in Earth's atmosphere. |  |  |  |
| 3 | Extend |  |  |  |
| E1 | Evaluate the implications of a proposal to reduce carbon emissions. |  |  |  |
| E2 | Evaluate claims that human activity is causing global warming or climate change. |  |  |  |
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| E3 | Compare the relative effects of human-produced and natural global warming. |  |  |  |
| E4 |  |  |  | |
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| E5 |  |  |  |  |
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