

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

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

Class: \_\_\_\_\_

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# IB Environmental Systems and Societies

## 6.1 Introduction to the Atmosphere

### **Significant ideas:**

The atmosphere is a dynamic system which is essential to life on Earth

The behaviours, structure and composition of the atmosphere influence variations in all ecosystems.





4. State the parts of the atmosphere (name and altitudes) in which the majority of chemical reactions relating to living organisms occur

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5. Outline factors that have influenced atmospheric composition over geological time

Note: "Geological time" suggests that human-related effects are not relevant here.

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6. Outline what is meant by the term "albedo effect"

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7. Summarise the role of clouds with regards to their influence on Earth's albedo

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## The greenhouse effect and human influences on the atmosphere

Before you go any further, be clear of one thing: "the greenhouse effect" is not a bad thing. The greenhouse effect maintains a suitable temperature on Earth for living organisms. The *enhanced* greenhouse effect, which results in global warming, has potential disastrous consequences, however. Don't use "greenhouse effect" and "global warming" interchangeably; they are not the same thing. Unfortunately, it is common to see these two phrases mixed up in the media.

1. Draw a diagram to summarise the greenhouse effect

2. Describe the ways in which human activities are influencing the atmosphere. Use the subheadings to guide your answer.

*Carbon dioxide concentration*

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*Ozone levels*

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*Water vapour (Hint: think about feedback cycles)*

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