Q1. a) Draw a **food chain** in the box below and explain how the energy is transferred from producer to consumer.

Q1. b) Using your food chain, **describe the ingredients** you think are needed for life.

Q2. a) Imagine the Earth lost all of its Carbon. How would this affect your food chain? You may wish to use diagrams in your answer.

Q2. b) The Earth is currently undergoing a climate crisis. Part of the reason for this is because of increasing levels of Carbon Dioxide (CO_2) in our atmosphere. How would an **increase** in CO_2 affect your food chain? You may wish to use diagrams in your answer.

Q2. c) Use the Global Carbon Atlas website to investigate how Carbon is produced on Earth and how the Earth absorbs Carbon. Record your findings in Table A.

Table A.

Carbon Sources	Carbon Sinks

Q2. d) How can we, as citizens, reduce our Carbon emissions to help slow down global warming?

Q3. Water is another ingredient that is necessary for life. Imagine that you are a scientist who has discovered this fact. **Design a simple experiment** demonstrating the water cycle on Earth, to help you communicate your findings to others. Remember to include diagrams!