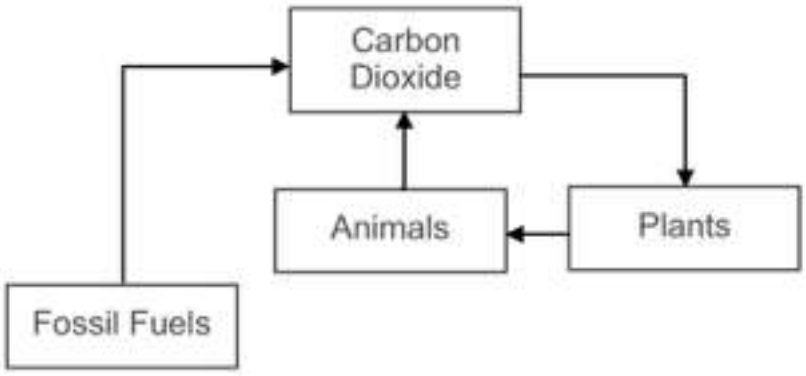
0 1 **The diagram shows a small part of the carbon cycle.**



0 1 . 1 Describe how carbon is cycled in the environment. In your answer you must include:

* key processes
* how carbon is used in living things.

[5 marks]

Carbon used to make carbohydrate for energy, or cellulose or starch [1]
or to make protein for growth, and fat for stored energy. [1]
Carbon in the form of carbon dioxide in the air. [1]
Taken in by plants / algae by photosynthesis. [1]
Taken in by plants or by animals eating plants. [1]
Mention of decay of dead plants, animals and waste. [1]
Respiration by plants, animals and microorganisms / detritus feeders. [1]
Combustion of fossil fuels / plant material. [1]

0 1 . 2 When the plants (featured in the carbon carbon cycle diagram above) die they decompose. Describe how the decay cycle helps to cycle the nutrients in the plants back into the ecosystem. **[4 marks]**

decomposers/microbes/microorganisms/bacteria/worms/maggots [1]
feed off dead plant material [1]
respire and release carbon dioxide/water [1]
breakdown material into absorbable nutrients [1]
which enter plants through roots [1]

0 1 . 3 The water cycle is important in maintaining habitats, photosynthesis and transport systems. State and describe each of the 4 main processes in the water cycle.

[8 marks]

Process 1: evaporation [1] : water from rivers/lake/sea/leaves etc. turns to steam/ vapour when heated by the sun[1]

Process 2: transpiration [1]: releases water (vapour) into the air through stomata in leaves [1]

Process 3: condensation [1]: water vapour cools as it rises and forms clouds/ water droplets [1]

Process 4: precipitation [1]: water in clouds fall as rain/snow/sleet as they get heavier [1]