20.2 Habitat destruction

Name: _____ Class: _____ Date: _____ **Total: 21 marks**

KEY WORDS deforestation • carbon dioxide • species • extinction • biodiversity

Objective

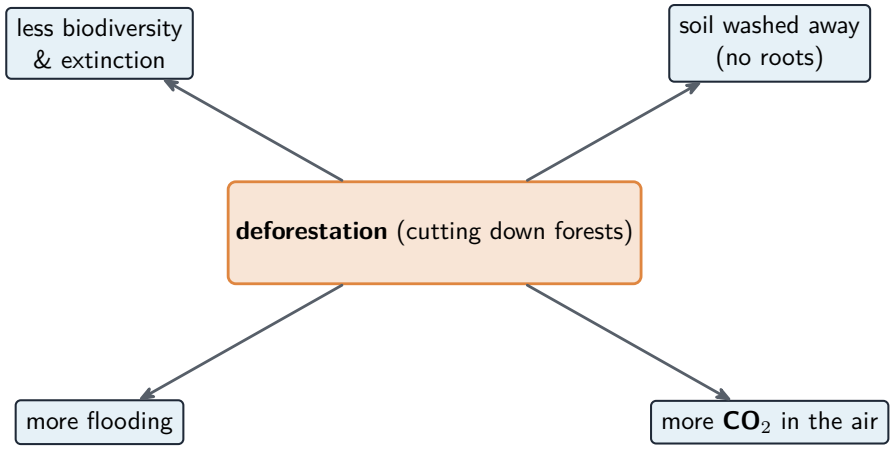
Build the skills to answer exam questions on **habitat destruction** – **biodiversity** and the effects of **deforestation** .

You must be able to:

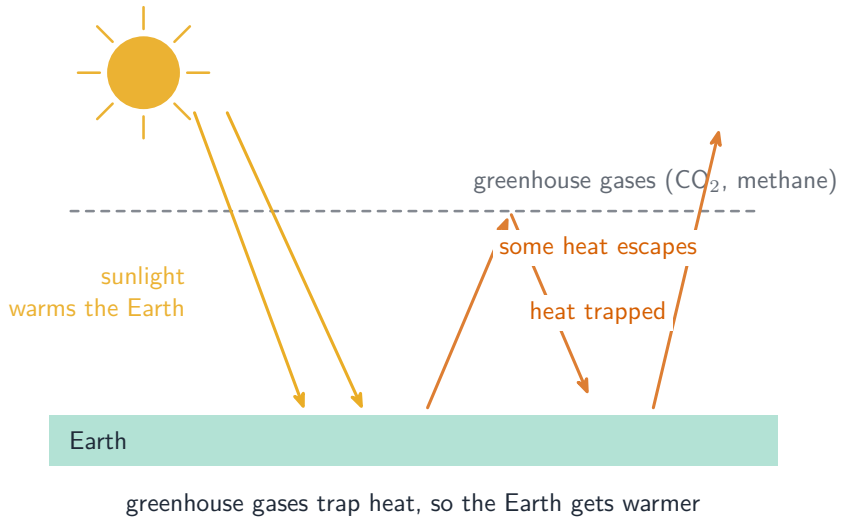
- explain how humans destroy habitats and reduce biodiversity
- list the effects of deforestation
- link habitat change to food webs

1 Key knowledge and worked examples

Deforestation



Deforestation lowers biodiversity, washes away soil, causes flooding and adds CO_2



Habitat loss links to the enhanced greenhouse effect

- **biodiversity** = the number of different species in an area.

2 Practice

2.1 Define biodiversity. [1]

2.2 State one way humans destroy habitats. [1]

3 Exam-style questions

3.1 Deforestation increases the amount of carbon dioxide in the air because: [1]

☐ **A** trees release it when cut
B fewer trees take it in by photosynthesis
C soil makes it
D rivers flood

3.2 A large area of forest is cleared.

(a) State two effects of this deforestation. [2]

(b) Explain why removing the trees leads to soil being washed away. [2]

3.3 A large area of tropical rainforest is cleared for cattle farming.

(a) State what is meant by *biodiversity*. [2]

(b) Describe **four** effects of deforestation on the environment, explaining each. [8]

(c) Explain why species that live only in that forest are at risk of extinction. [2]

(d) Suggest **two** ways of reducing the impact of using forest land. [2]

Solutions

Each answer shows the steps, then the **result**.

2.1

- biodiversity is the **number of different species** living in an area

2.2

- any **one** of: clearing land / mining / pollution

3.1 B

- fewer trees take in less CO_2 by **photosynthesis**
- A is not the main reason; C and D are unrelated

3.2

(a)

- any **two** of: lower biodiversity / soil loss / flooding / more CO_2

(b)

- tree roots no longer **hold the soil**
- so rain **washes it away**

3.3

(a)

- the number of **different species**
- and how many individuals of **each**

(b)

- **loss of habitat**: food, shelter and breeding sites gone
- **soil erosion**: roots no longer bind the soil
- **flooding**: less water taken up, so more runs into rivers
- **more CO_2**: fewer trees photosynthesise, and burning releases more

(c)

- a species found nowhere else has **no other population**
- once its only habitat is destroyed it becomes **extinct**

(d)

- **replant** after felling, or fell in rotation
- **protect reserves** and use already-cleared land more productively