

19.4 Populations

Name: _____ Class: _____ Date: _____ **Total: 7 marks**

KEY WORDS population 种群 • resources 资源 • death phase 衰亡期 • competition 竞争
• stationary phase 稳定期

Objective

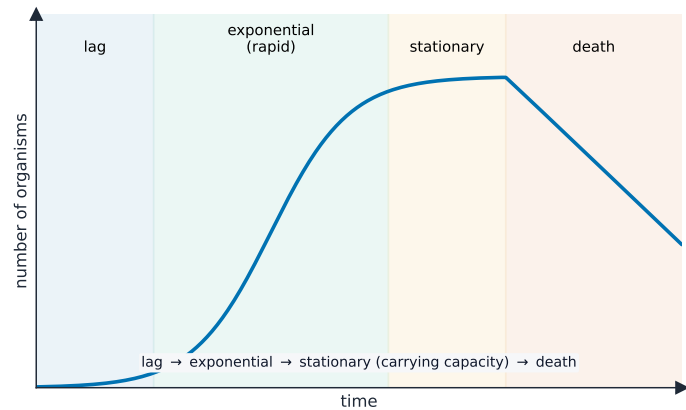
Build the skills to answer exam questions on **populations** 种群 — the terms, and the **S-shaped growth curve** S 形增长曲线.

You must be able to:

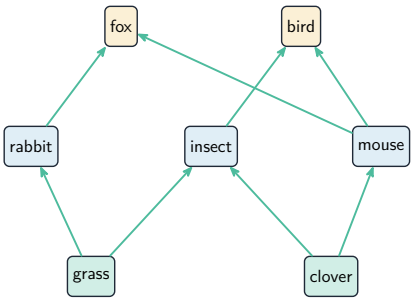
- define population, community and ecosystem
- describe the factors that affect population growth
- name and explain the phases of the S-shaped growth curve

1 Worked examples

■ Population growth



Four phases: lag (slow), exponential (fast), stationary (births ≈ deaths), death (numbers fall)



Populations interact in a food web

- **population:** one species, one area, one time.
- growth depends on food, competition, predation and disease.

2 Practice

2.1 Define a population. [1]

2.2 Name the phase of fastest growth. [1]

3 Exam-style questions

3.1 In the stationary phase of population growth: [1]

- | | |
|---|---|
| A | B |
| C | D |
- A the population is growing fastest
B births roughly equal deaths
C the population is dying out
D there are no organisms

3.2 A population grows in a place with limited resources.

(a) State two factors that limit population growth. [2]

(b) Explain why the population enters a death phase. [2]
