

How Food-Preservation Methods Slow Spoilage

Name _____

Date _____

Read the text carefully and answer every question clearly.

Food spoils when bacteria, moulds and yeasts multiply, or when enzymes and chemical reactions alter its colour, flavour and texture. Preservation slows one or more of these changes; it does not necessarily kill every microbe or keep food safe indefinitely.

In a fridge below 5°C, low temperature slows microbial growth and many reactions. Freezing at about -18°C stops microbes multiplying while food stays frozen, but some can become active after thawing. Ice crystals may also change texture.

Drying removes water microbes need. Salt and sugar similarly make less water available, provided enough is used. Pickling adds acid and lowers pH, preventing many microbes from growing. A small amount of salt or vinegar is not automatically protective.

Heating can reduce microbes and inactivate enzymes. Pasteurisation uses controlled heat but does not sterilise food, so the stated packaging and storage instructions still matter. Safe canning uses a tested combination of time, temperature, acidity and sealed packaging; simply heating food and closing a clean jar is not sufficient. Each method therefore controls particular causes of spoilage, and foods often combine methods, such as pasteurised milk kept refrigerated.

Comprehension questions

1. What happens to microbes while food is frozen, and what may happen after it is thawed?

2. Which four factors are combined in safe canning?

Reflection questions

1. If dried food absorbed moisture from the air, what would probably happen to its preservation effect, and why?

Opinion questions

1. The passage states that simply heating food and closing a clean jar is not sufficient for safe canning. Do you think this warning should appear clearly on jars and preserving equipment? Explain your view.
