

How Food Preservation Slows Spoilage

Name _____

Date _____

Fill in the gaps so that the text makes sense.

Food spoils when its enzymes continue chemical reactions or when bacteria, yeasts and moulds—collectively called _____—feed and reproduce. Preservation therefore changes one or more of the conditions these agents need; it does not make food permanently immune to decay.

Cooling mainly changes the rate of activity. A refrigerator keeps food cold enough to slow enzymes and microbial growth, but it does not kill every microbe. _____ goes further because it turns much of the food's water into ice. Reactions become very slow and microbes cannot use ice as liquid water, although some survive and become active again after thawing.

Heat works differently. Pasteurising milk uses a controlled temperature for a set time to destroy many harmful microbes and reduce spoilage, without the stronger heating used in sterilisation. In canning, food is heated and then sealed, preventing new microorganisms from entering. A swollen or leaking can may signal microbial activity, so it should not be tasted.

Dehydration preserves food by _____. Without enough moisture, most microbes cannot reproduce; sun-drying and ovens achieve this water loss. Salt and sugar create a related effect by drawing water away from microbial cells. Acid and approved preservatives can also inhibit microbes. Because each method controls different conditions, combining methods, such as refrigerating an opened jar of jam, often slows spoilage more reliably than either measure alone.