

Concept Overview

MATERIAL WORLD

The diagram below shows the science concepts outlined in this book and in the level 3–4 companion book, *Preserving Food*. The arrows show the links between concepts and how they might build in sequence. A “big idea” shows how a fully developed understanding of the concepts might look. Such an understanding might not be achieved until level 7 or 8. The big ideas are included to help you build appropriate concepts with your children, whatever their age.

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Preserving Food
(Book 24)

Big Idea

The types of changes that materials can undergo are related to their chemical composition.

Some foods are irreversibly changed by the process of preservation. Others can be restored to almost their original “fresh” state after being preserved.

Preserving removes one or more of the conditions that fungi and bacteria need for growth.

Some foods have natural defences against spoilage.

Some foods have a higher water content than others.

Different foods have different appearances, textures, tastes, and smells.

We eat many sorts of food.

Big Idea

Chemical reactions occur naturally around us all the time.

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Fungi and bacteria need certain conditions in which to grow.

Food spoilage results from the feeding activities of fungi and bacteria.

Dry foods tend to stay fresh longer than moist foods.

Some foods stay fresh longer than others.

Food changes as it loses its freshness.

Big Idea

People have developed technologies that slow down or alter the natural processes of decomposition in food.

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Preserving removes one or more of the conditions that fungi and bacteria need for growth.

Preserving stops or slows fungi and bacteria from spoiling food.

Packaging helps to keep food fresh by maintaining its water content at stable levels and by keeping air out.

Some food is not safe to eat if it is not fresh.

Some foods quickly lose their freshness unless they are kept cool.

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Fresh Food
(Book 23)

Science Concepts