

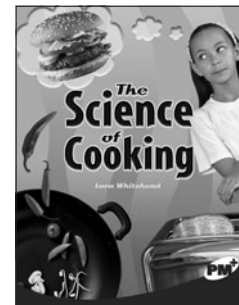
# The Science of Cooking

PM Level 29

Sapphire

**Text Type** Information Report / Procedure / Narrative

**Running Words** 2146



## Preparing for Guided Reading

### Orientation to the Text

- This book explores the science of cooking: the chemical reactions, the methods used, the processes that give us the food we eat, and the way food can poison us.

### Prior Knowledge

- Ask students to brainstorm recipes where the food changes form, e.g. jelly crystals to liquid to solid jelly. Ask students to suggest what causes these changes and whether these causes will always result in change.

## Building the Balanced Reader

### Grammatical Conventions

- Identify longer sentences, with multiple clauses, e.g. *On the table where the Bread Team had been working were a large bag of flour, an empty milk carton, some butter, sugar, salt, a jar of dried yeast, and a glass measuring cup they had used for the water.*
- Revise the use of a comma to separate items in a list, e.g. *in the air, the soil, on our skin, and in our food.*

### Vocabulary

#### Key vocabulary

alcohol, appliances, bacteria, conduction, contaminated, convention, dormant, electricity, fermentation, furnaces, ingredients, laboratory, microwave, moisture, molecules, multiplying, organism, preserved, radiant, reaction, refrigerator, souffle, technology, temperature, vegetarians, wok, yeast

### Spelling

- Make a group chart of scientific terms from the text. Explain to students that a good way to spell new words is to remember that each syllable has at least one vowel (except where the letter y is used instead of a vowel). Analyse the words listed to see whether this rule holds, e.g. *sci/ence*; *con/vec/tion*; *re/ac/tion*; *chem/i/cal*; *ra/di/a/tion*.

### Visual Literacy

- Assist students to understand events on the timeline that show the development of cooking methods from the open fire to the electric stove.

## Focusing on the Story – Guided Reading

- Ask students to read to the end of p. 13 after setting the focus questions:  
*The first chapter title is The Art and Science of Cooking. What is the difference between an art and a science?*  
*Which cooking implements are useful for increasing the speed of a chemical reaction? Which are useful for slowing the speed of a chemical reaction?*
- Ask students how they would go about testing a scientific concept, e.g. Which ingredient makes bread rise? Introduce the terms: *aim, hypothesis, apparatus, control, variable, method, observation, results and conclusion*. Explain that these are the steps and subheadings for conducting scientific experiments.
- Ask students what is meant by a 'fair test' and discuss the importance of controls and variables in an experiment. Experiments that don't have controls and variables and aren't testing something are called scientific procedures.
- Ask students to silently read to the end of p. 23 after setting the focus question: *How can we tell that the text about the green eggs is a scientific procedure and not an experiment?*
- Share students' responses to the focus questions, then discuss the following:  
*Different designs in cooking technology have allowed for different cooking styles. What were the most important changes?*  
*What is the difference between radiant heat and microwave heat?*
- Ask students to consider how they could conduct a test to find the temperature range for the warm water needed in the bread-making recipe.

## Comprehension

- Are all bacteria poisonous? (*Literal*)
- Why does Marsha say that Sam has murdered his yeast? (*Inferential*)
- What is the significance of the characters' names in the narrative text? (*Applied Knowledge*)

## Follow-up Activities

- Ask students to make a list of improvements the restaurant owner must complete if he wants to reopen his business.

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## Learning Intentions

- We are learning to apply a range of skills and strategies to gain maximum understanding of both written and visual information in a text.
- We are learning about a range of language effects that add variety and clarity to a text.

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## Success Criteria

- I can read written and visual information to better understand information in a text.
- I can read and understand a range of language effects used by the author.

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## Guided Reading Notes

| Student's name | Reading focus | Observations/notes | For follow-up |
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