

Book Summaries

On the Road and Our New Car

On the Road (lesson on pages 36–40)

Ratios and Proportions

Reading Level 6.5

This book explores ratios and proportions in the context of planning and taking a family vacation trip. Students learn that ratios and proportions are used to investigate situations in which groups are equal. Speed of cars and gas mileage are explored to investigate rates. Proportions are used to solve percent problems.

Our New Car (lesson on pages 41–45)

Ratios and Proportions

Reading Level 5.6

This book uses ratios and proportions to follow a family's purchase of a new car. They investigate the types of cars available, the car dealership, the warranty, and many associated car facts. Students use fractional equivalence to write and solve proportions. Rates are investigated using gas mileage and speed. Students learn to use proportions to solve percent problems.

What Did I Eat? and How Do They Make That?

What Did I Eat? (lesson on pages 60–64)

Fractions, Decimals, and Percents

Reading Level 6.6

The focus of this book is on food and nutrition. Through the context of food, students solve problems using addition, subtraction, multiplication, and division of fractions and decimals. They also solve problems with percents.

How Do They Make That? (lesson on pages 65–69)

Fractions, Decimals, and Percents

Reading Level 5.8

This book looks at the production of various kinds of food, including agriculture, processing, manufacture, and transportation. In this context, students solve problems using addition, subtraction, multiplication, and division of fractions and decimals. They also solve problems with percents.

Book Summaries *(cont.)*

Watch It Grow and Where Germs Lurk

Watch It Grow (lesson on pages 84–88)

Writing, Simplifying, and Evaluating Expressions
Reading Level 6.7

This book investigates growth, focusing on microorganisms. Students write, simplify, and evaluate algebraic expressions, use order of operations, and apply the distributive property. Students are introduced to exponential growth through the division of cells.

Where Germs Lurk (lesson on pages 89–93)

Writing, Simplifying, and Evaluating Expressions
Reading Level 5.8

This book describes the discovery of germs, diseases caused by germs, disease control, personal hygiene, and sterilization procedures. Students write, simplify, and evaluate algebraic expressions, use order of operations, and apply the distributive property. Students are introduced to exponential growth through the division of cells.

Land Animals and Sea Creatures

Land Animals (lesson on pages 108–112)

Solving Equations and Inequalities
Reading Level 6.8

This book looks at different kinds of animals from elephants to spiders, looking at their habitat, diet, and structure. Students use facts about the animals to identify independent and dependent variables, write linear equations and inequalities, and graph the solutions of inequalities.

Sea Creatures (lesson on pages 113–117)

Solving Equations and Inequalities
Reading Level 5.5

This book introduces interesting animals in the ocean. It investigates the wide variety of animals in the ocean, looking at the different parts of the ocean they inhabit, their diet, and their adaptations to their environment. Students use facts about the animals to identify independent and dependent variables, write linear equations and inequalities, and graph the solutions of inequalities.

Book Summaries *(cont.)*

A Sense of Art and Landscape by Design

A Sense of Art (lesson on pages 132–136)

Perimeter and Area

Reading Level 6.3

This book investigates the use of shapes in art, architecture, bridges, and interior design. As students learn about famous buildings, bridges, and rooms, they identify the shapes used in artistic designs. They find the area and perimeter of different kinds of triangles, circles, rectangles, parallelograms, and trapezoids.

Landscape by Design (lesson on pages 137–141)

Perimeter and Area

Reading Level 5.3

This book focuses around a family creating a plan to design the landscaping of their yard. As the family plans, they consider the size of the lawn, the design of a garden, the design of a patio, and a swimming pool. Students use the shapes encountered to find the area and perimeter of different kinds of triangles, circles, rectangles, and trapezoids.

Package Design and Pack It Up

Package Design (lesson on pages 156–160)

Surface Area and Volume

Reading Level 6.8

This book looks at the packaging of products. It discusses the attractiveness, sizes, and shapes of packaging, the display of packaging on shelves, and the consumer information included on packages. Students find the surface area and volume of packages that are rectangular prisms and cylinders.

Pack It Up (lesson on pages 161–165)

Surface Area and Volume

Reading Level 5.0

This book follows a family as they move to a new home. Students find the surface area and volume of boxes, personal belongings, and rooms in the house that are rectangular prisms and cylinders.

Book Summaries *(cont.)*

Hurricane Hunters and Tornado Chasers

Hurricane Hunters (lesson on pages 180–184)

Measures of Central Tendency

Reading Level 6.9

In this book, students learn about hurricane hunters. The book describes the activities of hurricane hunters and their contributions to the prediction of hurricanes. Students use data about hurricanes to study measures of central tendency. They also learn to read and make box plots.

Tornado Chasers (lesson on pages 185–189)

Measures of Central Tendency

Reading Level 5.4

In this book, students learn about the formation of tornados and the locations most likely to experience them. The book focuses on tornado chasers as part of a job or as a hobby. Students use data about tornados to study measures of central tendency. They also learn to read and make box plots.

Tonight's Concert and Battle of the Bands

Tonight's Concert (lesson on pages 204–208)

Using Data and Graphs

Reading Level 6.3

This book describes the steps needed to plan and produce a concert, including the choice of venue, the band, setting up the sound and lights, and promoting the show. Students use data from concerts to create statistical graphs and determine the appropriate use of circle graphs, histograms, bar graphs, and line graphs.

Battle of the Bands (lesson on pages 209–213)

Using Data and Graphs

Reading Level 5.2

In this book, students learn about a battle of the bands staged to support a charity. They read about selecting the bands, choosing a venue, finding the needed equipment, and advertising. Students use data to create statistical graphs and determine the appropriate use of circle graphs, histograms, bar graphs, and line graphs.