Reading Guide

This guide is intended to provide activities for using the reference materials in the *Rx for Science Literacy* manual as a way of integrating the *Reading Standard for Informational Text from the Common Core State Standards for English Language Arts & Literacy in History/Social Studies, Science, and Technical Subjects* into the science classroom.

- Why did the author write this selection?
- What was the point the author wanted to make in this selection?
- What are the major ideas in this selection?
- List a major idea for this selection and provide two supporting details for this idea.
- How does the author use aids, such as pictures or graphs, to convey the main idea of the selection?
- What three key vocabulary words and their definitions are found in the text?
- What three words are important to understand in order to discuss this selection?
- If you were the author of this selection, how would you change the piece to entice more people to read this selection?
- In sentences, write three things you learned from this reading selection.
- Identify the key points from this article.
- How did the author present the major ideas of this selection?
- How would you change the text to make it more appealing to students in your grade level?
- What other resources would be best to read to have a better understanding of this selection?
- What aids, such as pictures or graphs, should the author have used to make this selection more appealing?
- Which sentence states the main idea of this selection?

The *Rx for Science Literacy* manual has many reference and handout sections that should be used to integrate the *Reading Standard for Informational Text from the Common Core*. This chart matches the references or handouts to suggested grade ranges.

Unit I-Chapter 1: What is Science?

| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 12 | | | | | | | | | | | |
|---|--------|--|--|--|---|---|---|---|---|---|---|---|---|
| What is Science? | I-1.3 | | | | | | • | • | • | • | • | • | • |
| Great "Truths" | I-1.7 | | | | • | • | • | • | • | | | | |
| Some Famous Biological Scientists, Their Discoveries and Trends | I-1.11 | | | | | | • | • | • | • | • | • | • |

Unit I-Chapter 2: What is Biomedical Research?

| Title | Daga | Suggested Grades | | | | | | | | | | | |
|------------------------------------|--------|------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| nue | Page | K 1 2 3 4 5 6 7 8 9 10 11 12 | | | | | | | | | | | |
| What is Basic Biomedical Research? | I-2.2 | ••••• | | | | | | | | | | | |
| Basic Heart Facts | I-2.4 | ••••• | | | | | | | | | | | |
| What is Applied Research? | I-2.14 | ••••• | | | | | | | | | | | |
| What is Clinical Research? | I-2.15 | ••••• | | | | | | | | | | | |

Unit I-Chapter 3: Biomedical Research Methods

| Title | Daga | Suggested Grades | | | | | | | | | | | |
|--|--------|------------------|---|----|---|-----|----|---|---|----|----|----|---|
| The | Page | К | 1 | 23 | 4 | 5 (| 57 | 8 | 9 | 10 | 11 | 12 | |
| Biomedical Research Methods | I-3.3 | | | | | | • | • | • | • | • | • | • |
| Chemical, Computer and Mathematical Models | I-3.4 | | | | | | • | • | • | • | • | • | • |
| In Vitro Studies | I-3.6 | | | | | | • | • | • | • | • | • | • |
| Nonhuman Animal Models | I-3.8 | | | | | | • | • | • | • | • | • | • |
| Human Clinical Trials | I-3.17 | | | | | | • | • | • | • | • | • | • |
| Epidemiological Studies | I-3.23 | | | | | | • | • | • | • | • | • | • |

Unit I-Chapter 4: Benefits of Biomedical Research

| Tiale | Dama | Suggested Grades | | | | | | | | | | | |
|---|--------|------------------|-----|-----|-----|----|---|----|----|----|---|--|--|
| Title | Page | K 1 | 2 3 | 4 5 | 567 | 78 | 9 | 10 | 11 | 12 | | | |
| What Difference Has Biomedical Research Made to Human Health? | I-4.12 | | | | • | • | • | • | • | • | • | | |
| Human Vaccines Developed Through Biomedical Research | I-4.23 | | | | • | • | • | • | • | • | • | | |
| Polio: A Success Story | I-4.36 | | | | • | • | • | • | • | • | • | | |
| History of Polio | I-4.38 | | | | | | | • | • | • | • | | |
| AIDS: A Need for Continuing Research | I-4.42 | | | | | | | • | • | • | • | | |
| Biomedical Research for Animal Health | I-4.54 | | | | | | | • | • | • | • | | |

Unit II-Chapter 2: Why Use Animals?

| Title | Dago | Suggested Grades |
|--|--------|------------------------------|
| | Page | K 1 2 3 4 5 6 7 8 9 10 11 12 |
| Why Use Animals? | II-2.2 | |
| Most Commonly Used Animal Models | II-2.8 | ••••• |
| Animals Studied for Their Unique Characteristics | II-2.9 | ••••• |

Unit II-Chapter 3: Advances Based on Animal Research

| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 12 | | | | | | | 12 | | | | | |
|---|---------|--|--|--|--|--|--|---|----|---|---|---|---|---|
| Without Animal Research | II-3.4 | | | | | | | • | • | • | • | • | • | • |
| Research Partners | II-3.7 | | | | | | | | | | • | • | • | • |
| Milestones in Biomedical Research Benefiting Humans and Animals | II-3.12 | | | | | | | | | | • | • | • | • |

| Unit II-Chapter 4: Number and Species of Animals Used | | | | | | | | | | | | |
|---|--------|------------------------------|--|--|--|--|--|--|--|--|--|--|
| Title | Page | Suggested Grades | | | | | | | | | | |
| The | Page | K 1 2 3 4 5 6 7 8 9 10 11 12 | | | | | | | | | | |
| Number and Kinds of Animals Used in Biomedical Research | II-4.2 | ••• | | | | | | | | | | |

Unit II-Chapter 5: Care of Research Animals

| Title | Deee | Suggested Grades | | | | | | | | | | | |
|--|---------|------------------------------|--|--|--|--|--|--|--|--|--|--|--|
| Inte | Page | K 1 2 3 4 5 6 7 8 9 10 11 12 | | | | | | | | | | | |
| Caring for Research Animals | II-5.2 | ••• | | | | | | | | | | | |
| Laws, Regulations and Guidelines Governing Animal Research | II-5.4 | ••• | | | | | | | | | | | |
| Responsibilities of an Animal Care and Use Committee | II-5.8 | ••• | | | | | | | | | | | |
| IACUC Research Proposals for Review | II-5.12 | | | | | | | | | | | | |

Unit III-Chapter 2: Animal Research: Issues and Answers

| Title | Daga | Suggested Grades |
|---|----------|------------------------------|
| The | Page | K 1 2 3 4 5 6 7 8 9 10 11 12 |
| Animal Research vs. Animal Rights | III-2.3 | |
| Issues and Answers | III-2.12 | ••• |
| Issues and Answers: Is Animal Research Good Science? | III-2.14 | |
| Issues and Answers: Is There Unnecessary Duplication of Research? | III-2.17 | ••• |
| Issues and Answers: Can Alternatives Replace Animal Research? | III-2.18 | ••• |
| Issues and Answers: Regulation of Animal Research | III-2.19 | |
| Issues and Answers: Product Safety Testing | III-2.22 | ••• |
| Science and Self-Doubt | III-2.25 | ••• |

| Unit III-Chapter 3: Transgenic Animals | | |
|--|---------|------------------------------|
| Title | Page | Suggested Grades |
| Inte | 1 age | K 1 2 3 4 5 6 7 8 9 10 11 12 |
| Transgenic Animals | III-3.2 | |

| Unit III-Chapter 4: Therapeutic vs. Reproductive Cloning: Scientific Realities, PublicControversy | | | | | | | | | | |
|--|---------|--|--|--|--|--|--|--|--|--|
| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 12 | | | | | | | | |
| | Ŭ | | | | | | | | | |
| Therapeutic vs. Reproductive Cloning: Scientific Realities, Public Controversy | III-4.2 | ••• | | | | | | | | |

Unit IV-Chapter 1: Careers in the Biosciences

| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 1 | | | | | | | 12 | | |
|-------------------------|---------|---|---|--|---|---|---|---|----|---|---|
| Becoming a Bioscientist | IV-1.3 | | П | | | | | • | • | • | • |
| Bioscience Careers | IV-1.15 | | | | • | • | • | • | • | • | • |

| Unit IV-Chapter 2: Genetics Primer | | |
|---|---------|---|
| Title | Page | Suggested Grades |
| | i uge | K 1 2 3 4 5 6 7 8 9 10 11 12 |
| It's All in the Genes | IV-2.3 | ••• |
| Editing Life's Instructions | IV-2.31 | ••••••••••••••••••••••••••••••••••••••• |
| CRISPR—A Tool to Edit Life's Instructions | IV-2.32 | •••• |

| Unit IV-Chapter 3: Nanobiotechnology | | |
|--------------------------------------|--------|--|
| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 12 |
| Nanobiotechnology | IV-3.3 | •••• |

| Unit IV-Chapter 4: Regenerative Medicine | | |
|--|--------|--|
| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 12 |
| Regenerative Medicine | IV-4.3 | |

| Unit IV-Chapter 5: New Technologies in Vaccines | | |
|---|---------|--|
| Title | Page | Suggested Grades K 1 2 3 4 5 6 7 8 9 10 11 12 |
| New Technologies in Vaccines | IV-5.3 | |
| Will This Vaccines Work? | IV-5.53 | •••• |