WorldWise™
Content-based Learning

Lesson Plan

Advanced Fluent
Upper Primary reading stage
Level U

Science for the People recounts the exceptional achievements of scientists Rachel Carson and Sally Ride. It examines how both women achieved success in their field of study and made their scientific ideas accessible and engaging to young people through social media channels. The book also introduces readers to science projects that everyone can participate in.

Informative text types:
Recount/Report/Explanation

Science Curriculum links

- Australia
- **SS01.4** World views recognise the dependence of living things on healthy ecosystems, and value diversity and social justice
- **SS01.5** World views are formed by experiences at personal, local, national and global levels, and are linked to individual and community
- **UIS (ACSHE083)** Scientific knowledge is used to predict possible effects of human and other activity and to develop management plans or alternative technologies that minimise these effects

New Zealand

- **NS:** Scientists' investigations are informed by current scientific theories and aim to collect evidence that will be interpreted through processes of logical argument
- **PEB:** The interactions between the solar, lunar and Earth cycles and the effect of these on Earth

Key concepts

- Some scientists, such as Rachel Carson and Sally Ride, have shared their knowledge with the world in interesting and engaging ways
- Modern technologies have made science more accessible to all people
- By making science available to everyone, scientists have a better chance of creating positive changes

Content vocabulary

astronaut, astronomers, atmosphere, biologist, biology, calcium, campaign, classify, culled, DDT, design, expedition, experiment, explanations, feral, hypotheses, inventions, laboratories, legacy, nebulas, observations, ozone layer, pesticide, physics, posthumously, press conference, research, robotic, satellites, space shuttle, specimen, technology

Text features

- Diagrams, captions, time line, text boxes, glossary

Reading strategy

- Comparing and contrasting information

First reading session

Getting started

Introducing the book

Give each student a copy of the book *Science for the People.* Have the students browse through the book. Say: *As you browse through the book, think about what you already know about scientists and in particular Rachel Carson and Sally Ride. What connections are you making?* Have the students discuss their thinking with the group.

Exploring vocabulary

Ask: *What words or phrases would you expect to see in a book about scientists?* Have students work with a partner and record a list of words on sticky notes. Say: *When you are finished, join with another pair of students and combine your lists, then we will combine all the lists to make our group list.*

If some words or phrases are not known, have the student who recorded the word explain what it means. Compare the students' vocabulary words with the words in the glossary.

Introducing the reading strategy focus

Say: *This book has lots of information about two amazing scientists and how they have inspired people. One way of sorting out new information is to compare and contrast it. What do I mean by this?* Discuss that it means to identify what is similar and what is different about two sets of information.

Say: *Today, you will compare and contrast information about scientists Rachel Carson and Sally Ride.*

Reading with teacher support

Say: *Read the introduction and chapter 1 to yourselves. As you read, think about the new information you are learning.* Have the students discuss their thinking with their partner, and then have a group discussion. Ask: *How has the author helped you to understand the achievements of Rachel Carson?* Have the students record the information about Rachel Carson on sticky notes and compare it with their partner's. Say: *Be ready to talk about what you noticed with the whole group.*

Second reading session

Building understanding

Choose to have students either read independently or, if they need more support, to meet with you in a small group.

Independent and partner work

Have the students read chapters 2 and 3 independently. Say: *Read the chapters to yourself and keep track of your thinking by adding to both parts of your Graphic Organiser, then meet with your partner to discuss the similarities and differences you noted.*

Have the students meet as a group to share and talk about what they have read and what they recorded on their Graphic Organiser. Monitor the group's progress and support them, if necessary.

Have the students read the rest of the book. On completion, have the students reread the whole book in preparation for the final reading session. Say: *Be ready to talk about your thinking and to discuss your questions and wonderings with the group.*

Reading with teacher support

Ask: *What have we learned so far about science and how scientists can inspire us? Share your ideas with a partner.* Have the students read chapter 2 to themselves. Review what the students have read. Ask: *What new information do you have about scientists? How is Sally Ride similar to and different from Rachel Carson?* Invite the students to talk about their understandings. Have the students read chapter 3 to themselves. Say: *Now add your thinking about the similarities and differences between the science projects in this chapter to your Graphic Organiser.* On completion, have the students reread the whole book in preparation for the final reading session. Say: *Be ready to talk about your thinking and to discuss your questions and wonderings with the group.*

Reflecting on the reading strategy

Encourage the students to talk about what they did to help themselves as readers. Ask: *Were you able to identify similarities and differences between sets of information? How did this help you to clarify the important facts and concepts you were reading about?*

Final reading session

Bringing it all together

Have students talk about the whole book. Use a range of questions to promote discussion and higher-level thinking. Where appropriate, have the students lead the discussion.

What do you think was Rachel Carson's biggest achievement? Why could it be said that she was "before her time?" What legacy has Sally Ride left? In what ways did Rachel Carson and Sally Ride do more than just find out new facts and information? (Inferential)

Do you find these scientists inspiring? If so, in what ways? Would you consider participating in any of the science projects in the book? If so, which ones interest you and why? How has the study of science changed with the introduction of modern technology? (Synthesising)

Why might the author have chosen female scientists? Would it have made a difference if the scientists were male? If so, how? What different features did the author use to present the information in this book? (Critical)

Invite students to ask their own questions.

Going beyond the book

Have students demonstrate their understandings by choosing one or more of the following tasks. The tasks can be completed independently, in pairs or in a small group.

Speaking and listening

Have students role-play a mock radio interview between an interviewer and either Rachel Carson or Sally Ride. Have students write questions and answers, practise asking and answering them, and make an audio recording of the interview to present to the group.

Vocabulary

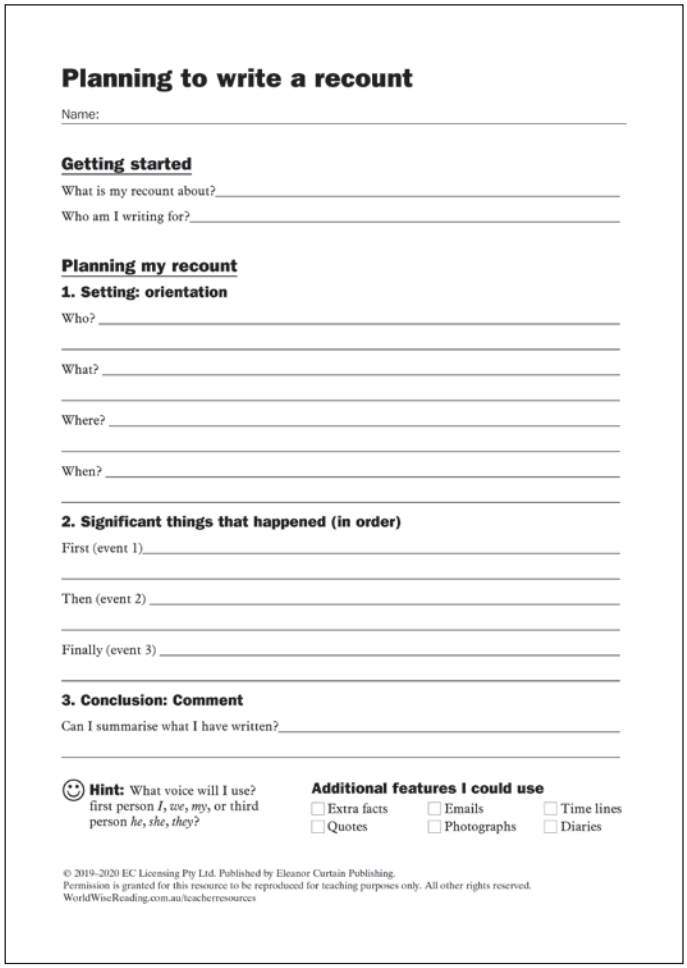
Have students identify and list verbs from the book related to the processes of science (e.g. design, classify, research) and nouns related to the equipment that scientists use (e.g. satellites, specimens, microphones).

Visual literacy

Have students choose four different areas of science (biology, environmental science, astronomy etc.). Have them use visual devices (images, symbols, cartoons etc.) to represent each type of science on a poster or on individual cards.

Writing

Have the students write a recount about a scientist they find interesting, using the prompt: *An inspiring scientist ...* Provide the students with a template detailing how to plan and write a recount. Remind them to begin with background information about the scientist, followed by the main events in this person's life.



Planning to write a recount

Name: _____

Getting started

What is my recount about? _____

Who am I writing for? _____

Planning my recount

1. Setting: orientation

Who? _____

What? _____

Where? _____

When? _____

2. Significant things that happened (in order)

First (event 1) _____

Then (event 2) _____

Finally (event 3) _____

3. Conclusion: Comment

Can I summarise what I have written? _____

Hint: What voice will I use? first person *I, we, my*, or third person *he, she, they*?

Additional features I could use

☐ Extra facts ☐ Emails ☐ Time lines
☐ Quotes ☐ Photographs ☐ Diaries

Download the template at www.WorldWiseReading.com.au/teacherresources

Say: *You will need to research to get ideas on who to write about and then find information about their life*. Encourage the students to talk about their ideas with a partner, then write their recount.

Alternatively, the students could choose to research and write reviews about science projects that people can take part in.

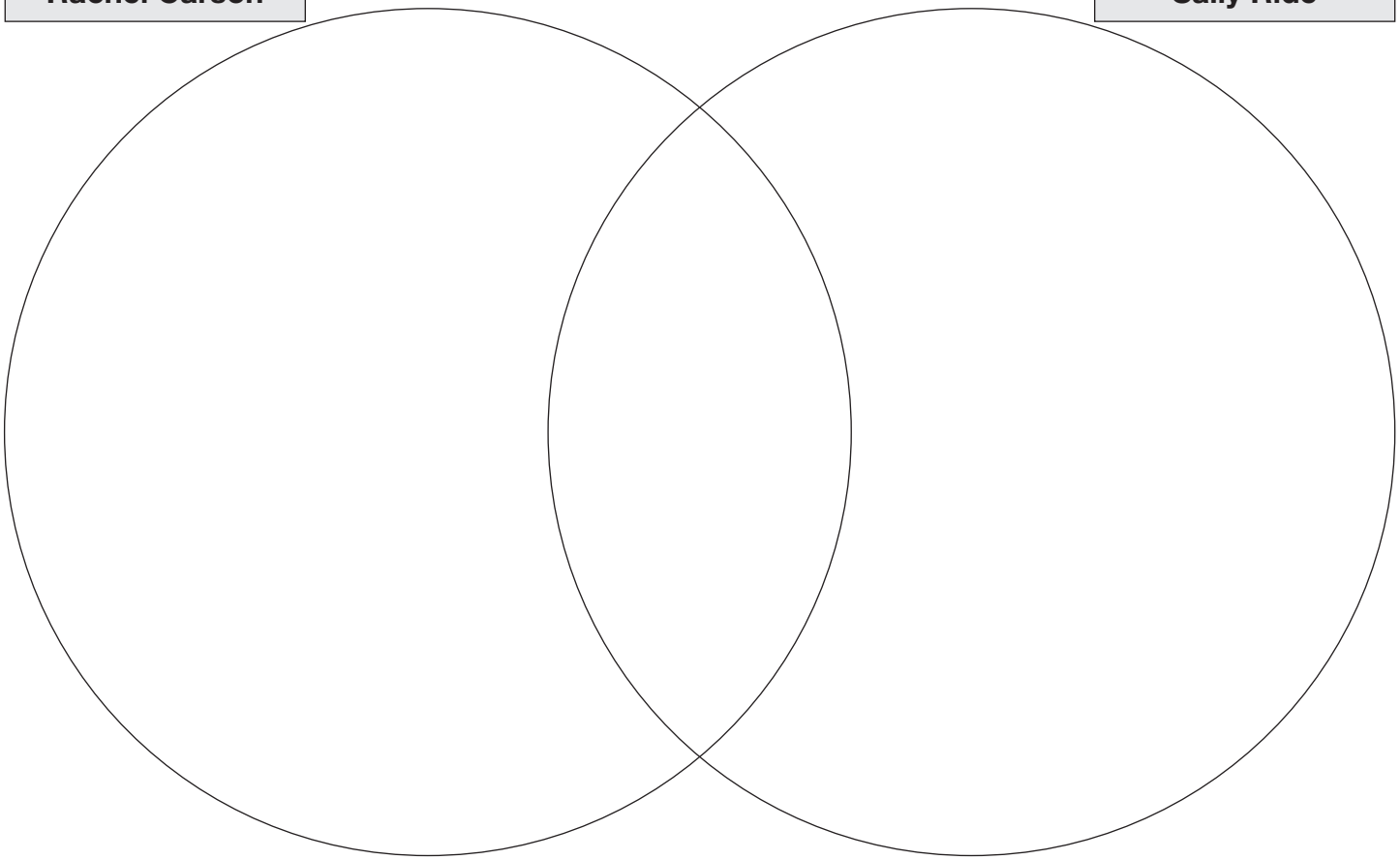
Graphic Organiser: What's the same? What's different?

Name/s: _____

Compare and contrast these scientists.

Rachel Carson

Sally Ride



Compare and contrast the projects in chapter 3.

What do the projects have in common?	In what ways are the projects different?

Flying Start to Literacy®

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