UNIVERSITY OF LEEDS

Discovering Science: Science Writing

Scheme of Work

	Lesson 1	Lesson 2	Lesson 3
Length	Approx. 1 hour	Approx. 1 hour	Approx. 1 hour
Objectives	To consider how science writing can help to explain complicated issues. To identify various types and forms of science writing. To examine sources of science writing and evaluate how science is communicated through the media.	To understand factors to consider when preparing to write a science story. To define an audience and an angle in science writing. To analyse relevant and useful information when researching a science story.	To produce an engaging, well-structured piece of science writing which is suitable for a defined audience. To apply relevant approaches and principles to science writing. To evaluate the science writing of a peer, bearing in mind the relevant approaches and principles.

Lesson plans for each session can be found on the following pages.

Discovering Science: Science Writing

Lesson 1 plan

<table>
<tr><th>Starter activity</th><th>Learning objectives</th></tr>
<tr><td>Students watch the video in Step 1.3 (Introducing science writing).

In pairs, students discuss the following:

Can you think of a topic you have seen in the news where you think science writing helped to explain a complicated issue to the general population?

Invite some pairs to share their examples.</td><td>• To consider how science writing can help to explain complicated issues.

• To identify various types and forms of science writing.

• To examine sources of science writing and evaluate how science is communicated through the media.</td></tr>
<tr><th>Main activities</th><th>Resources required</th></tr>
<tr><td rowspan="6">In their pairs, students brainstorm as many types and sources of science writing they can think of.

Show the video in Step 1.5 and ask students to compare their ideas with those in the video. Did they miss any in their lists, and does anything surprise them from the video?

Give each pair the PDF exercise from Step 1.6 (A worthy read?) or allow them to access it on a device.

Each pair should work through the exercise, reading the articles and discussing their answers to the questions.

Share answers as a class, then provide the written feedback for the exercise. Discuss responses to the exercise and the feedback.</td><td>1. Devices for watching videos.
2. Materials for brainstorming types of science writing.
3. Devices or PDFs for completing the exercise, and the feedback.</td></tr>
<tr><th>Assessment for Learning</th></tr>
<tr><td>Discussion contributions, answers to the exercise.</td></tr>
<tr><th>Differentiation</th></tr>
<tr><td>SEND: Videos have subtitles.
Low ability: Peer-learning.
Gifted and Talented: Peer-teaching.</td></tr>
<tr><th>Plenary</th></tr>
<tr><td>Ask students to discuss the following:

• Which sources of science writing do you trust and why?
• What makes a piece of science writing reliable?

Ask students to identify a topic for a piece of their own science writing in the next lesson (this could be homework).</td></tr>
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Lesson 2 plan

<table>
<tr><th>Starter activity</th><th>Learning objectives</th></tr>
<tr><td>Thinking of the topic they have chosen to base their own science writing on, ask students to individually write down:
Who is the audience?
Why is this topic interesting to them?
How much (or little) are they likely to know about this already?
What will be most interesting about this story to the audience?
Lead a brief class discussion.</td><td>To understand factors to consider when preparing to write a science story.
To define an audience and an angle in science writing.
To analyse relevant and useful information when researching a science story.</td></tr>
<tr><th>Main activities</th><th>Resources required</th></tr>
<tr><td rowspan="4">Students will spend the rest of the lesson performing research and gathering information on their story.

First, ask students if they can define the difference between primary and secondary sources, and give examples of each. Elicit answers (information in Step 1.10 may be useful).

Advise students to consider using multiple sources and to use these questions to structure their research:
What?
Why?
Where?
Who?
How?
When?
Support students to perform research and suggest alternative sources and angles to their story. Invite students to support each other and share sources of information.</td><td>1. Devices and materials for performing research (this could include science magazines, academic journals, etc. if available).
2. Devices and materials for collecting research.</td></tr>
<tr><th>Assessment for Learning</th></tr>
<tr><td>Contributions to discussions and individual research collected/monitoring of information gathering.</td></tr>
<tr><th>Differentiation</th></tr>
<tr><td>SEND: Teacher-led support.
Low ability: Peer-learning, teacher support.
Gifted and Talented: Peer-teaching.</td></tr>
<tr><th>Plenary</th></tr>
<tr><td>Ask students to share any interesting or surprising sources of information they discovered in their research.

Students can start to plan their piece of writing.</td></tr>
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Lesson 3 plan

<table>
<tr><th>Starter activity</th><th>Learning objectives</th></tr>
<tr><td>Students watch the video in Step 1.12 (Structuring a narrative).

Share the ‘inverted pyramid’ approach and diagram with the class, and a short piece of science writing which illustrates this approach. Ask students to identify how this approach is applied in the writing.</td><td>• To produce an engaging, well-structured piece of science writing which is suitable for a defined audience.

• To apply relevant approaches and principles to science writing.

• To evaluate the science writing of a peer, bearing in mind the relevant approaches and principles covered.</td></tr>
<tr><th>Main activities</th><th>Resources required</th></tr>
<tr><td rowspan="5">Students will write (or continue to write) their science story in this lesson.

Before doing so, briefly review the list of ‘Do’s and Don’ts’ in Step 1.14 as a class.

In addition, share a summary of the advice given in Step 1.13 to guide the student’s writing, including the importance of:

• Using quotes
• Using examples
• A solid conclusion

The piece of writing can be brief (250-500 words) but students should remember to think of their audience, use their research and consider the writing tips provided.

Students can work and support each other in pairs or small groups.</td><td>1. Device to watch video.
2. Inverted pyramid diagram.
3. Pre-chosen science writing which illustrates inverted pyramid.
4. Devices and materials for writing story.</td></tr>
<tr><th>Assessment for Learning</th></tr>
<tr><td>Individual science stories and peer assessments.</td></tr>
<tr><th>Differentiation</th></tr>
<tr><td>SEND: Videos have subtitles, teacher-led support.
Low ability: Peer-learning, teacher-led support.
Gifted and Talented: Peer-teaching.</td></tr>
<tr><th>Plenary</th></tr>
<tr><td>Ask students to swap stories with a partner and provide feedback.

• How well did their partner apply the inverted pyramid approach, and the writing tips and advice?</td></tr>
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