Passing on Fukushima memories and realities: ‘Life after Fukushima’ teaching materials

Joke Kenens
Citizen Radiation Measuring Organizations (CRMOs)
Literature study

Multi-site ethnographic fieldwork

Qualitative study

Document analysis

Fieldwork sites (2018 – 2020):
- 14 Citizen Radiation Measuring Organizations
- 2 Non-governmental Organizations
- 5 local and prefectural governments
“Once it passes your throat, you forget the heat”

(Japanese proverb)
Politics of layering

• Multiple Fukushima realities
• Is the Fukushima accident over?
• Position of knowledges in politics and scientific research


Translocal assemblages (McFarlane, 2009)

• Looking beyond Fukushima
• Sensing change and evolution
• Processes of becoming, doing, being
‘Life after Fukushima’
Teaching materials
SCK CEN SPS, ACADEMY & COMMUNICATION DEP.

Illustrations by Sigrid Vanspauwen
Objective: learn about Fukushima nuclear accident:
- in a multidisciplinary & interactive way
- from citizen perspective (Masako, student)

4 chapters:
- 11 March 2011
- My life after Fukushima
- Measuring radiation in a citizens’ lab
- Fukushima and Belgium

Teacher & student (age: 16-18) guide
Study pack: Life after Fukushima
Chapter 2 – My life in Fukushima

Learning objectives

<table>
<thead>
<tr>
<th>English</th>
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<tbody>
<tr>
<td>2.7</td>
<td>The students convey the content of texts using purposeful communication.</td>
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<tr>
<td>Modern languages</td>
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<td>2.5.1</td>
<td>The students convey the content of texts using purposeful communication.</td>
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<tr>
<td>2.8.1</td>
<td>The students convey the content of texts using purposeful communication.</td>
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<tr>
<td>Mathematics, sciences, technology, STEM</td>
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<tr>
<td>6.10</td>
<td>Pupils use concepts relating to radiation and electricity to explain phenomena and their applications found in everyday life.</td>
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<tr>
<td>6.25</td>
<td>Pupils use concepts relating to nuclear physics to describe radioactive phenomena and their applications.</td>
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<td>6.30</td>
<td>Pupils use measurement values, quantities and units in mathematical, scientific, technological, and STEM contexts.</td>
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<td>6.45</td>
<td>Pupils explore the interaction between STEM disciplines and between STEM disciplines and society on the basis of specific societal challenges.</td>
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Learning competencies

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<tr>
<td>13.3</td>
<td>Pupils optimise search strategies based on the usefulness and reliability of digital and non-digital sources to answer a question asking for information.</td>
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<td>13.4</td>
<td>Pupils use explanatory and exploratory summaries to retrieve information from a digital and non-digital resource.</td>
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<tr>
<td>13.7</td>
<td>Pupils use study skills strategically in order to fully understand the content of teaching material.</td>
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Expected duration
40 minutes

Materials/media
"All of these measures have a major impact on daily life. Before I introduce you to some aspects of my life after the accident, I'd like to test your knowledge of radioactivity!"

What do you know about radioactivity?

I know all about radioactivity!

Fantastic! Then test your knowledge now.
Is the quiz too difficult?
Click here for extra information.

To the test

I know something, but not everything.

Click through to further information that will get you started.

To the information

Radioactivity: what's that?!

Click through to learn more about radioactivity. Then try to complete the exercises in your workbook!

Learn all about it
Measuring radioactivity yourself

Would you like to try measuring radioactivity yourself? Find the four radioactive sources (≥ 20 μSv/h) using your Geiger counter.

Rules of the game:

The residents of the fictional village of Harishima (meaning 'Island of forests') are worried. They suspect that there are highly radioactive sources in their area and are afraid that this will harm their health, the animals, and the ecosystem. It's up to you to track down these radioactive sources.

How to play: exploring the area

- Always keep an eye on the cumulative dose counter at the bottom right of the screen.
- *Cumulative dose* refers to the total amount of radioactive events μSv/h (one microsievert)

Developed by Riccardo Rossa (SCK CEN)
Learning from and passing on Fukushima realities

• Position & status of citizen knowledges:
  • preservation & dissemination
  • science communication
• Research in translation
• Societal relevance:
  • transparent & accessible information
  • bridging Fukushima & Belgium
Study pack: Life after Fukushima

Real-life stories teach third-grade secondary pupils about life after a nuclear disaster

Ten years have passed since the earthquake and tsunami that destroyed large parts of Japan’s east coast and caused a nuclear accident at the Fukushima Daiichi nuclear power plant. These teaching materials look back at those 10 years through the eyes of a girl named Masaaki. Masaaki is 17 years old and was evacuated with her parents from Okuma, the town in which the Fukushima Daiichi nuclear power plant is located. Although Masaaki is a fictional character, the stories and photographs are based on personal experiences.

About the author of the study pack

As part of her doctoral research in relation to citizen science, joke Kenens (KU Leuven) travelled to Japan several times in 2018 and 2019 to visit civic organisations that measure radioactivity. With the help of colleagues at SCK CEN, she compiled these experiences into a study pack that is accessible to young people in the fifth and sixth year of secondary school. (general secondary education, technical secondary education and vocational secondary education). The purpose is to help them to learn about radioactivity and about the impact of a nuclear accident on everyday life.

This project was conducted in the framework of the SCK CEN programme for the integration of civic and ethical aspects linked to nuclear research. The teaching package was produced in cooperation with the Crisis Management and Decision Support Unit, scientists of SCK CEN and SCK CEN Academy.
