



## Bad research can harm people!

### Description and background

This learning unit:

*Introduces citizens to the processes required to produce reliable research results*

*Enables an understanding and usage of research results in our knowledge-based society*

*Challenges citizens to speak up for responsible research*

*Stresses how important the responsible conduct of research is for society*



*An advocate for research integrity*

*Justyna Olko*

### Keywords

*Research processes; reliable research results; bad research; progress in society; research output*

*This unit has been prepared for non-disciplinary learning groups.*

### Learning objectives

- 1** *Describe criteria for bad research*
- 2** *Listen actively to how research outputs can be implemented in society*
- 3** *Argue in favour of the importance of reliable research results for both research and society*

### Learning stages

- 1** *Become familiar with the topic*
- 2** *Dive into an interesting story*
- 3** *Engage in storytelling*
- 4** *Collect arguments in favour of responsible research*

**“We as researchers have the responsibility towards society to conduct research in an honest and ethical way.”  
(Justyna Olko, an advocate for research integrity)**





## 1 Become familiar with the topic:

### *Homework (before the unit starts) or reading session*

Look up three stories about research fraud. Bring them to class.

Read chapters 1 and 3.1 of “The European Code of Conduct for Research Integrity”.

Discuss what is written in the document and the meanings of any unknown words.

**European Code  
of Conduct for  
Research Integrity:**



## 2 Dive into an interesting story:

Review or look up the story from LONA Science Centre (video or text).

Briefly flesh out what characteristics the students (Emma, Rebecca and David) and two researchers (Prof. Weis and her colleague) have.



## 3 Engage in storytelling:

Now imagine the story continues as follows. Let one read aloud:

“No!”, Prof. Weis cried out. “This couldn’t be true.” According to the newspaper article in her hand two firefighters died in a storm the day before. The head of the fire brigade stated that three more were severely injured because they overlooked the retreat signals, which were implemented in their trainings due to the results of a study she co-authored last year. Prof. Weis could not ignore it any longer. The past caught up with her. She had falsified data in the study about reaction times in stressful situations.

Build groups of three to four persons and write a story about Prof. Weis committing fraud and its impact to society. Fill the story with sentences that argue in favour of good research procedures and underline them in colour.



### What is research for society?

Progress is often driven by research. Think of space travel, penicillin, de-escalation strategies, smart homes etc.

Research is a quest for knowledge that is conducted in a way that is systematic, well-considered, well planned, thought out in advance etc.

Tax money is used to fund research and foster scientific innovations in order to improve life.

## 4 Collect arguments in favour of responsible research:

**Come together in pairs and ask each other the following questions:**

1. Why is it important that researchers, such as Prof. Weis, publish honest research results?
2. How can the head of the fire brigade argue that research should be taken seriously?

**Collect the answers on a chalk board.**

Tell your partner a story in which Prof. Weis this time follows values and norms of careful and well-considered research.

