



## Impossible Inventions

Małgorzata Mycielska, illustrated by Aleksandra & Daniel Mizieliński,

### Synopsis

When Leonardo da Vinci invented the tank, car, helicopter, glider, parachute, submarine, lift and telescope, over 500 years ago, he was considered a dreamer. Or even crazy. Today he is understood to be a genius, ahead of his time.

This book collects ancient and modern inventions. Some are revolutionary, others comical, others were simply impossible. But each of them testifies to the extraordinary imaginations of their inventors.

You will find here a flying bicycle, bubble telegraph, passenger clouds and passenger birds, mechanical chess players, a water clock, a concentration hood and many more incredible ideas.

### The Author

Małgorzata Mycielska is an art historian, publisher and book editor.

### The Illustrators

Aleksandra Mizielińska and Daniel Mizieliński are graduates of the Faculty of Graphic Arts of the Warsaw Academy of Fine Arts and founders of the Hipopotam Studio. They are authors of internationally recognized children's books and creators of fonts, apps and websites. Their prize-winning book *Maps* was a worldwide bestseller.

### Themes

The themes in this wonderfully fun book are those qualities required by all inventors: Imagination, commitment, and courage.

Although the inventions within these pages may be “impossible”, the stories behind them show what is possible to achieve if we are allowed to exercise our imagination. In turn, if we apply commitment and courage to these imagined possibilities, any one of us is capable of conceiving a wonderful invention!

# Activities

## Level One – Text (Before and While Reading)

1. Before you read the book, look at the cover (front and back) of the book. What can you tell about the story from the title, font, illustrations, and blurb? Think about the colours and style of illustrations and what they might tell you about what sort of story this is.
2. Either on your own or in pairs find the definition of the following words that appear in the story and then use them in a new sentence:
  - Sorcerer (p. 16)
  - Apparatus (p. 16)
  - Cistern (p. 16)
  - Diabolical (p. 26)
  - Startling (p. 60)
  - Inevitable (p. 61)
  - Ballast (p. 96)
  - Altitude (p. 97)
3. World map. In a group or as an entire class obtain a world map. While reading the book, mark on the map where the different inventions were created and tested. Include the name of the inventor, the date, and the name of the invention.

## Level Two – Responding to the Text and Reading Between the Lines (While Reading)

1. On page 5 we meet Leonardo da Vinci. Like many inventors, he created other marvellous works. In pairs, find 5 facts about Leonardo da Vinci's life and 5 of his other works. These can include paintings.
2. On page 8 we learn that people living in Greece two thousand years ago thought that automatic doors were "amazing and even terrifying." People are often suspicious – or even scared of – of new inventions. For example, some people used to think that having their photograph taken would steal their soul. In groups of 3-4, choose one of the inventions in the book and discuss how people would have responded to them at the time they were created. Would they have been amazed? Scared? Suspicious? Or even angry? Why do you think they felt this way?
3. In pairs, compare one of the impossible inventions in the book with a later, more successful version of the invention. Can you explain how it was possible for the more successful version to be created? What had happened to make this possible?

## Level Three – Creating Based on the Text

1. In pairs, create a poster that shows how one of the inventions below works. You may need to do some research at the library or on the Internet. Make sure that your poster is both informative and eye-catching.

- Compass (p. 13)
- Battery (p. 17)
- Hot air balloon (p. 28)
- Cuckoo clock (p. 37)
- Bicycle (p. 53)
- Steam engine (p. 92)
- Telescope (p. 100)

2. Create a timeline showing different machines used for communication starting from Samuel Thomas von Sömmerring's Bubble Messenger (pp. 16-17) up until the present day. Try to include at least five different machines.

3. On p. 72 there is mention of Icarus, which is a story from Greek mythology about a young man who makes wings from wax and feathers and tries to fly, but the wings melt when he flies too close to the sun. In groups of 4-5, research the story of Icarus and then create your own short play based on the story. There are several ways you could do this: write a script and perform, perform as a mime, or perform using puppets.

## Level Four – Beyond the Text

1. Interview your parents/caregivers and/or grandparents about their memories of inventions they used to use but don't anymore because they're obsolete (no longer produced or used; out of date). Some of these might include: floppy discs, word processors, typewriters, Polaroid cameras, slide projectors, cassette and VHS players, and Walkmans. What did they like/not like about these machines? Is there anything they particularly miss about them?

2. Research the story behind an invention that you use in everyday life. How did it come to be? Whose idea was it? How long did it take to develop?

3. As a class, hold a competition for the best inventions for the 21st Century. Create your inventions on your own or in pairs. They could be designed to help with an everyday task, or something to ensure a sustainable future for us all. Think about what we might need 50 years from now so that we can all have sustainable, safe, and healthy food, housing, and transport.

4. Design your own Heath Robinson. A Heath Robinson is a fun, but unnecessarily complex and implausible machine, inspired by the cartoons and illustrations by W. Heath Robinson (1872-1944). Be courageous, commit to your creation, and let your imagination go wild!

