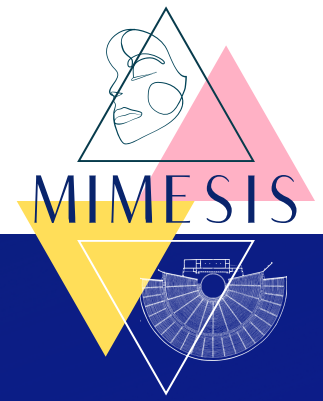


Teacher's card



FAMOUS KAMISHIBAI

Learning objectives

Scientific literacy

Imagination & Creativity

Expression

Speaking & Listening

Modalities of the activity

7- 12 years old

In the classroom

Group work

Materials needed

- Several sheets of cardboard
- A ruler
- A measuring tape
- A pencil
- Felt pen
- Scotch tape
- Glue gun
- Glue sticks
- Scissors
- Cutter



Printable resources attached

No specific resources are needed to be printed. You can use and print for support:

- The manufacturing steps
- The example of illustrated boards for Kamishibai

Difficulty and targeted school level

Easy

Primary

Low Secondary

Acts

Act 1: Building a Butai

Act 2: Scientists in history





Summary of the activity

The 'Famous Kamishibai' activity is an annual, long-term art project that offers pupils the opportunity to discover and create a Kamishibai, a portable paper theatre of Japanese origin. This activity allows both pupils and teachers to become exceptional storytellers using a series of illustrated boards. It aims to develop oratory skills and storytelling abilities for people of all ages.

Through this project, pupils will explore the lives of famous and lesser-known scientists who have made significant contributions to history through their scientific discoveries. The project consists of two main parts: constructing the kamishibai and creating stories with illustrated boards. The goal is to provide pupils with a scientific culture, enhancing their understanding of scientific contributions throughout history and fostering curiosity and interest in science from an early age. This activity helps develop a range of skills, such as communication, creativity, information retrieval, imagination, and collaboration, as well as approaching the basics of storytelling.

'Famous Kamishibai' is an original and enriching project that immerses pupils in the history of science in a fun and interactive way.

Sequencing the activity



ACT 1: BUILDING A
BUTAI



ACT 2: ILLUSTRATING
THE LIFE OF SCIENTISTS



Kamishibai - A Japanese Storytelling Technique

Kamishibai, or "picture theatre", literally means "paper theatrical play". It is a storytelling technique of Japanese origin based on images displayed in a small wooden (originally) or cardboard theatre with three or two doors called a butai (舞台, literally meaning "stage"). The cardboard boards, illustrations for the kamishibai, tell a story, with each image presenting an episode in the narrative. The front of the board, facing the audience, is entirely covered by the illustration, while the back is reserved for the text, which is very legible, with a miniature image (a vignette) in black and white reproducing the drawing seen by the spectators. The illustrated boards are inserted into the slide of the butai closed by two or three flaps at the front. Once open, the two forward-facing side flaps keep the object in balance. The back is hollowed out so that the storyteller can read the text. The butai is placed on a small table, but originally it was on the back of a bicycle. The kamishibai storytelling technique can easily be used in all kinds of community places (libraries, schools, hospitals, prisons, retirement homes). It is useful for teaching literacy, reading pictures, learning to read aloud, and creating and writing stories for children.



Kamishibai through the ages

Kamishibai has its earliest origins in Japanese Buddhist temples, where Buddhist monks from the 8th century onward used emakimono ("picture scrolls") as pictorial aids for recounting their history of the monasteries, an early combination of picture and text to convey a story. After a long slumber, it was revived at the end of the nineteenth century with the advent of cinema in Japan, but it was not until 1923 that the first kamishibai for children appeared, entitled The Golden Bat (Ōgon Bat) and inspired by manga (a word originally referring to the burlesque sketches created by the painter Hokusai in the eighteenth century). The 1950s are considered to be the golden age of kamishibai, with almost 50 000 storytellers performing across Japan at the time. Ōgon Bat was one of the most popular characters, and many stories featuring him were created by various authors. Several great mangakas got their start with kamishibai, such as Shigeru Mizuki, Gōseki Kojima or Sampei Shirato. At the time, kamishibai was sometimes called gageki (画劇), "picture theatre". Since the 1970s, kamishibai has spread throughout the world (Switzerland, France, Holland, Belgium, United States), adapting to the cultural conditions of the host countries. As a storytelling technique, kamishibai can be linked to the field of object or effigy theatre. It makes it possible to offer inexpensive shows based on a lightweight set-up. They can be performed in a flat or in front of a large audience. A number of professional theatre and puppet companies offer shows using the kamishibai technique, for instance combining kamishibai and shadow theatre techniques.



Source: Wikipedia



Summary of the activity - Act 1: Building a Butai

Before you start building, make a short introduction by showing them a butai that you have already built, for example, or choose a video to show them how it works. Relate the art of Kamishibai to what children might be interested in like mangas to raise their motivation in the activity!

Beforehand, find and collect all the materials your pupils will need to build the different butai (cardboard, glue, felt pens, paint, etc.) that will welcome your story created following the kamishibai technique.

Then you can start building the butai in class. This may take several sessions with your pupils. You can refer to the instructions we've provided to help you get started. Ideally, you should pre-cut some of the pieces beforehand for the younger children, to prevent them injuring themselves in class.

For this section of the activity, you can form groups of 3 to 4 pupils who can work together for the first stage, i.e. building the butai, and then for the second stage, i.e. assigning a scientist, creating the drawings to illustrate the boards and writing the script.



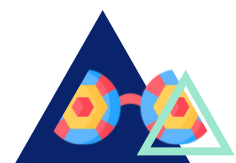
Artistic choices on sets and motifs



Duration of the Act :
2 hours



Mathematics &
Logic



Creativity &
Imagination

Phases of activity

- 1 Introduce and present what Kamishibai technique is, show inspiring resources and explain the goal of the session in creating the butai and how it works.
- 2 Divide the students into groups of 3 or 4 and hand out the instructions for building their butai.
- 3 Distribute the various materials that you will have prepared beforehand for their construction.
- 4 Take them through the various stages and let their imagination run wild.



Learning objectives

This kamishibai activity offers many advantages for pupils. It engages and motivates them while introducing them to another culture and developing their creativity. Pupils can design stories based on scientists and create unique illustrations and settings, thus expressing their artistic talents. Building the butai in a group encourages collaborative skills, inclusiveness, and mutual respect. Finally, this activity also develops manual skills, problem-solving, and creative thinking through making the cardboard butai. Pupils are encouraged to take precise measurements, assemble it carefully, and solve any technical problems that may arise.

Theatrical objectives

Students will be able to develop their theatrical creativity by experimenting with their ideas to create captivating sets and a unique theatrical experience. They will have to make original artistic choices by selecting colors, textures, and motifs that reflect their world. Collaborative theatre will also allow them to work as a team, sharing their ideas and making collective interpretation decisions. Finally, through this activity, they will develop communication skills by actively listening to the other members of their teams, expressing their opinions respectfully, and finding creative solutions together. These skills are invaluable on stage and in everyday life.






Skills developed

- Creativity
- Artistic expression
- Collaboration
- Communication and listening
- Problem-solving
- Patience and perseverance
- Self-confidence
- Technical and manual skills



Instructions for use

1. Gathering the material you need

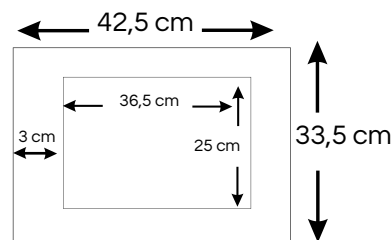
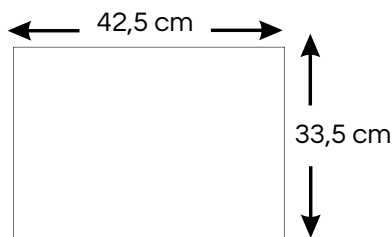
-  • Several sheets of cardboard
-  • A ruler
-  • A measuring tape
-  • A pencil
-  • Felt pen

-  • Tape
-  • Glue gun
-  • Glue sticks
-  • Scissors
-  • Cutter

2. Building the front panel

Using a ruler and pencil, draw a rectangle measuring 42.5 cm x 33.5 cm on the first piece of cardboard. At a distance of 3 cm from the left and right sides of the first rectangle draw a second, inside the first measuring 36.5 cm x 25 cm

Once you've completed this step, you can retrace the lines with a felt-tip pen to make them more visible.

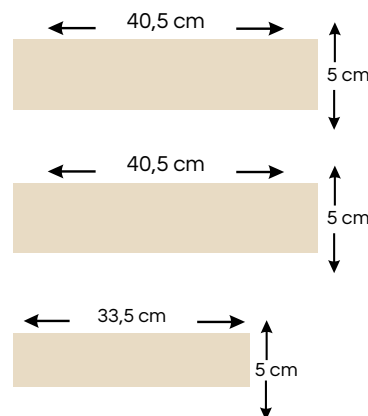


3. Building the back panel

Take your second board and repeat the first step.

4. The strips

On another piece of card, draw two large 42 cm x 4 cm rectangles to form the two large rulers. Then draw another smaller rectangle measuring 32.5 cm x 4 cm.

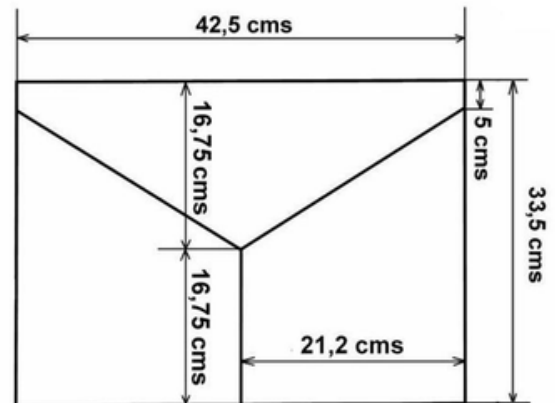




Instructions for use

5. Building the doors

On another piece of card, draw a rectangle measuring 42 cm x 32.5 cm.

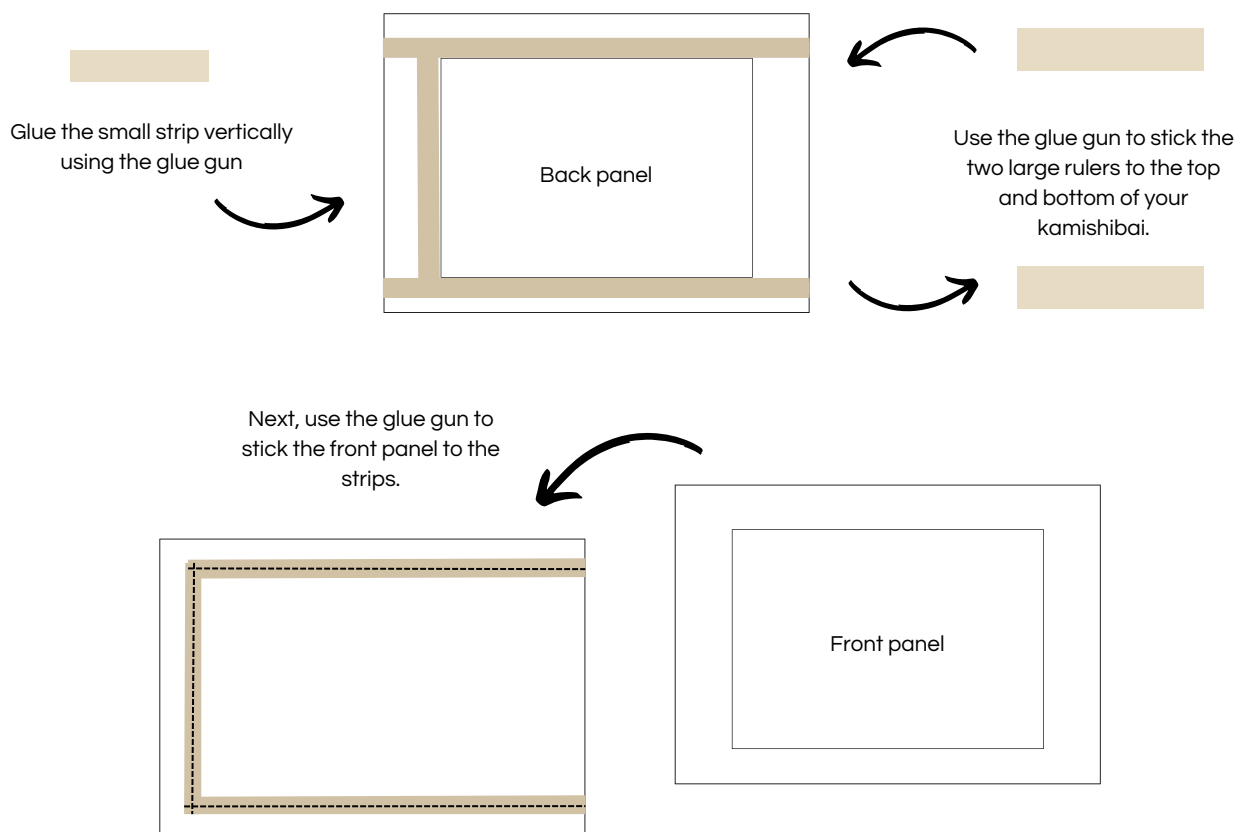


6. Cutting

Using a cutter and scissors, cut out all the pieces you have marked out.

7. Gluing

Glue all the parts together as shown in the diagram below:





Instructions for use

8. Creating the closing system

Leave the closing system to your imagination. In our example, we've cut out 3 small cardboard circles and glued them with a glue gun.

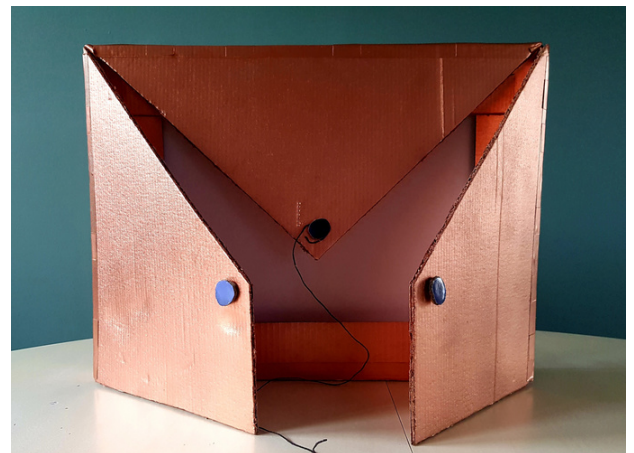
Take some string and tie it to one of the circles. To close your Kamishibai, wrap the string around the circles.

Another option : you can drill 3 holes and use a thick ribbon to close your Kamishibai.



9. Cladding

You're free to clad your Kamishibai as you like: paint, collage, deco-patch... you name it!





Summary of the activity - Act 2: Illustrating the life of scientists

Now that the butai are ready for each group, it's time for the second activity: telling the story of scientists through the art of kamishibai. You have two options for carrying out this activity:

1. Find and distribute scientists to the different groups, for whom they will have to research both their biographies and their scientific discoveries.
2. Or let the students choose for themselves and research little-known male or female scientists and decide within the group which one to choose.

You can adapt this activity to suit the age of your pupils.

In this second act, pupils will have the opportunity to discover and celebrate the remarkable contributions of scientists who are often overlooked in school textbooks, and to highlight the women who have left their mark on the history of science. Through the magic of kamishibai, pupils will be able to tell the captivating stories of these inspiring scientists as narrators, using illustrated boards created by themselves with engaging narrative texts written by the pupils.

They will have the opportunity to explore the achievements, challenges and scientific discoveries of these people, who are often overlooked or forgotten in history.



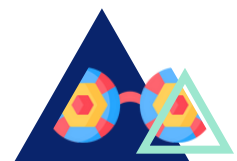
Narrator
Storyteller



Duration of the Act :
3 hours



Scientific
Literacy



Creativity & Critical-
Thinking

Phases of activity

1

Select the scientists you want to work on, based on the topic of the class or to a specific challenge linked to science development (for instance gender equity in science, innovations through the ages ...) and launch the students in the research phase to select the most relevant information.

2

Ask the pupils to draw their scientist's story on cardboard to illustrate their story.

3

Based on the information they wanted to retain and their illustrations, ask them to write the story in the style of a fairy tale. Accompany them during this stage.

4

Give them a few rehearsal sessions so that they can practise, correct and improve if necessary before the final performance. Organise a showroom if possible with parents to create link with the families!



Learning objectives

This activity offers a unique opportunity to raise students' awareness of the diversity of scientific contributions while developing their research, storytelling, artistic creativity, and presentation skills. Students are encouraged to carry out in-depth research on the scientists assigned to their group or those they choose. They should find information about the biographies, achievements, and scientific discoveries of these people. This helps them to develop their research skills and learn how to find and evaluate reliable sources of information.

At the same time, pupils will be able to strengthen their writing and storytelling skills as they are required to create engaging narrative texts to accompany the illustrated boards of their kamishibai. They have to organize their ideas and summarise their research clearly and coherently, using appropriate and attractive language. This develops their creative and narrative writing skills. This pedagogical objective is coupled with that of developing their oral expression skills and public speaking. They will have to tell the story of the scientist in question in front of the whole class, which presupposes good eloquence as a storyteller.

Finally, there is another educational objective that stems from this activity, namely artistic creativity. The pupils will have to illustrate boards for their kamishibai to accompany their texts.

Theatrical objectives

The kamishibai offers pupils the chance to explore different elements of physical expression and acting. Using gestures, facial expressions and body movements, they bring the characters in the story to life. They also work on their voice and diction to make the dialogue more expressive, and explore the interpretation of the characters by putting themselves in their shoes. The presentation of the kamishibai is considered to be a theatrical performance, which enables the students to manage the stage space and make effective use of the visual elements. When working in groups, they develop theatrical collaboration by coordinating their actions. Public speaking is also reinforced during the presentation of the kamishibai, which helps students to manage their stage fright and keep the audience's attention. Finally, the kamishibai encourages theatrical creativity by allowing students to experiment with variations and add elements to enrich the theatrical experience of the story.

Skills developed

- Searching for information
- Artistic creativity
- Writing
- Elocution and diction
- Narration
- Collaboration



Example: Katherine Johnson

Board 1



Once upon a time, there was a little-known woman scientist, yet her story was that of a heroine. Her name was Katherine Johnson. She had a brilliant mind and loved exploring the mysteries of the universe more than anything else.

Board 2

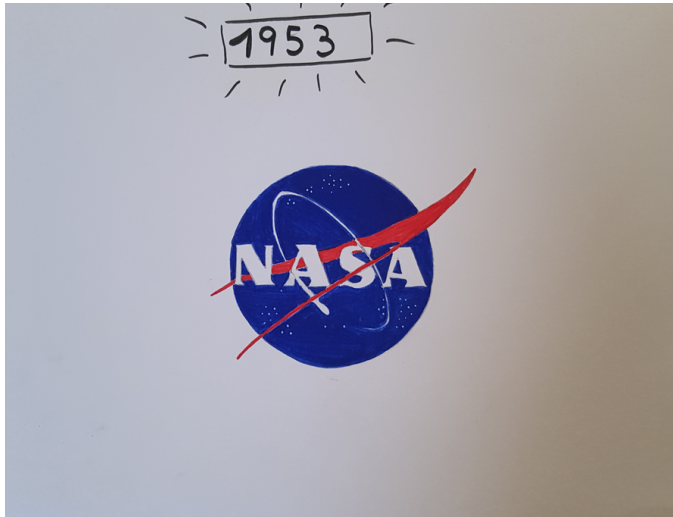


Born in 1918 in a small town in Virginia in the United States, Katherine Johnson was a little girl who quickly developed an interest in numbers. She liked to count everything she saw around her: the steps she climbed, the footsteps she took, the cutlery on the table? She could not **resist** it! Katherine was so good at maths that, at the age of 10, she was placed in the class for 14-year-olds. She felt like an outsider among her older classmates, but that didn't stop her from continuing to learn and flourish. At 18, Katherine graduated from university with a degree in mathematics. She was so brilliant that scientists all over the country soon heard about her.



Example: Katherine Johnson

Board 3



In 1953, Katherine was lucky enough to join NASA in Virginia. From her very first day, everyone noticed what an exceptional person Katherine was. She had an incredible memory and was able to calculate complex equations in the blink of an eye. People even nicknamed her the human computer! Katherine worked hard to help astronauts on their missions to space.

She calculated the trajectory of spaceships, helping astronauts to travel further and faster than ever before. Thanks to her hard work and talent, Katherine has become one of the most valuable members of the NASA team.

Board 4

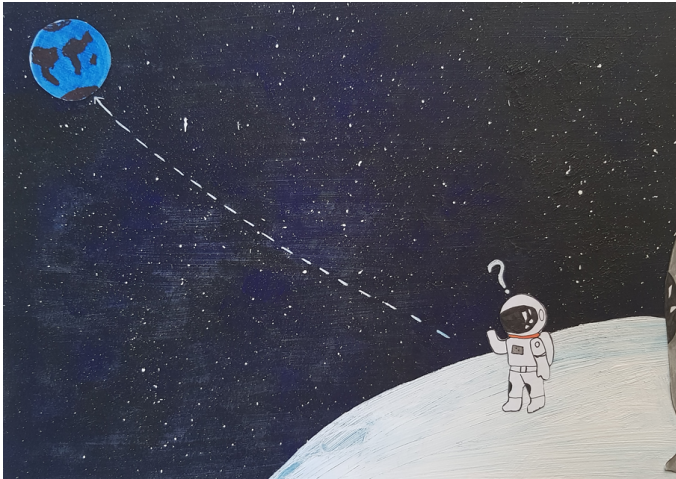


Her calculations were so long and complicated that she needed a large blackboard to write them on. She even had to climb a ladder to start writing at the top of the board, and then slowly descend to the ground to finish her calculations! Katherine was so passionate about maths that she used to say: "Maths is simple. You're either right or you're wrong". She loved to lose herself in her calculations and was and took great pride in finding solutions to difficult problems.



Example: Katherine Johnson

Board 5



Thanks to her precise calculations and perseverance, she saved the lives of the astronauts on the Apollo 13 mission. They were in trouble in space, but thanks to Katherine's calculations, they managed to return to Earth safe and sound.

One day, in 1962, a famous astronaut called John Glenn asked Katherine to check all the calculations made by the computer for his Friendship 7 mission, which consisted of circling the Earth. Katherine worked hard and checked every figure carefully. When she said that everything was fine, John Glenn trusted her and set off on his mission into space.

Board 6



Katherine worked for almost 30 years at NASA, where she established the rules of calculation for space science. She was so precise in her calculations that she helped astronauts arrive safely in space and return to Earth. She was so impressive that President Barack Obama awarded her the Presidential Medal of Freedom, the highest honour in the United States. Katherine is a very important person in scientific history, pioneering Nasa with her precise calculations for space missions. She faced many challenges, as she was one of the first mixed-race women to work in this field at a difficult time in the United States, when only whites were accepted. Thanks to her passion, perseverance and talent, Katherine became a great scientist, known and respected the world over. And so the little girl who loved to count became a mathematical heroine. She is an inspiration to all children who love science and maths.