

Eureka!



Galileo Galilei

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GALILEU GALILEI

Did you know that Galileo Galilei was one of the first scientists to develop a theory and test it in practice?

Galileo was born on 18 February 1564, in Pisa, Italy, son of the mathematician Vincenzo Galilei, and became one of the most important scientists of the 16th and 17th centuries. Curious by nature, he became interested in different areas of science, but ended up following in his father's footsteps, becoming Professor of Mathematics at the University of Pisa, where he also had the opportunity to expand his knowledge of astronomy. In his studies, he learned about the theory of Ptolemy, who argued that the Earth was the centre of the Universe (Geocentric Model), and about the work of Copernicus, who hypothesized that the Sun was the centre of the Universe (Heliocentric Theory).

Did you know that it was Galileo who first studied systematically the skies with a telescope? That's right! The equipment was able to magnify what could be seen in the sky by around 8x, which started the Age of Telescopic Astronomy. He later perfected his telescope, resulting in an increase in its magnification capacity by 30x. With it, Galileo was able to see the Universe as it had never been seen before.

For this reason, Galileo would very much like it if you placed him near the window of his laboratory, when setting up the diorama scene, so he can continue his studies and notes on the Universe!

Galileo discovered that the Moon has phases, mountains and valleys, and did not have a smooth surface, as had been believed. Observing the Milky Way, he viewed many as yet unknown stars, identifying more than 80 in Orion's Belt and another 30 in the Pleiades cluster. He studied Saturn, but his telescope was unable to see its rings. Galileo even realized that, like the Moon, Venus has phases, from crescent to full. He was the first to see Jupiter's four largest moons, in January 1610, known as the Galilean moons or Galilean satellites, just as he discovered that the Earth was a planet like any other.

Well, having made his discoveries with the telescope, Galileo published his first book *Siderius Nuncius* (Messenger of the Stars), in March of the same year. His

work was praised by the Church, although it didn't agree with many of the interpretations he made. In 1613, after studying the behaviour of dark spots on the face of the Sun and publishing a pamphlet called *Letters on Sunspots*, Galileo stated that the theory of Copernicus was correct (Heliocentric). Back then, the Church held the belief that the Earth was the centre of the Universe, and people who disagreed with them were considered to be heretics and their theories were placed in the *Index Librorum Prohibitorum* (List of Prohibited Books). Galileo then tried an alternative way to disseminate his ideas and wrote the book *Diálogo*, which had three characters - one defended Geocentric theory, the other defended Heliocentric theory, and the third was neutral. Because Galileo agreed with the Copernicus Theory, he was ordered to Rome by the Holy Inquisition, to explain himself. Threatened with torture and death, Galileo renounced his theories and was sentenced by the Holy Inquisition to life imprisonment, which was later transformed into house arrest in Siena, Italy, where he spent the rest of his life.

In 1638, already completely blind, Galileo continued to write and teach students about his theories, even though he was prevented from publishing them. With the help of his followers, he managed to edit the book *Discorsi*, which would become the basis for further studies in the physical, astronomical and cosmological sciences.

Galileo died on 8 January 1642, in Arcetri, and his body was buried in the Church of Santa Croce, in the city of Florence.

Galileo Galilei's theories and observations revolutionized knowledge about the Universe and, to this day, form the basis of knowledge used by scholars and lovers of astronomy.

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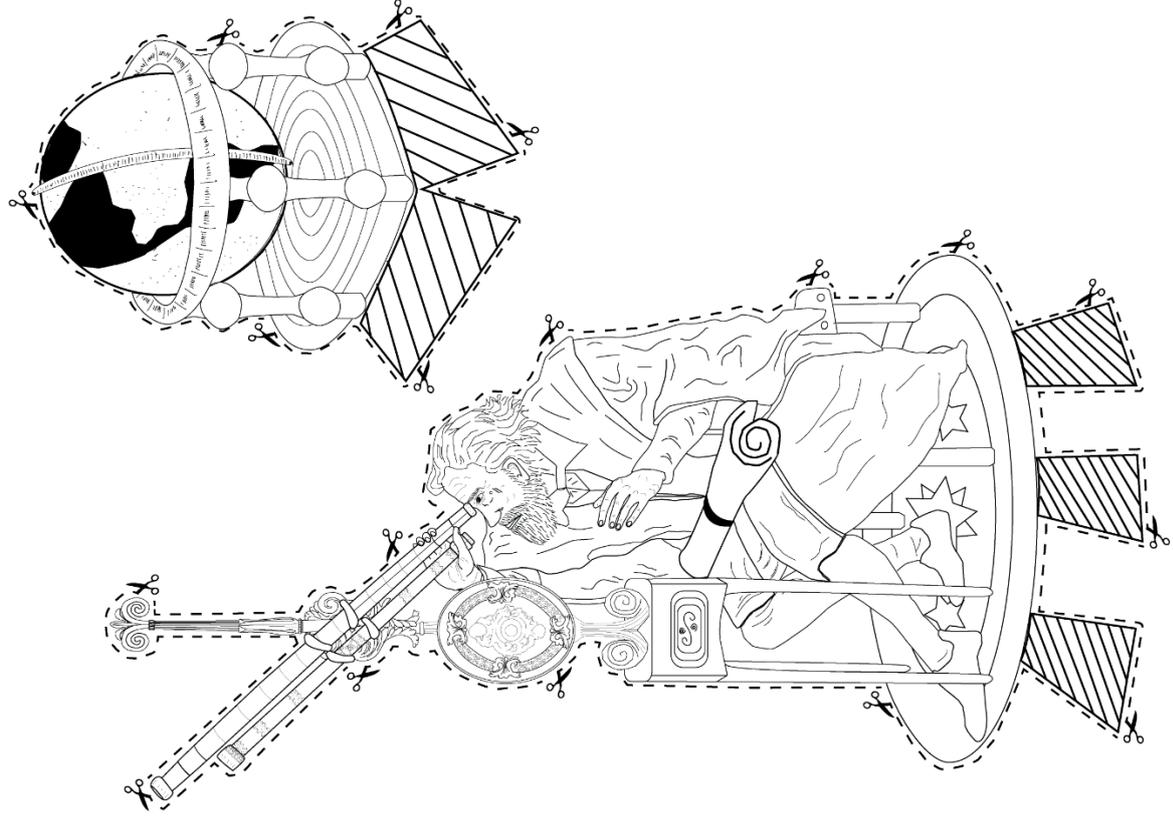
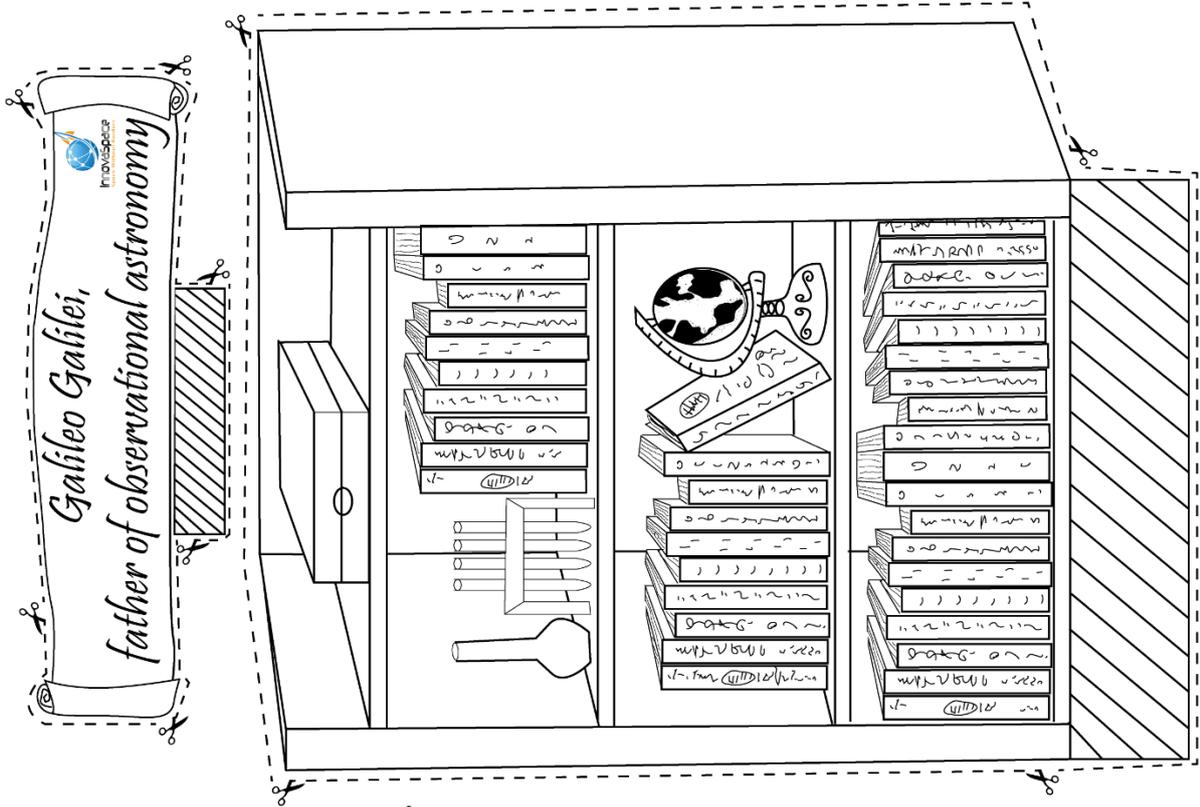
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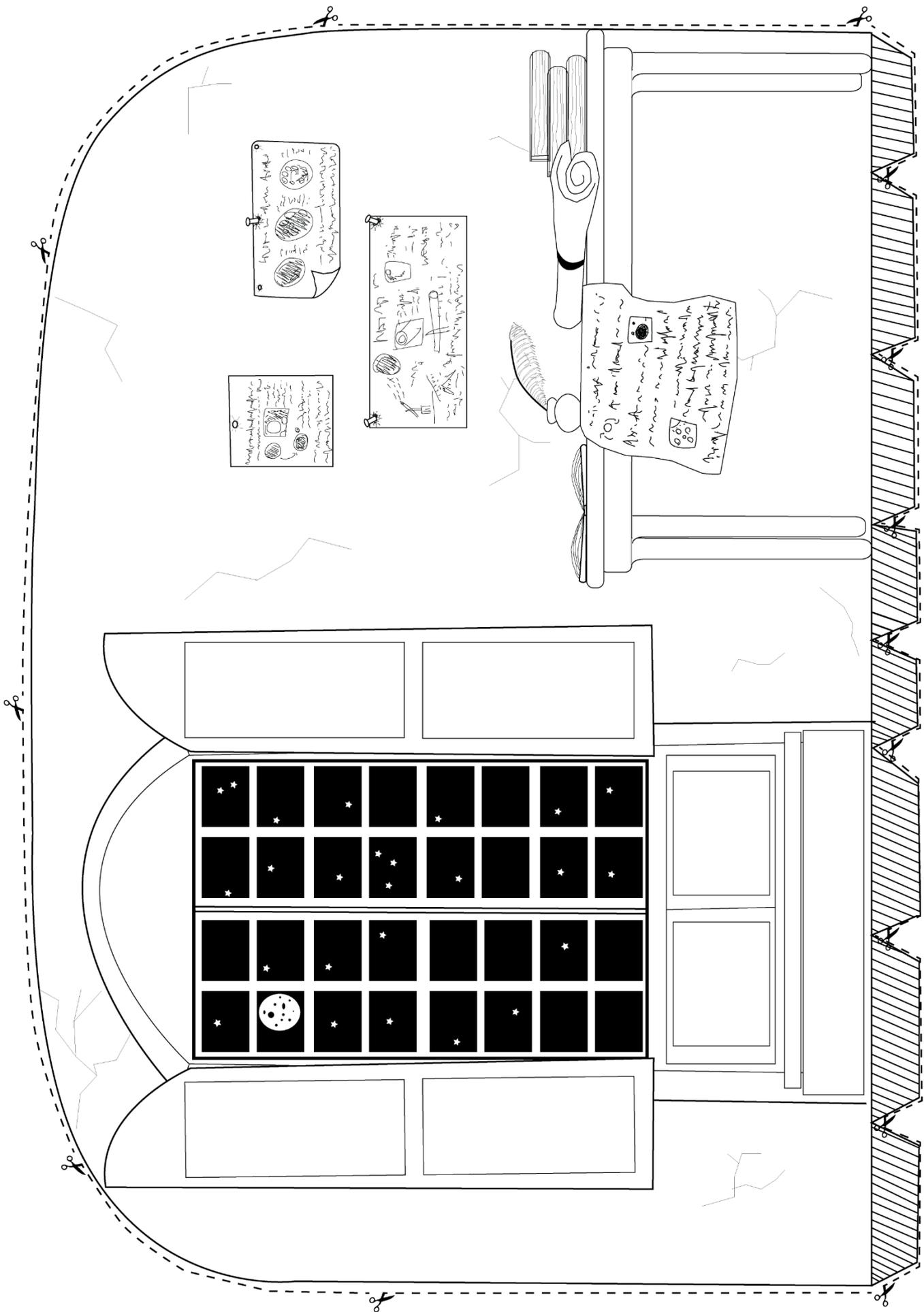
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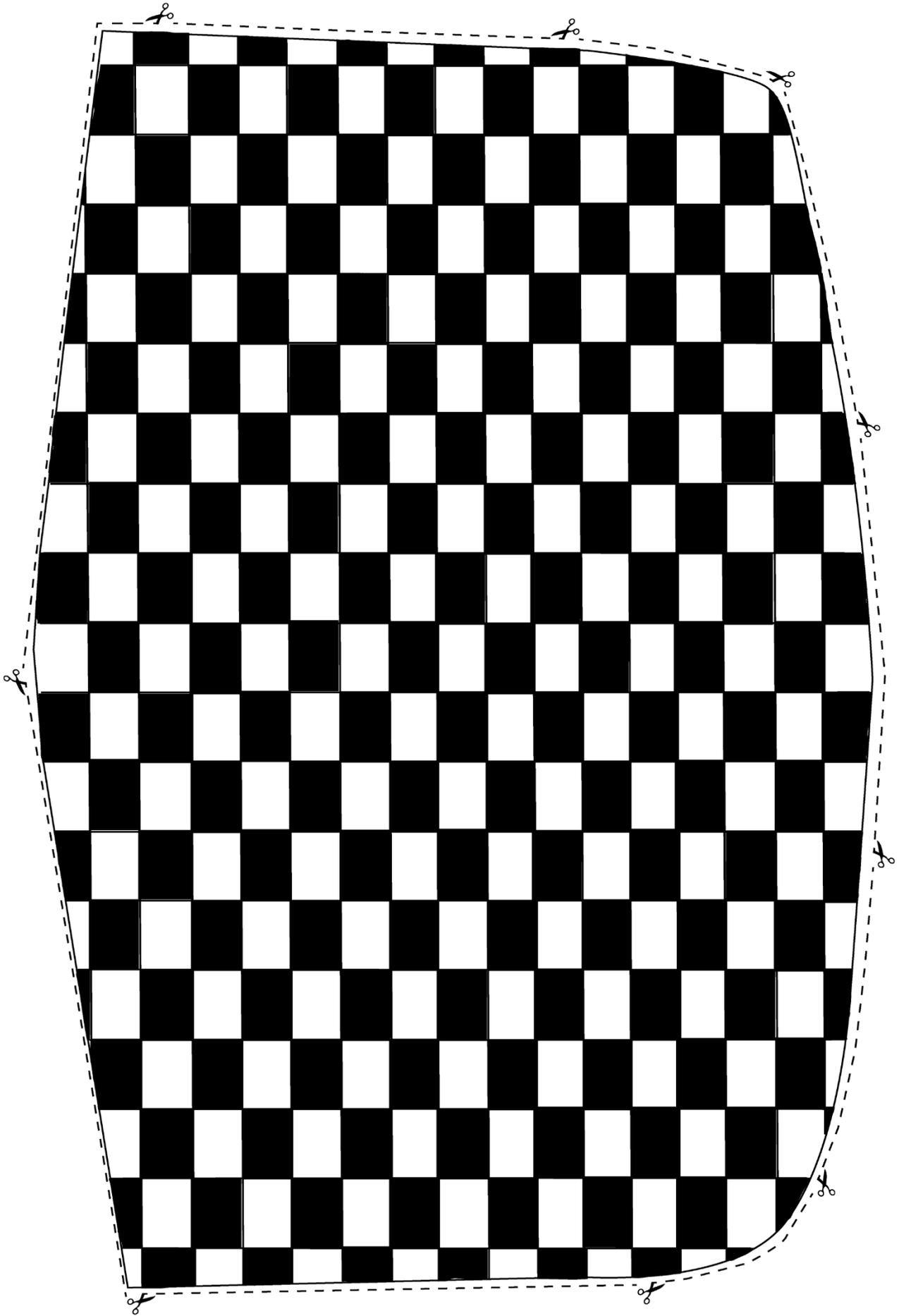
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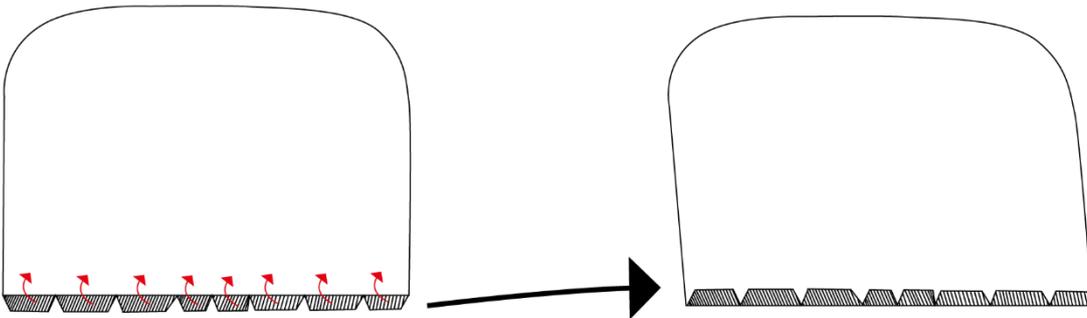




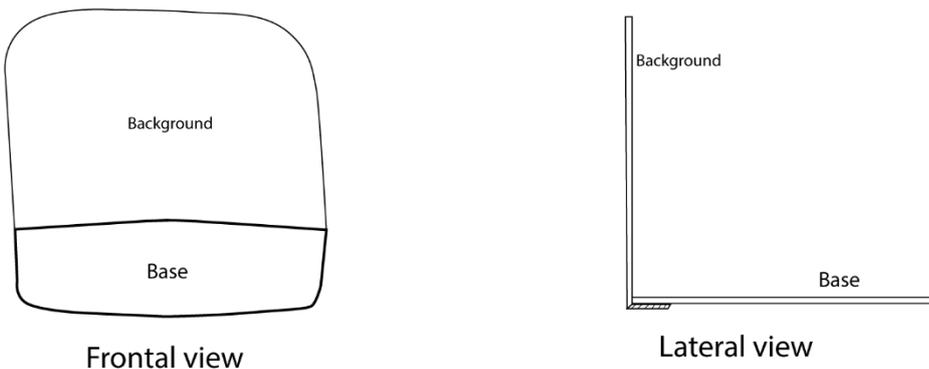
Eureka!

General assembly instructions for the diorama

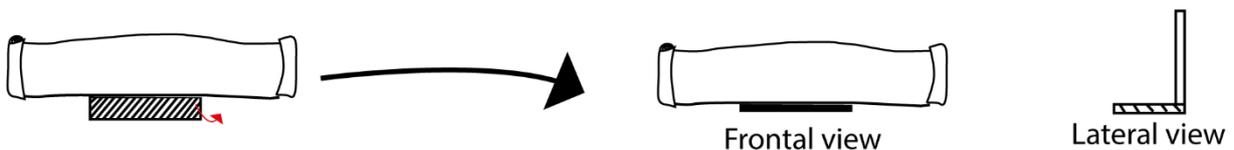
1. Paint/colour in the pieces of the diorama, including the base and background, with your chosen colours;
2. Cut out all the pieces, base and background, as indicated by the following markings: ✂ - -
3. Take the background panel of the diorama and fold the support flaps forward, as shown below:



4. Put glue on the background support flaps and stick them to the back of the base, so they look like this:



5. Fold the support flaps downwards for the individual pieces that will go on top of the diorama, as shown below:



6. Put glue on the support flaps of each item that will go on top of the diorama base, and stick them where you want them to go.
7. There, your diorama is finished!

Tip: if your diorama is not firm, you can use some of the strips of paper leftover from the cut-outs to reinforce the glued area from step 4, on the back of the diorama. Adhesive tape can also be used, if available at home.