

The planets



The planets



The Universe in my pocket



I discover the Sun, the Earth and the Heavens



Grażyna Stasińska  
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The planets

There are 8 planets orbiting the Sun. They are, in order: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune. Some are rocky, others are gaseous. Some have moons, like the Earth (which has only one moon). Thousands of planets have been discovered in the Galaxy, each revolving around its sun.

The planets

Some of them can be seen with the naked eye as small points of light in the sky. Through a telescope, you can see their round shape and colours.



"The Sky Shared", a collective work by artists from Australia and South Africa.



"The sky and the seasons" a work by Inuit artist Kencjuak Ashevak.

Shooting stars



Shooting star shower



Shooting stars

They appear to us as flashes of light that cross the sky in the blink of an eye. They often come in groups at about the same time.

Shooting stars

These are not stars but tiny debris from space. These particles burn up when they enter the atmosphere and leave a trail of light. When the Earth crosses the path of a comet that has spread a cloud of dust behind it, we see a 'shooting star shower'.

The heaviest 'showers' occur in August and October.

The Earth

It has been known for a very long time that the Earth is not flat, as you might think if you looked around. It is round like a marble. The Earth revolves around the Sun, but as we live on the Earth we have the impression that it is the Sun that revolves around us. Thanks to the Earth's gravitational attraction, we can walk anywhere on the Earth without ever falling into space.

The Earth

What is round, covered by water, mountains, forests, and also deserts, and where millions of different kinds of living creatures live?



A landscape on Earth

The Earth



A picture of the Earth taken by a NASA satellite. It shows North and South America.

A picture of the Sun taken with a special filter (SOHO). You can see some nice protuberances



## The Sun

The Sun in the sky



What is pale yellow and dimly illuminates the night? Sometimes it looks round, other times it looks like a croissant.



## The Moon

The Moon revolves around the Earth and is illuminated by the Sun. Men walked on the Moon in 1969, 1971 and 1972. Since there is no atmosphere on the Moon, they had to wear special suits to breathe. Because the gravity on the Moon is six times lower than on Earth, these suits, which weighed over 70 kilos, seemed very light to them.

My drawing of the sky



Starry night



## The stars

A photo of the centre of the Milky Way taken in Brazil by B. Tafreshi. On the right, the Southern Cross constellation can be seen.

They can be seen as glittering dots in the sky as soon as it gets dark. Where they are many, their light merges into a great milky trail called the Milky Way.



## The stars

Stars are balls of fire, like our Sun. But they are much further away. They appear to us as twinkling points of light. Stars are not all the same colour: the white and blue ones are the hottest, the yellow ones have the temperature of the Sun, while the red ones are the coldest. Several thousand stars can be seen with the naked eye. In the Milky Way there are a hundred billion stars.

Translation: StanKurtz  
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To find out more about this collection and the topics presented in this booklet, you can visit <http://www.tuinipora.org>.



The last page of the book shows two different representations of the sky, by artists from the southern hemisphere (top) and the northern hemisphere (bottom). How do you imagine the sky? Draw it on the next page.

The Universe in my pocket no. 34  
Grażyna Straeińska, from the Paris Observatory, wrote this booklet in 2022 and dedicates it to her 5-year-old grandson, Côme. The drawings were done by 8-year-old Arsen.

The Sun is a ball of fire. Occasionally small eruptions occur on its surface that can interfere with telecommunications on Earth. There could be no life on Earth without the Sun. It provides the energy to grow the plants that provide our food and the oxygen we breathe. Sunlight takes 8 minutes to reach the Earth.



## The Sun

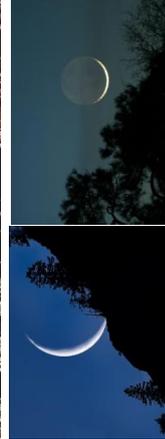
What is round and yellow, gets up in the morning, and lies down at night? Gives us light and warmth during the day? And disappears at night?



A landscape with the Moon



## The Moon



Crescent Moon 'standing' Photo by Gary Hart  
Crescent Moon 'on her back' Photo by Tavi Greiner

The orientation of the crescent moon depends on the time of day, the season and the location on Earth.