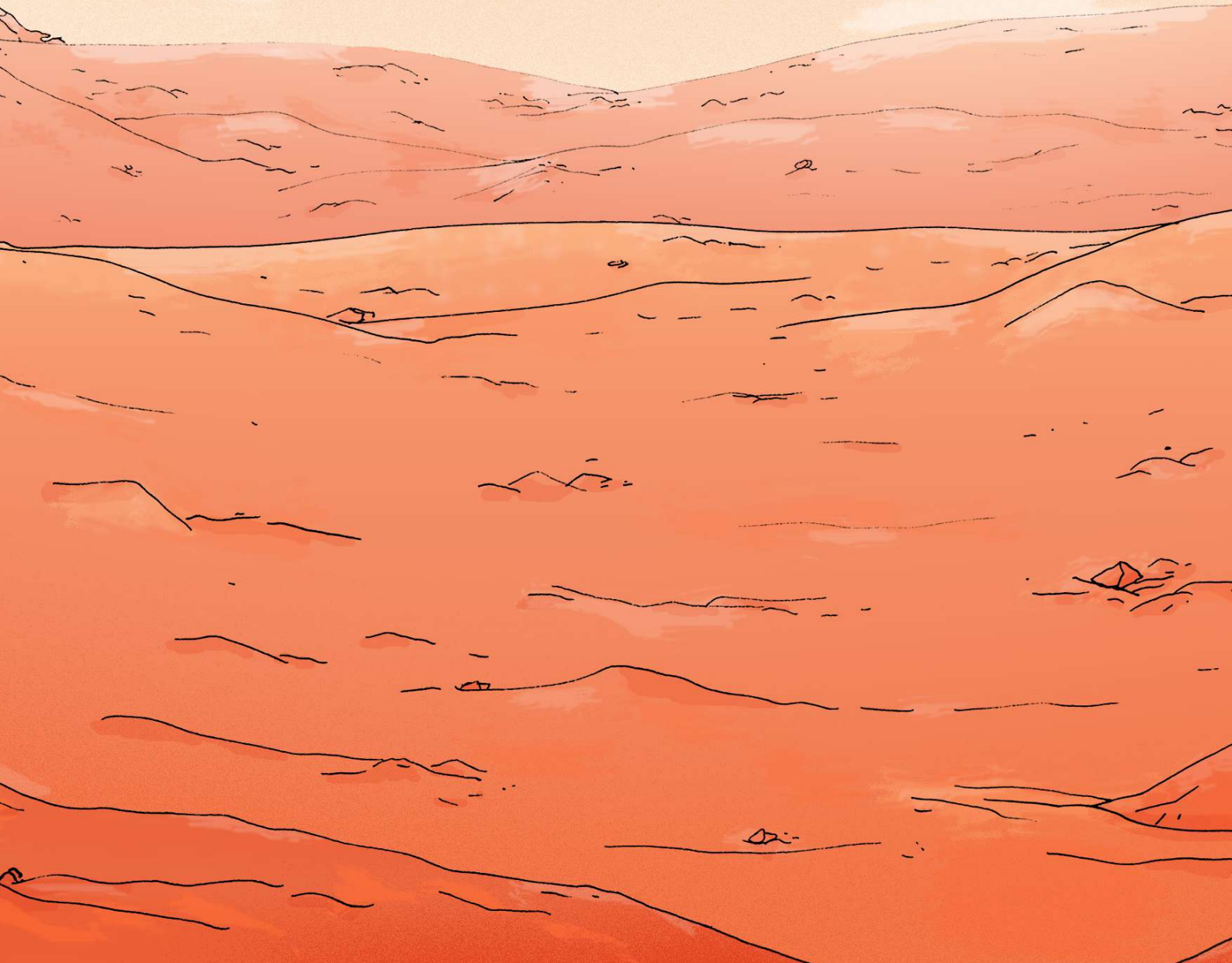




# Facilitator's Guide



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## 1. About our project

The study of Astronomy is an important experience which has far-reaching implications for many curricular areas. "Astronomy literacy" implies not only knowledge and understanding of the Earth and its interaction with other celestial objects, but also an understanding of the scientific processes used to produce those concepts.

Astronomy is, on its own right, a high interest subject with vast implications in our societies. It has been a cornerstone of technological progress throughout history, has much to contribute in the future, and offers all humans a fundamental sense of our place in the universe. (Finley, 2013)

Astronomy also has the power to attract a wide range of students (Massey, 2011). This motivational nature of Astronomy promotes science literacy and may encourage students to pursue future careers in STEM.

But Astronomy, as part of science education, can no longer be viewed as only elite training for future scientists or engineers. As recently stated in an EC Report, knowledge of and about science are essential to prepare people to be actively engaged and responsible citizens, creative and innovative, able to work collaboratively and fully aware of and conversant with the complex challenges facing society (Science Education for Responsible Citizenship, EC, 2015).

The project SpaceGuardians has developed an innovative pedagogy for improving Astronomy Literacy of children (3 to 6 years old) and for raising their interest over STEM (science, technology, engineering and mathematics), based on two interactive learning eBook. The partners who worked on this project came from 4 different countries (Scotland, Portugal, Greece and France):

- CIVIC Computing is a digital strategy agency with vast expertise in the development of bespoke applications and tools that is investing in new services for educational publishers and in children's books.
- Advancis is a private company that provides consultancy and training services in Education and People Development, with competences in curricula development, storytelling in education, ICT based learning methodologies, among others.
- BOON is a private company that provides services in design and illustration.
- Platon schools (Kindergarten – Elementary – Gymnasium – Lyceum) is a modern educational institution with 530 learners and 83 staff.
- Laboratoire d'Astrophysique de Marseille is a joint research unit of the CNRS-INSU and of the Université d'Aix-Marseille (AMU), that undertakes research in astrophysics and instrumentation.

The eBook that has been developed has taken into consideration:

- A framework for Astronomy education that the partnership will specifically develop for pre-school level.
- Good practices of storytelling and interactive stories, specifically for this age group.
- Need to appeal to both boys and girls.

As an interactive eBook, it integrates interactive features, mini-games, puzzles and other elements embedded in the story.



The purpose of this Guide is to maximize the learning opportunities provided by the interactive eBook by:

- explaining how the eBook is used
- proposing topics for reflection
- proposing exercises
- proposing activities

that can be used by teachers and parents with children.



## 2. Ebook 1 and 2



We have developed 2 eBooks. The first book is called 'The Moon was stolen' and is about a young girl called Rita who is trying to figure out who stole the Moon. During her adventure, she finds different clues and friends along the way. Rita discovers who stole the Moon and is asked to join the Space Guardians team. SG are scientists, adventurers and protectors who study space and go on dangerous missions to protect the planet, so off course Rita accepts and becomes a Space Guardian.



We then went on to develop a sequel called 'Is there anybody out there'. In this book, the Space Guardians team are picking up a strange signal from somewhere in the solar system and decide to go out to space to check this out for themselves.

They soon realise the signal is coming from Mars and during their trip to there are a number of activities that the readers can complete including arranging numbers from 1 – 10 during take-off, dressing Rita in her Space suit and put the planets in the correct order from the Sun.

Once they land on Mars, they realise that a meteor has damaged a telescope and they work together to fix it.



### 3. Explaining how the eBook is used

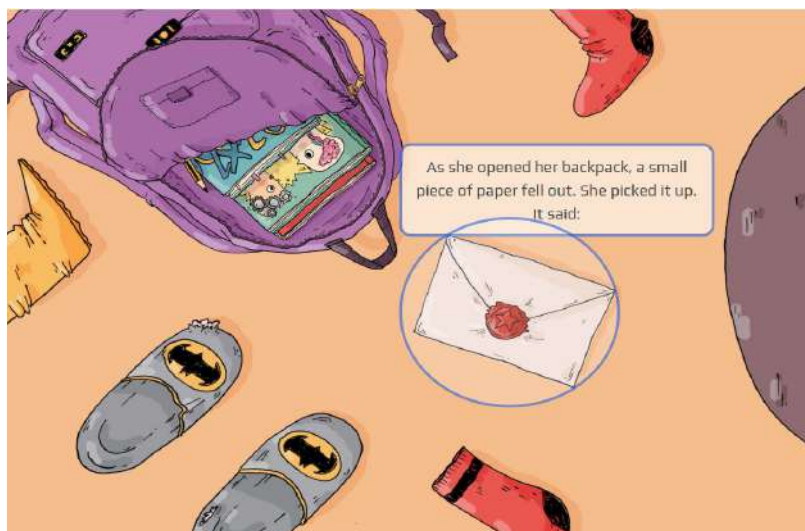
The book is about a story. The story of the Space Guardians (SG). First of all you can choose one out of the four languages that has already been translated (English, Greek, Portuguese and France). You can easily turn the pages forwards or backwards by clicking in on of the corners of the page (picture 1) (red arrow).

But, before to change a page, be sure you read all the text by clicking on the blinking text.



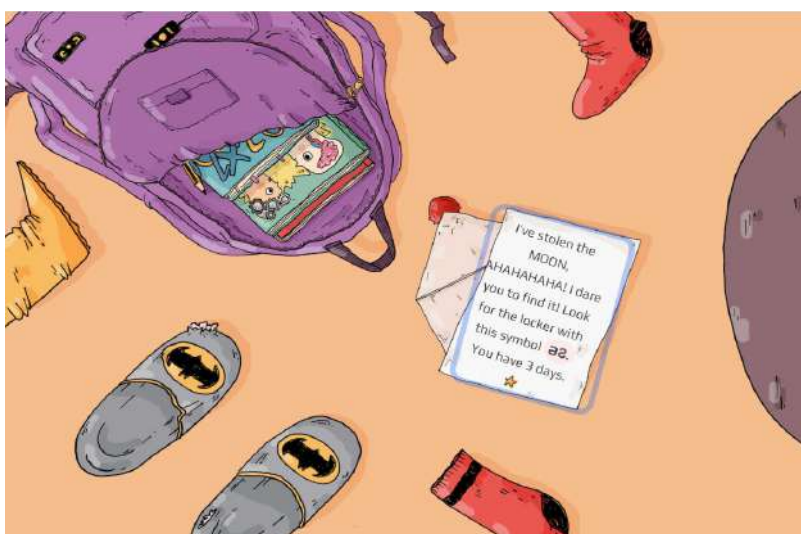
Picture 1

You can also find some blinking objects, in some of the pages, that you can interact with them (picture 2).



Picture 2

You can interact with them by just clicking on them (picture 3).



Picture 3

Sometimes something new appears or you can even hear a sound. You can even see a video or a secret game. So, you have to stay sharp and look for all the blinking objects or you may lose some clues of the story.

As you continue reading the story, you can find some more information about planets or constellations. You can either ignore them, if you want to use the book as a bed time story, or try to explain to your kids what these things really are (at the end of this Facilitator's guide you can find some links about astronomy that can provide more about it). It doesn't matter how you want to use it. The thing is that the kids have to enjoy it, get intrigued about astronomy, learn about it and.... Look for the stars! Enjoy!



## 4. Astronomy and the pre-school kids

Children of an early age are easily intrigued by the sky and space. Space imagery is widely present today in books and media fuelling both their curiosity and imagination.

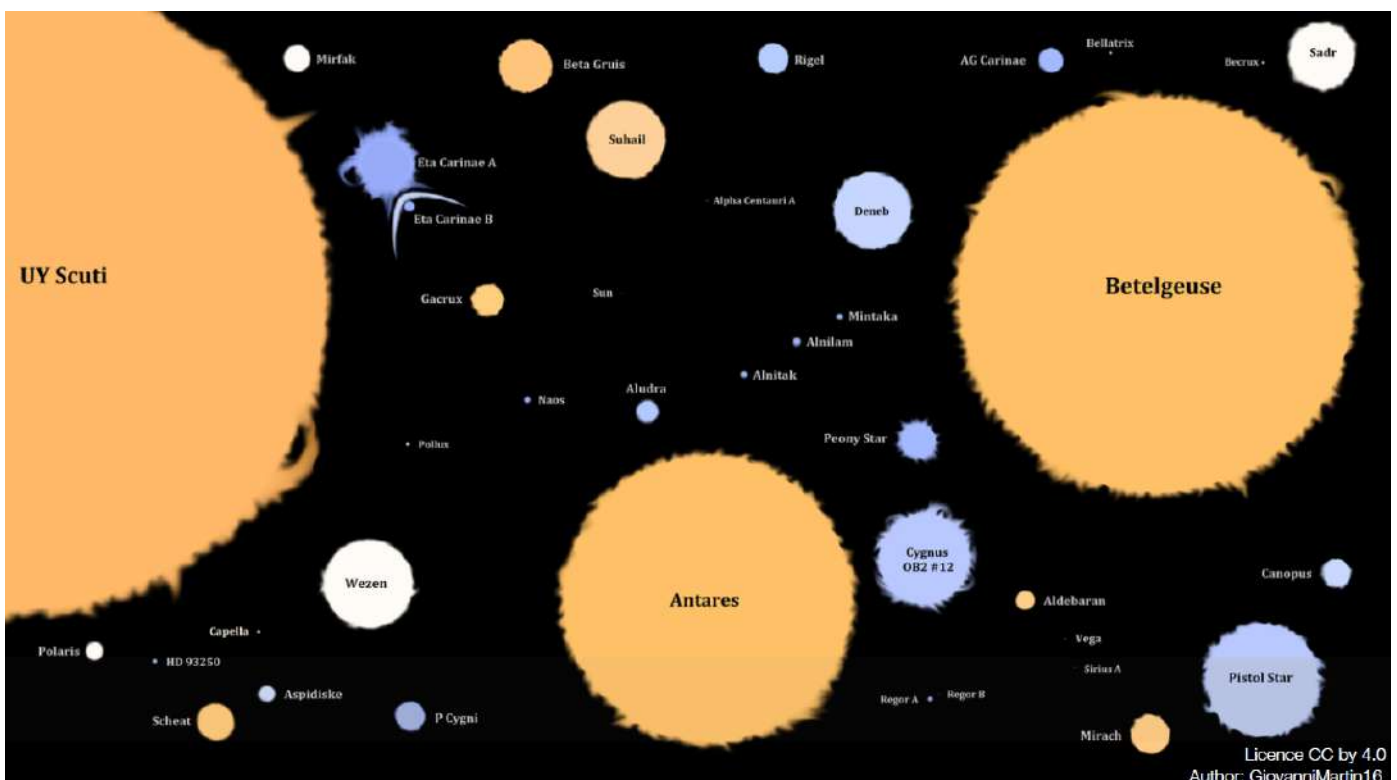
Astronomy is an observational science. We cannot touch a star, we can only observe their aspect, their movements and their configurations in relation to each other. An awareness of “things in the sky” will encourage the emergence of logical and observing thinking. For example, sunlight generates shadows. This is a simple way to experiment and start a discussion about the sun with kids. On the other hand, simulations such as day and night, the phases of the Moon,... will lead to the first models.

Below we've described several concepts that are present in the ebook and that can be discussed in class or at home. We also provide ideas for activities you can do with kids to teach them about astronomy concepts, as well as photos and image banks. Some interesting links from professional astronomers and observatories are given at the end of this guide (just before some colouring is proposed !).

### Star

A star is a ball of luminous gas that can be seen in the sky. The Sun is the closest star to us. We can see it during the day, but we can't look at it directly because it will seriously damage our eyes. At night, we can often see a lot of small bright dots on the dark sky. This is the light coming from the stars.

Stars shine because they are balls of molten matter. So they emit rays of light, like fire. They are composed mainly of hydrogen, which is their fuel. Stars of different colours exist: from red to blue. It is related to their sizes and temperature. These differences of colour can be seen at night. On the other hand, the flicker that we can see from starlight is due to fluctuations in the Earth's atmosphere.

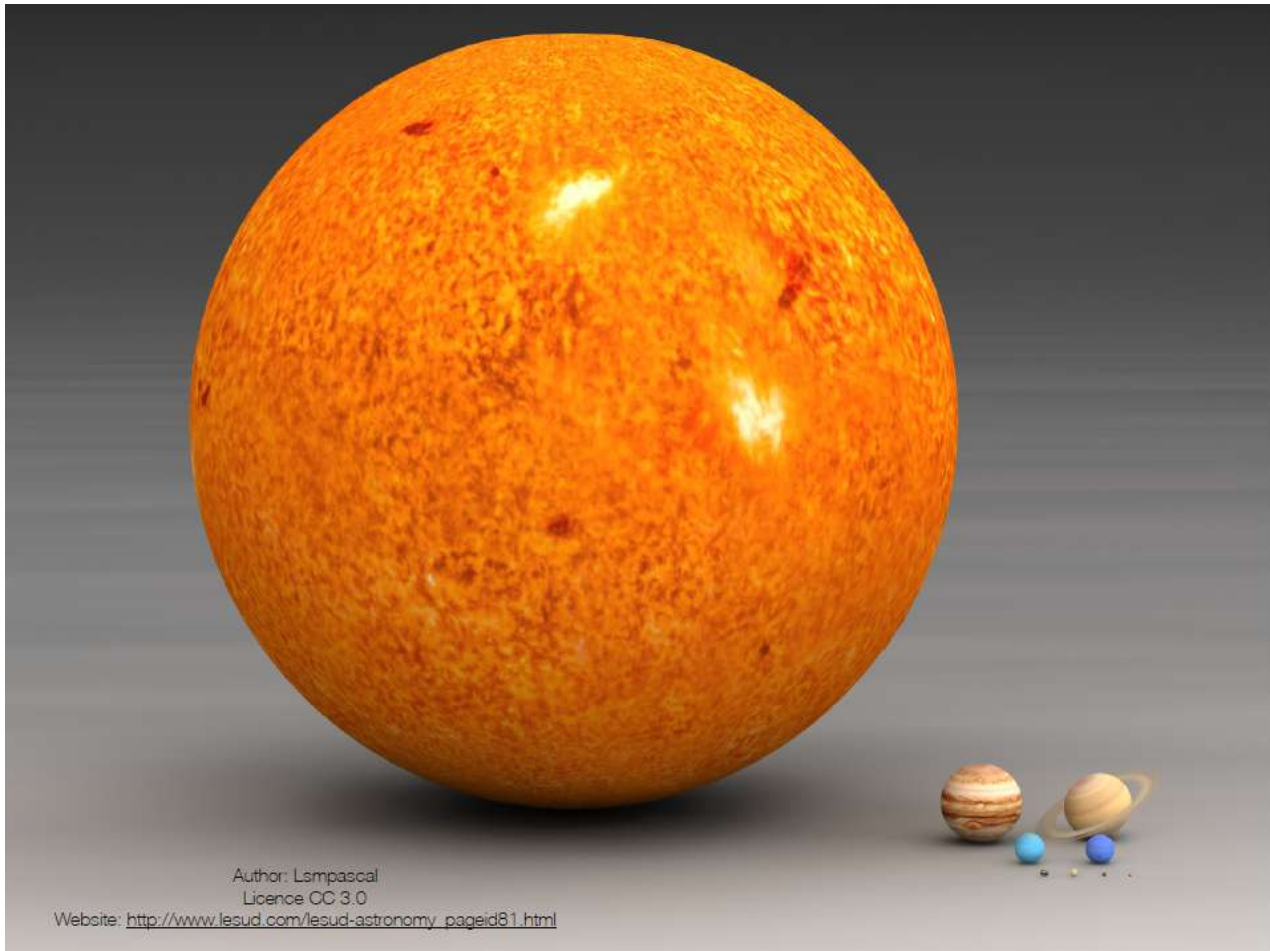




Some of the well-known stars are shown with their apparent colours and relative sizes. The Sun is in the center of the image and it is a very small dot compared to the biggest ones.

Most of the stars that we can see by eye are big and very hot stars. However, the most abundant type of stars in our Galaxy are small, low-temperature objects, named red dwarfs. But they don't shine a lot, so it is difficult to see them by eye.

As all objects in the universe, stars have their "life cycle". They are born, then age, and then they die. The lifetime of a star depends on its size.



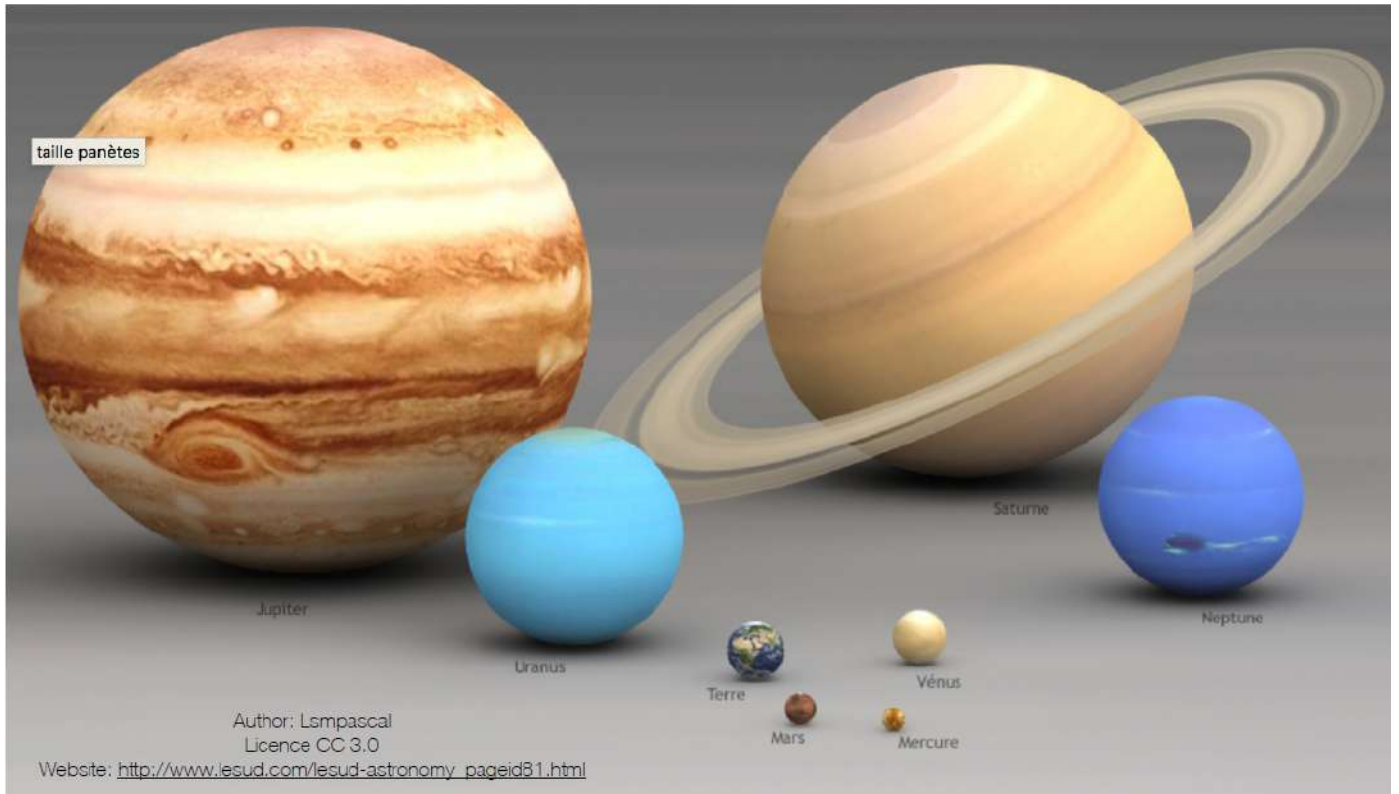
This is a comparison of sizes between the Sun and the different planets of the Solar System. Earth is one of the four small dots.

## Planet

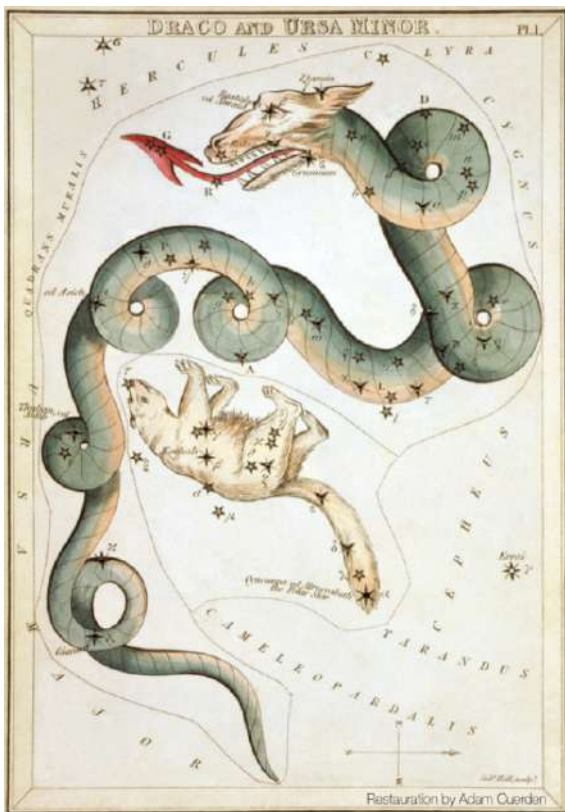
A planet is an object in the Universe that revolves around a star. To be called a planet, it must be big enough to be spherical in shape and have cleaned up the other rocks in its path, meaning, it's the only one left in its orbit. There are eight planets around the sun. The Earth is the planet on which we live.

A couple of years ago, we discovered that there are planets around other stars and we are in the process of further research.





The is a comparison in size between the different planets of the Solar System.



## Constellation

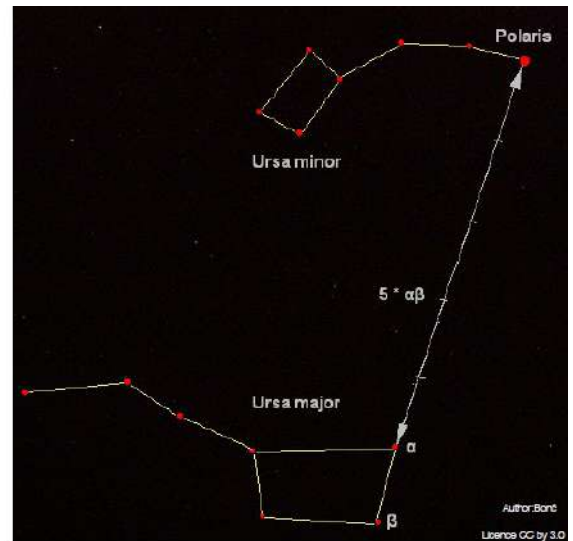
A constellation is a figure imagined by humans. Seen from the Earth, they represent shapes evoking representations of what we know - for example: Libra, Aries, the Coachman, the Arrow, the Furnace... These imaginary "drawings" are made by "connecting" stars close to each other.

## The Ursa major and minor

The Ursa major and minor are constellations of the night sky of the northern hemisphere. Seen from Europe, they are visible all year round. Each bear has seven very bright stars and several less bright stars. The brightest stars form a pot from which comes the Big and Small Dipper names. Big and small bears are named compared to each other. Ursa major is a large constellation in the sky that is very easy to spot and the other is called Ursa Minor.



## Polaris



**Left:** This image was taken at Observatoire de Haute-Provence (France) over several hours. We can see the star moving the Celestial North Pole. Polaris, is currently the star closest to the Earth north pole. **Right:** Schema of the sky where the small and big dipper are located. This explains how to identify the star Polaris.

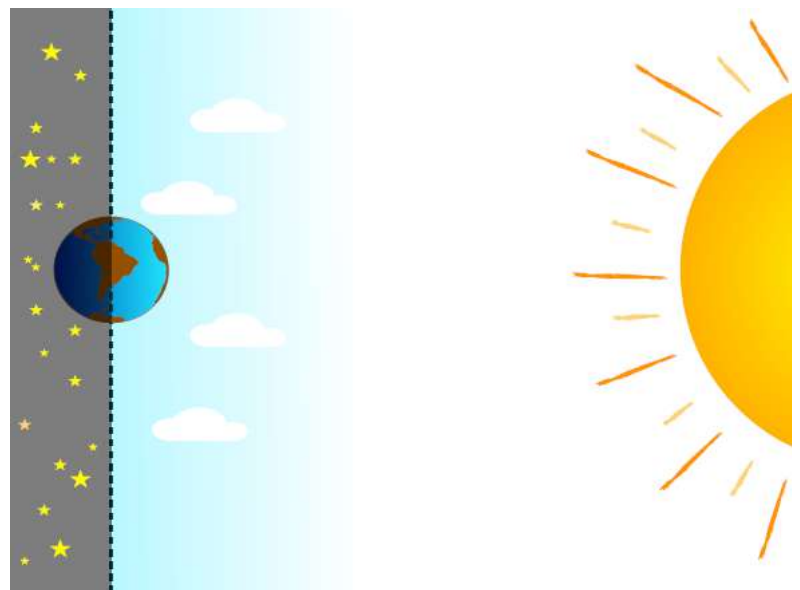
The North Star in the Northern Hemisphere is the brightest star in the constellation of the Little Dipper. It is a star that can be seen by the naked eye. It's called a North Star because it points north, where the North Pole is ! Due to the rotation of the Earth on itself, during the night, all the stars move in the sky, except this one! This is because this star is aligned with the Earth's axis of rotation. During the night, all the stars in the sky seem to move around her.

## The Sun

The Sun is the name we have given to our star. If we observe the Sun setting and rising, it is actually because the Earth rotates on itself. So it is daytime under the sunlight, and night in the shadows.

A year represents the time it takes the Earth to travel around the Sun. In one year, we observe the four seasons: fall, winter, spring and summer.

The Sun shines because it emits light. It is a hot and very dense ball of gas. The light rays we receive on Earth illuminate and warm us because the Sun is very close to us compared to other stars. It shines so brightly that it can burn your eyes if you look at it for a period of time.



The Sun is white. We see it yellow because the Earth's atmosphere dispersed the blue. Hence we see the sky blue, and the Sun is the result from white from which the blue is removed, it let yellow. At sunset, the sunlight passes through a thicker layer of atmosphere. More of the blue is removed, leaving only the red light!



## The Earth

The Earth is the name we have given to our planet. It turns on itself in 24 hours. It is the time of day and night. During the day, we are illuminated by the Sun and the other side of the Earth is then plunged into the night.

The Earth is the only planet where we know there is life (plants, animals,...). It is also the only planet where large quantities of liquid water (oceans, seas, rivers, streams, lakes...) and continents are observed. The Earth has an atmosphere, it's the air you breathe.

Starting from the Sun, the Earth is the third planet after Mercury and Venus. Then we find the asteroid belt, the red planet Mars, and then the giant planets: Jupiter, Saturn, Uranus and Neptune.



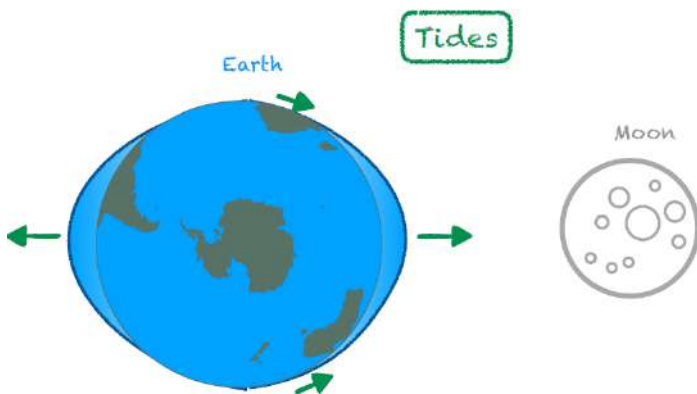
## The Moon

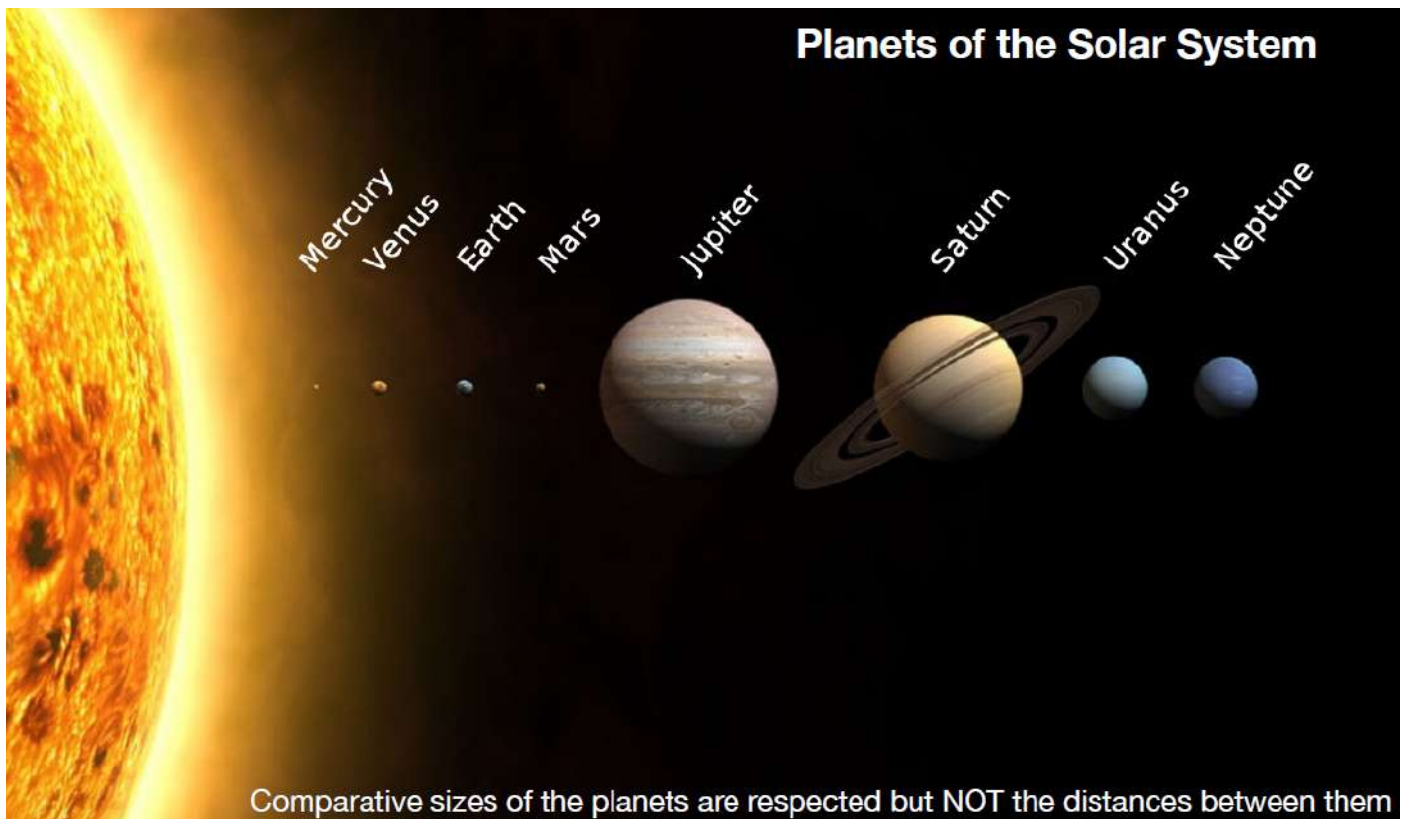
The Moon is the Earth's natural satellite, which means that it revolves around the Earth. The Moon rotates on itself at the same time as it rotates around the Earth. This means that from the Earth we always see the same side of the Moon. We see many craters on the Moon. These craters are visible because there is no air on the Moon. On the Moon, there are dark spots called "seas". These are lava outpourings that come from volcanoes that marked the Moon in its youth. On the Moon, there is no life, no water, just rocks and dust.



The Moon doesn't shine. It reflects sunlight. Depending on how it is illuminated, it can be seen round, oval or crescent-shaped. The Moon makes one orbit (one complete revolution) around the Earth in about 27 days. It also completes one complete orbit around itself in 27 days. It is why from Earth we always see the same face of the Moon.

The Moon has many impacts on the Earth. The most visible thing you can see is the tides of the ocean. This allows you to see the sea level change twice a day in the same place. It is because of the attraction between the Earth, the water and the Moon. The Moon is about one third of the Earth, as can be seen in this image composed by NASA.





## The Solar System

Eight planets and a lot of smaller rocks are rotating around the Sun. There are four small and rocky planets. They are the closest to the Sun. One of the four is our Earth. Starting from the Sun, the names of these planets are Mercury, Venus, Earth, and Mars. Then there is four giants and gaseous planets that are farther from the Sun. Their names are Jupiter, Saturne, Uranusand Neptune. All giant planets have rings and several Moons.

Between Mars and Jupiter there is a lot of small rocks named the asteroid belts, and after the farthest planet, Neptune, there is also a large number of objects called the Kuiper belt. Even further away, there is a spherical cloud of very distant objects in what is called the Oort cloud. Comets come from these faraway places.

Below are a short description of each objects. The last few decades have seen the launch of a number of satellites and space probes to study objects in our solar system. Among other things, they have allowed us to obtain very beautiful pictures. We encourage you to extend your research in books or on the internet as a large number of high quality images are available.

You can present and explain the concept of day and night to the children, as proposed in the first activity below (next section). The children already experienced them on Earth. The children should already understand the concept on Earth before you expand onto the concept of other planets:

- Day: time a planet rotates on itself
- Year: time a planet takes to do a revolution around the Sun

For example, Venus rotates very slowly on itself due to its thick atmosphere. It results that its day (243 d) is longer than its year (225 d).

At night, when planets are visible, they shine very strongly. It is only because they reflect the Sun's light. You can consult ephemerides in order to know which object is currently observable. For example, <https://www.timeanddate.com/astronomy/night/>

## Mercury

Mercury is the nearest planet to the Sun and the smallest planet of our Solar System. The planet has a rocky surface and is smaller than Venus and Earth.

Mercury has no atmosphere and this is why we can see so clearly the craters, as it is for the Moon. It is because there is no erosion from air or water.



## Venus

Venus is more or less the same size than Earth. It has a very thick atmosphere full of clouds. There tends to be strong storms on Venus. The temperature is very high (460 degré Celsius).



Earth cf. item 7 above





## Mars

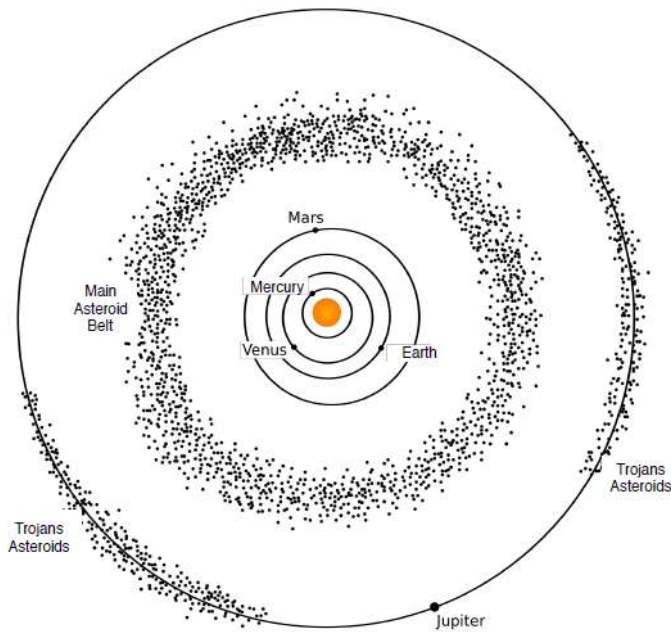
Mars is the fourth planet from the Sun. It is slightly larger than Mercury, but much smaller than Venus and Earth. Mars has two "Moons" (natural satellites), called Phobos and Deimos.

Mars has the highest mountain in the Solar System: Mount Olympus, 25 km high!

Humans have sent many robots to explore this planet (see below, 3 copies of these robots, named Mars rovers).







## The asteroid belt

It's a region between Mars and Jupiter. It contains most of the asteroids in our Solar System.

Asteroids consist of small stones to large pebbles (1cm in diameter to several hundred km) that revolve around the Sun. They are not big enough to be planets.

In fact, the asteroid belt is a planet that could not form because it was too close to Jupiter.

Asteroids that fall to the Earth by a few centimetres burn up in the atmosphere like shooting stars.

## Jupiter

Jupiter is the fifth planet in our Solar System. It is also the largest and heaviest planet in the Solar System. It revolves around the Sun in 12 years. It is mainly made up of gas. It has many bands of clouds on its surface, and a large red spot, which is a huge cyclone. Jupiter has four moons.

Jupiter is visible to the naked eye as a very bright star. If we observe it several nights in a row with binoculars or a small telescope, we will see the Moons revolving around Jupiter. This is what Galileo did in 1610, refuting that everything revolved around the Earth as it was commonly believed in his time.



Author: NASA/JPL-Caltech/SwRI/MSSS/Kevin M. Gill



## Saturn

Saturn is the 6th planet from the Sun. It is mainly composed of gas and it is a little smaller than Jupiter. Saturn is well-known for its bright rings.

You can easily see these rings with a small telescope. Most astronomers will tell that it is the best things to observe in the sky !

Its rings are composed of chunks of ice and dust.

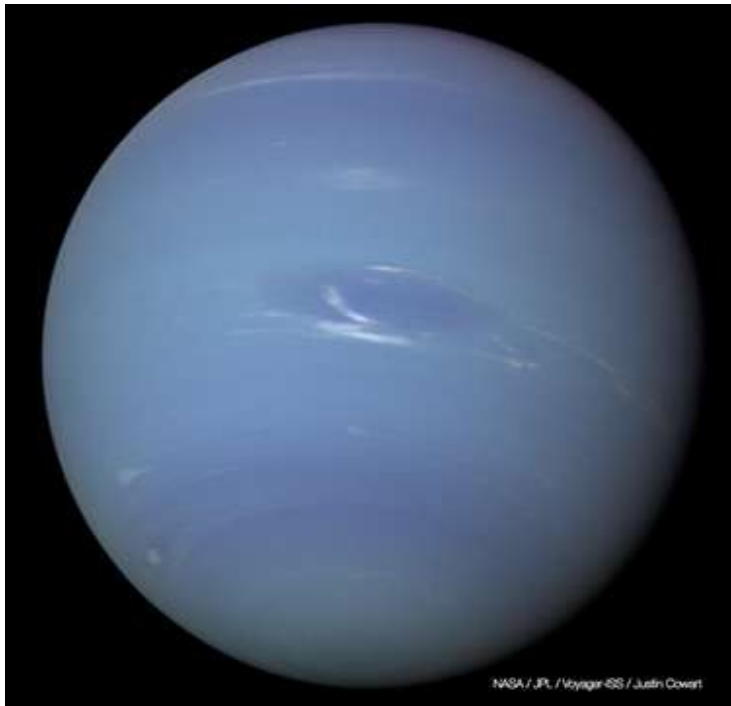
The picture shows Saturn illuminated by the Sun, its rings and on the left, 3 of its numerous moons.



## Uranus

Uranus is the 7th planet from the Sun. It has a blueish green colour due to clouds of methane in its atmosphere. Contrarily to the other planets that rotates vertically compared to their movement around the Sun, Uranus spins on itself like a wheel around the Sun. Uranus is so far that you cannot see it by eye from Earth, you need a telescope.





## Neptune

Neptune is the 8th and the last planet from the Sun. Neptune was discovered by calculation. Uranus movement was strange so scientists deduced there will be another planet.

Neptune is deep blue due to the clouds of methane. Neptune is bluer than Uranus. This is due to a component in its atmosphere but we don't know yet which one. There are very strong winds and storms in its atmosphere as can be seen by the bright clouds and dark spots on its surface.

## The Kuiper Belt

This is the name of what is outside Neptune. As the Asteroids belt, it is mainly composed of small bodies. Charon and Pluto are found in the Kuiper Belt. Comets are issued from the Kuiper belt.



Author: Philipp Salzgeber  
<http://salzgeber.at/astro/>



## The Milky Way and the galaxies



The Milky Way is the name of the Galaxy in which we live. It contains the Solar System and its name describes the Galaxy's appearance from Earth: a hazy band of light. We cannot image our Galaxy, but we know how it should be. It would resemble for example this galaxy imaged by a spatial telescope. Several smaller galaxies can be seen on the picture.

Our Galaxy, the Milky Way is composed of more than 200 billion stars.

## Light pollution - The preservation of the night sky



Light pollution is the excessive and prolonged use of artificial light. It results in the brightening of night skies. It has serious environmental consequences for humans and wildlife. It hampers our view of stars, planets and even galaxies. The numerous and bright lights from cities contribute to light pollution. It results that the stars cannot anymore be observed from a very illuminated place. Most kids from big cities can see only very few stars and cannot observe the Milky Way, our own Galaxy.

The picture was taken during and after a massive power outage in Canada. Photo by Todd Carlson. The Milky Way can be seen on the left.

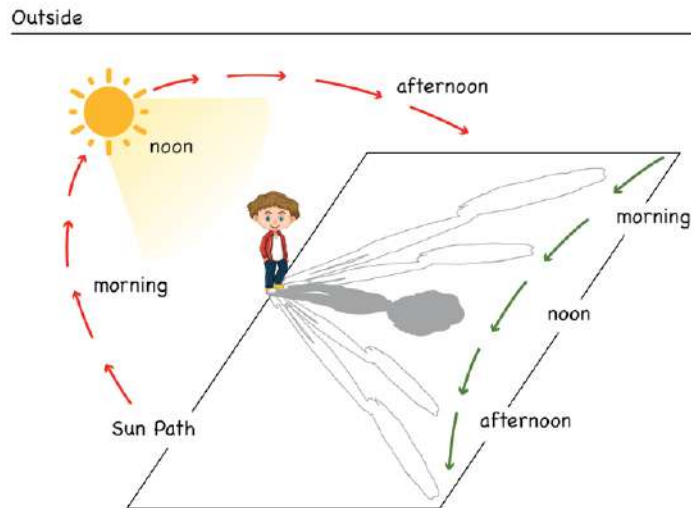


## Activities

### 1. Night and Day and the Shadows

This activity will help kids understand the concept of day and night. The idea is to get them to observe the change of the sunlight shadows. You should do this activity during a sunny day. For this activity, you need a light (to represent the Sun light), a globe or a big ball to represent the earth, and a small stick or a small doll placed on the globe (or ball).

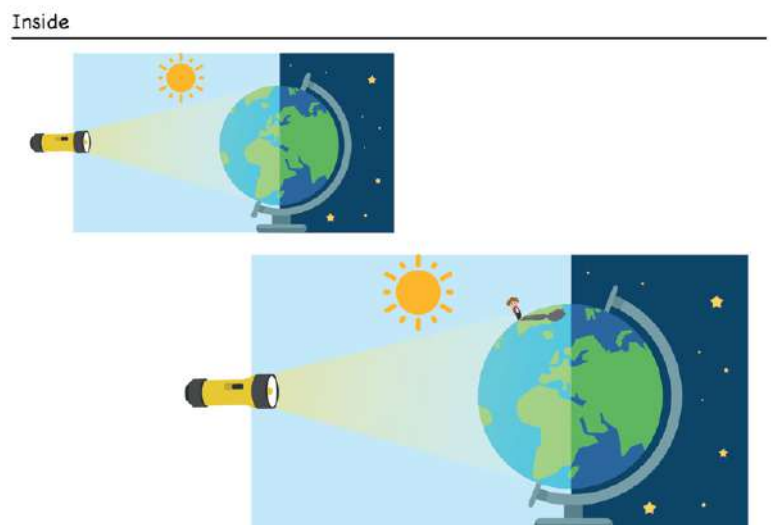
Draw outside with chalk the shadow cast by a child standing in the same place at different times of the day (morning, noon, early afternoon). You will observe that the child's shadow changes shape (more or less elongated) and moves in space.



Then inside, take the light to illuminate the globe (or ball). You can show the kids the part of the globe that is illuminated noting that this is where the day is. On the other side, there is no light from the sun (the lamp) which means it is night. We can see the stars.

Make the globe rotate on itself in order to show how we observe on Earth a succession of day and night time. If you have a globe, you can then discuss how across the world people are at different times of the day (morning, noon, night) as in the story 1 when Rita is calling her different friends.

Now, you can put the stick or doll on the globe. You can observe that its shadow is going to change as you rotate the Earth as you observed it before outside with the different sunlight shadows during the day!



## 2. Phases of the Moon - Observation

This activity consists of getting the children to draw the Moon aspect and its position in the sky over the course of one month (around a period of Moon rotation). To do this activity, you need to have access to a site where the Moon can be seen. You could begin this activity during a Full Moon. Use an ephemeris link or a calendar in order to begin your activity on the correct day.

Each day (in class) or night (at home) take a look outside and draw in a calendar the moon. If you do it at the same time of the day, you can also keep a trace of the position of the Moon in the sky (compared to the closest building or trees, mountains). An easiest way could be to take a picture each day of observations. After few nights the kids will notice that shape of the Moon changes as well as its position in the sky.

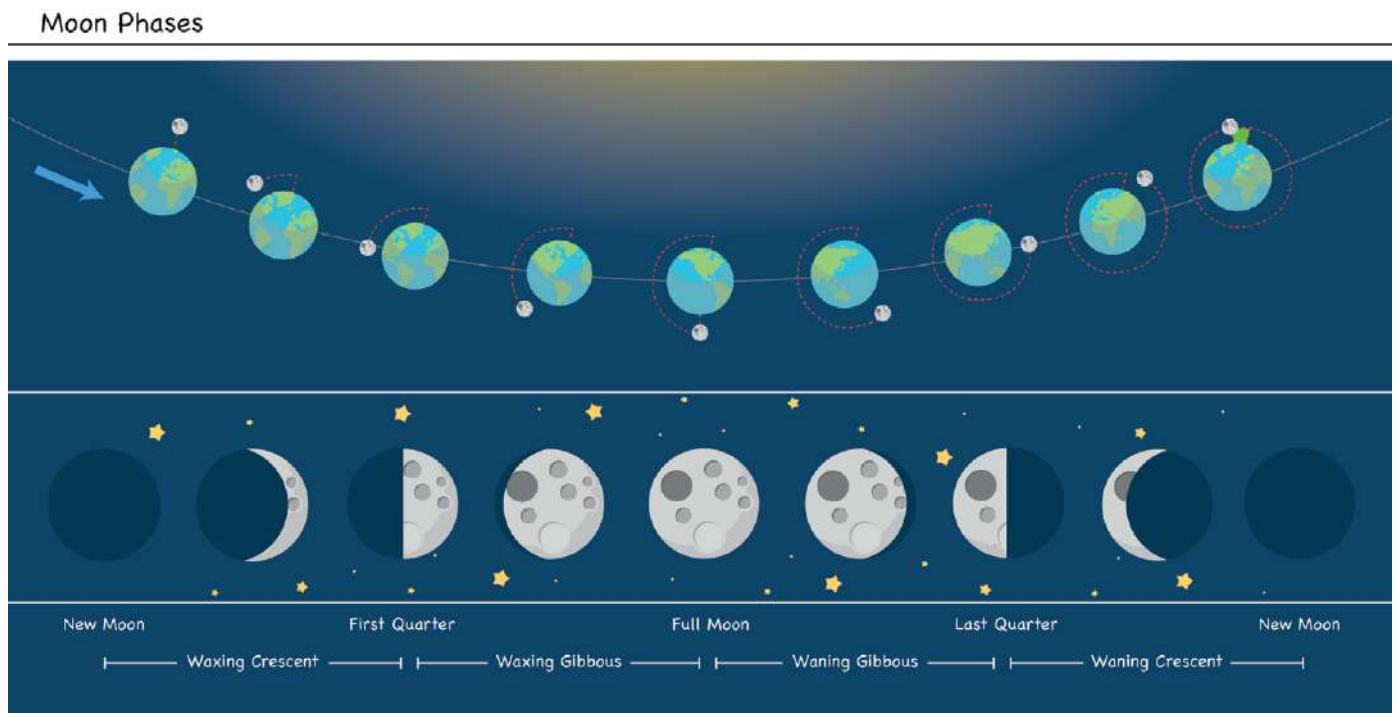
You can reproduce the Moon shape with Playdough.

For very young children, it might be better to do sky observation during holidays or during winter time as in northern hemisphere, the night begins early.

Don't forget that the Moon is visible almost as much during daytime than nighttime.

## 3. Phases of the Moon - Understand

This activity will help kids to understand why we see the shape of the Moon changing during its rotation around the Earth. The idea is to reproduce how the sun's light reflects the different phases of the moon.



For this activity, you will need a light (to represent the Sun light), a globe (to represent the Earth) and a small ball (to represent the Moon).

With the light and globe (Sun and Earth), you can first remind the kids how the earth turns on its axis to make night and day. When we face the Sun, it is the day because we have the light from the Sun. And when we turn away, we don't see the sun so it is dark, and it's the night and we can see the stars.

You can then begin the experiment with the Moon and the Sun, explaining that we can only see the Moon because of the light reflecting from the Sun. The Moon has not its own light. As all the planets and satellites in our Solar System, the Moon is just reflecting the light of the Sun.

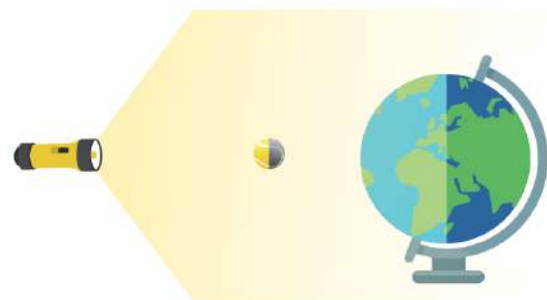
The Moon circles the Earth and depending on its position between Earth and Sun, we will see the different phases.

You can then begin the experiment with the Moon and the Sun on opposite direction of the Earth. When the Earth is between the Moon and the Sun, it is the full Moon. The illuminated side of the Moon can be seen entirely from the Earth.

## Moon Phases



When the Earth is between the Moon and the Sun, it is full Moon. The illuminated side of the Moon can be seen entirely from the Earth.



In the case of the new Moon (= Black Moon), the Moon is between the Sun and the Earth. We can not see the Moon. The Moon is visible during the day during the waxing and waning crescent.

When it is the new Moon (= dark Moon), the Moon is between the Sun and the Earth. Therefore, we cannot see the Moon. This is what happen in the first eBook, when Rita has to discover why the Moon has disappeared.

The first and last quarters are the positions that the Moon takes in between the Full and New Moon. The Moon can be seen during the day, on broad light during the waxing and waning crescent.

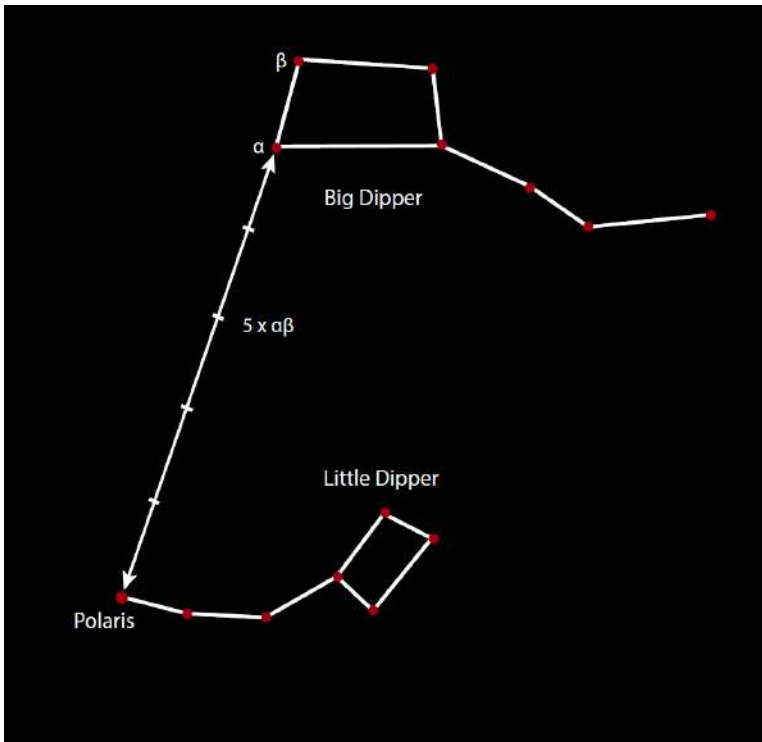


Image taken in 1968 by Bill Anders from Apollo 8 that orbited around the Moon. The sphericity of the Earth is clearly visible.

**In the classroom:** You can then illustrate the dance of the planets. Take one child to act as the Sun that rotates slowly on itself (The Sun rotation period is of 28 days). Another child will play the Earth. It will rotate on itself and at the same time around the Sun. Then a third child will do the Moon, it will rotates around the Earth but also on itself in order to always look at the Earth.



#### 4. Find the North



You may do this observation during spring (or summer but night begins late at that time). At the beginning of the night, the big dipper is easily spotted. Its handle is on the right its container is on the left.

Draw an imaginary line down that continues the two left-most stars. The next bright star is Polaris. It points north!





## 5. The Solar System distances

This activity will allow kids to understand the distance of the Solar System. Three planets will be used plus the Sun. For this activity you will need one big ball to play the Sun, a small blue ball for the Earth, another big ball for Jupiter and a medium sized ball as Neptune. This activity is best done outside or in a large room.

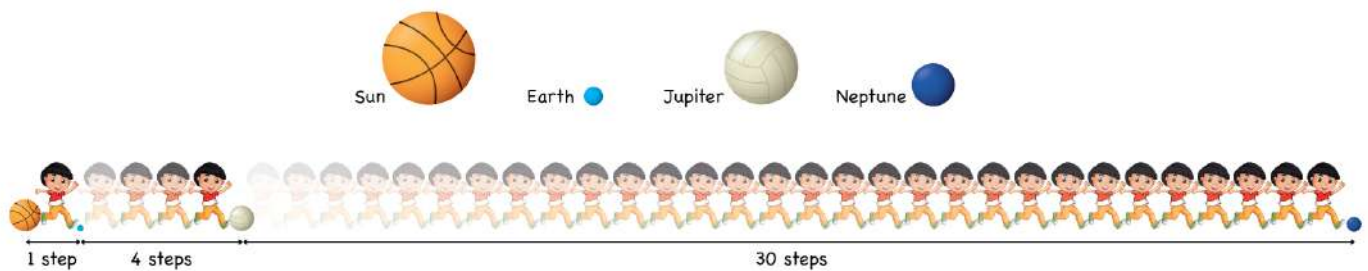
Place the Sun somewhere on the ground, walk one step and place down Earth. From Earth walk 4 more steps and place down Jupiter. Then, continue to walk 30 steps to arrive to Neptune. This represents the distance of the solar system.

You can also use chalk to draw the planets and the Sun on the ground at the right distances.

In the classroom: In spite of using objects to represent the different planets of the system, you can also ask the children to carry them and stay in their position. Children tend to find activities more interesting when they are involved.

### The distances in the Solar System

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## 6. The colours of light

This activity explains that the Sun's light can be decomposed into the different colours of the rainbow. For this exercise, the children can experiment with two objects, a CD and a glass filled with water.

They will experiment with the two objects one after the other by approaching a window. Tilt the object until several bright colours appear on a wall (white preferably, otherwise put white paper on it).

The sunlight seems white but in fact it is composed into many colours. Glass or CDs can be used to separate these colours.

It's the same thing that happens when you see a rainbow. It is the sunlight that is separated by water droplets in the sky.

## 7. Take a closer look at me!

If you have binoculars, feel free to take them out to look at the Moon. The children will be amazed to see this object that they thought they already knew very well.

## Games

### 1. Game of differences

Express the similarities and differences that can be seen between these two Solar System objects:

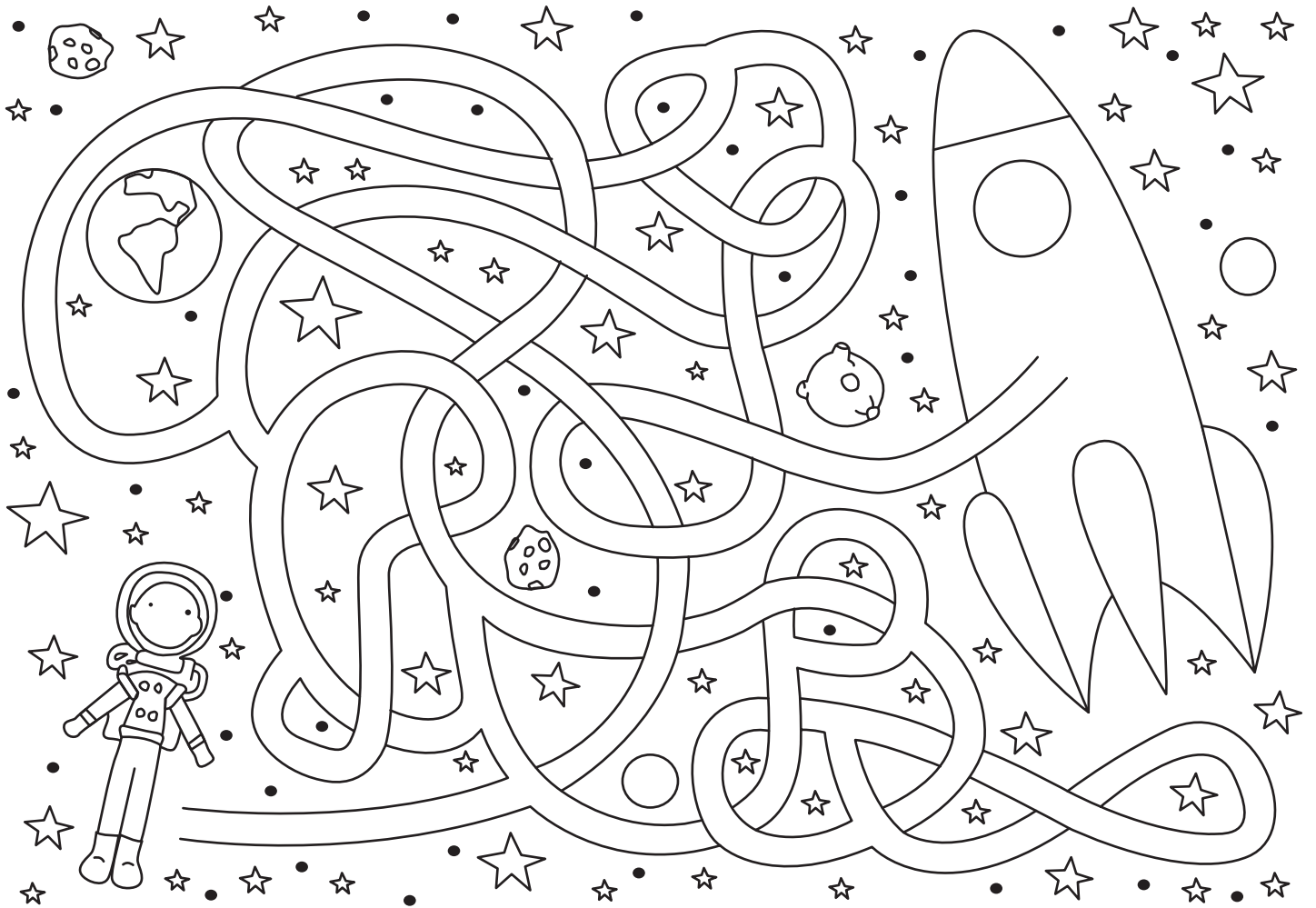
Moon (left) and Mercury (right)- Note that in reality the Moon is much more smaller than Mercury.

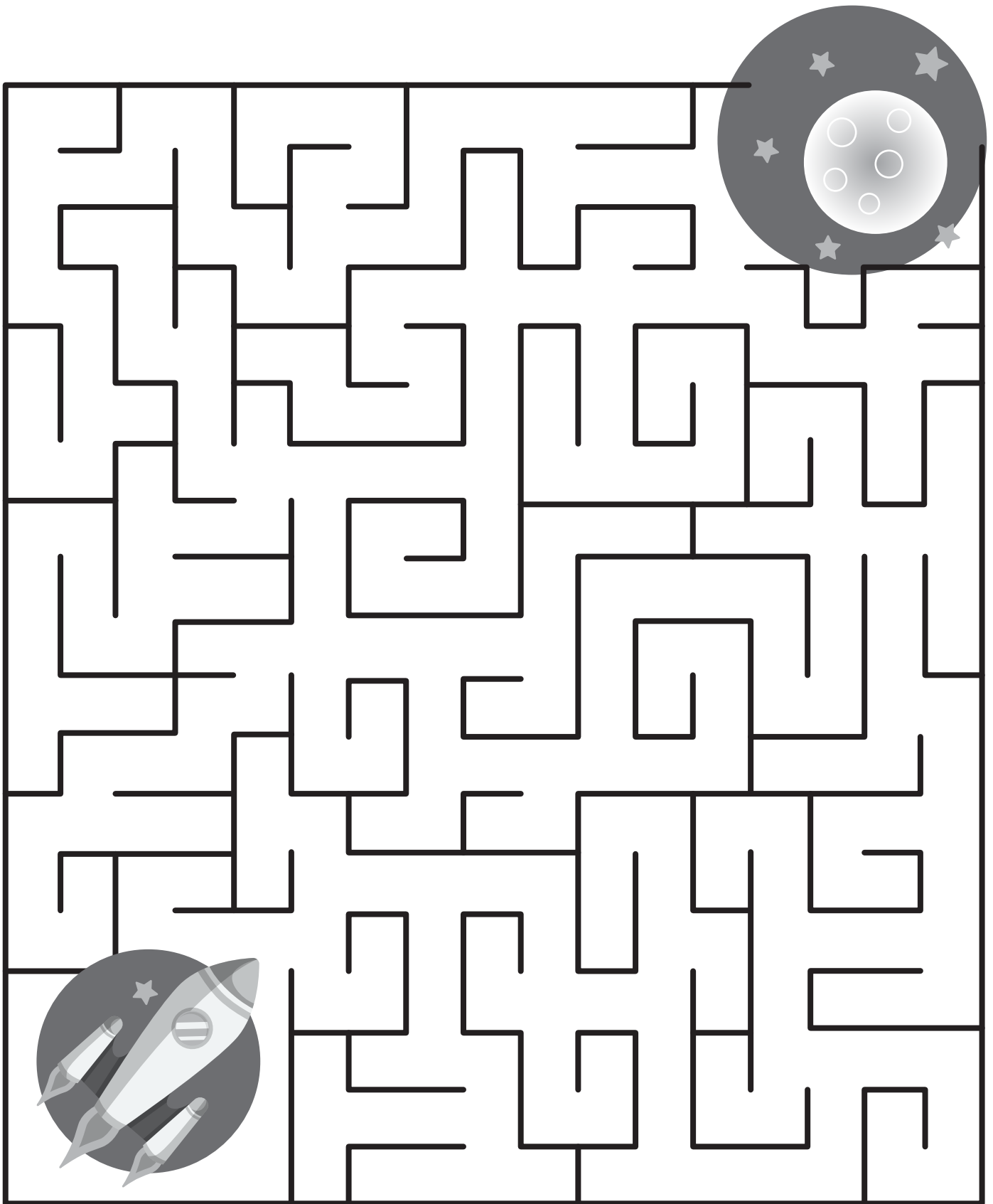


Uranus (left) and Neptune (right)



## 2. Maze game

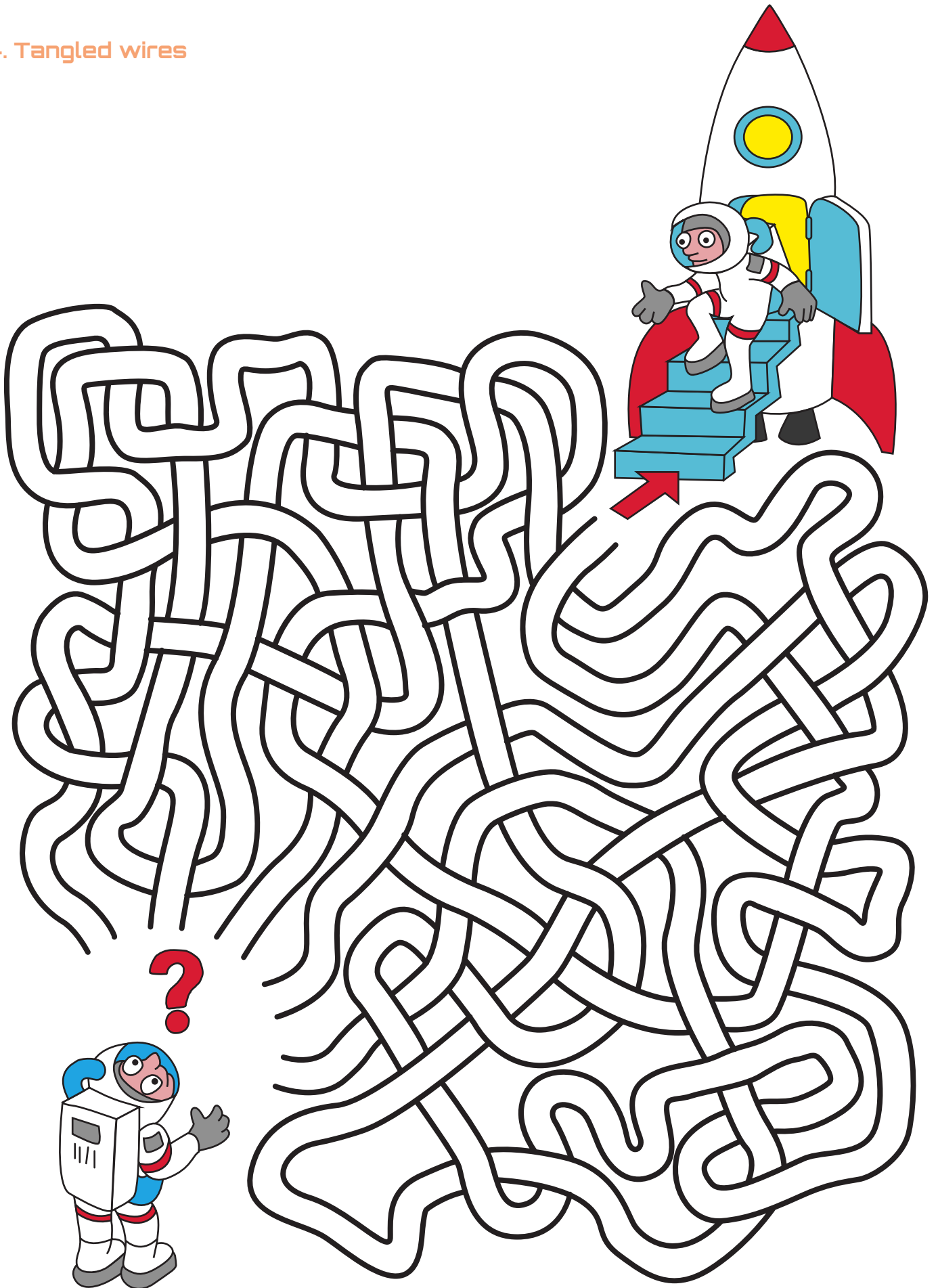




3. Draw with numbers



4. Tangled wires



## Links about astronomy for young children

The following links provide access to different activities, explanation, activity books focussed for young children.

### English:

- NASA kid's club - <https://www.nasa.gov/kidsclub/index.html>
- ESA space for kids - <http://www.esa.int/kids/en/home>
- ALMA for kids - <http://kids.alma.cl/>
- Universe Awareness - <https://www.unawe.org/about/>
- Science in school - [https://www.scienceinschool.org/search-page?search\\_api\\_views\\_fulltext=&search=1&f%5B%5D=field\\_categories%3A82&f%5B%5D=field\\_ages%3A3&f%5B%5D=search\\_api\\_language%3Aen](https://www.scienceinschool.org/search-page?search_api_views_fulltext=&search=1&f%5B%5D=field_categories%3A82&f%5B%5D=field_ages%3A3&f%5B%5D=search_api_language%3Aen)
- Las Cumbres Observatory for kids - <https://lco.global/education/activities/?age=1dren>.

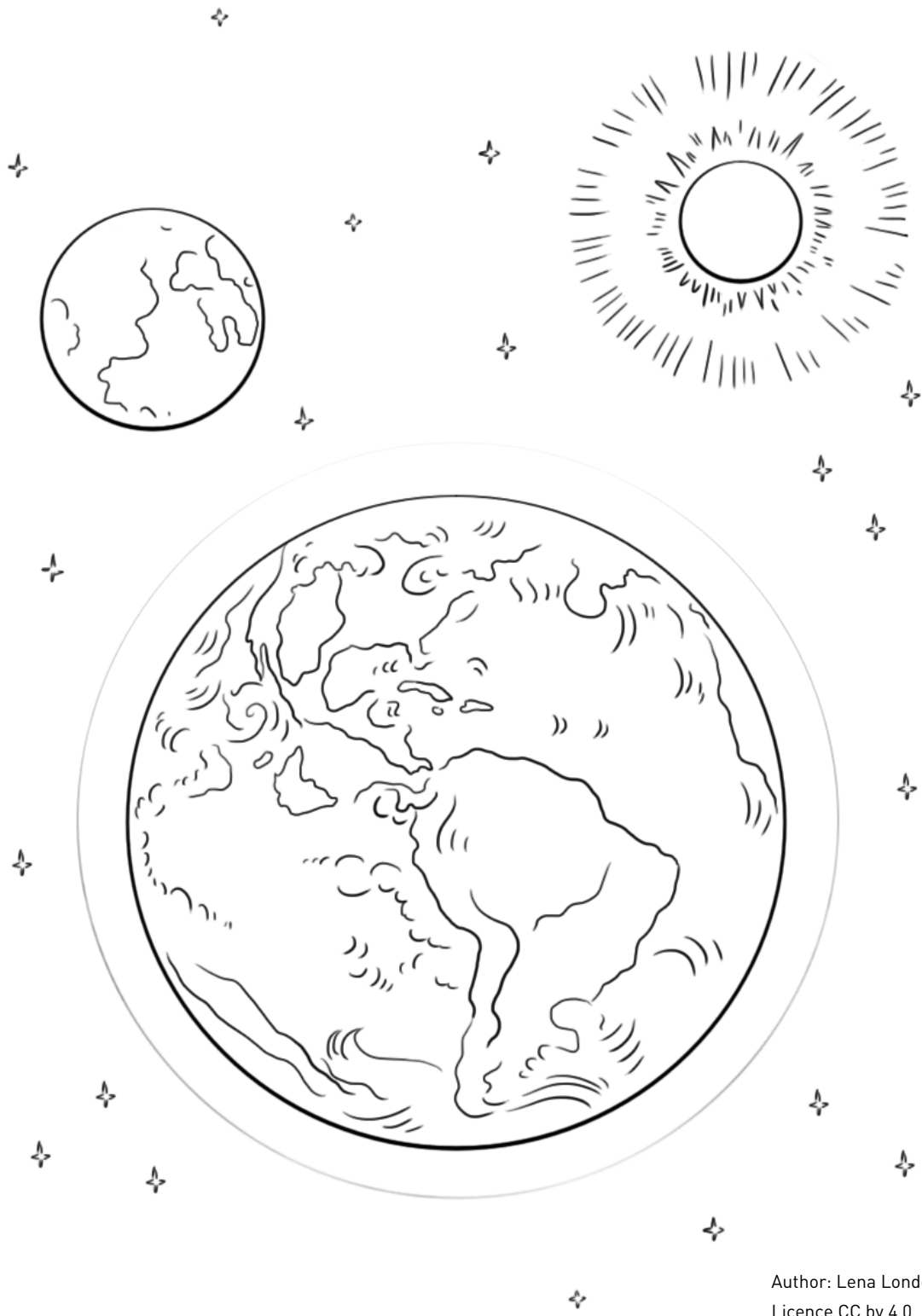
### In French:

- ESA space for kids - <http://www.esa.int/kids/fr/home>
- Petit Malabar - <https://www.france.tv/france-5/petit-malabar/>
- Les astres a l'école maternelle - Fondation La Main a la Pate - <https://www.fondationlamap.org/-fr/page/11784/les-astres-a-lecole-maternelle>

### In Portuguese:

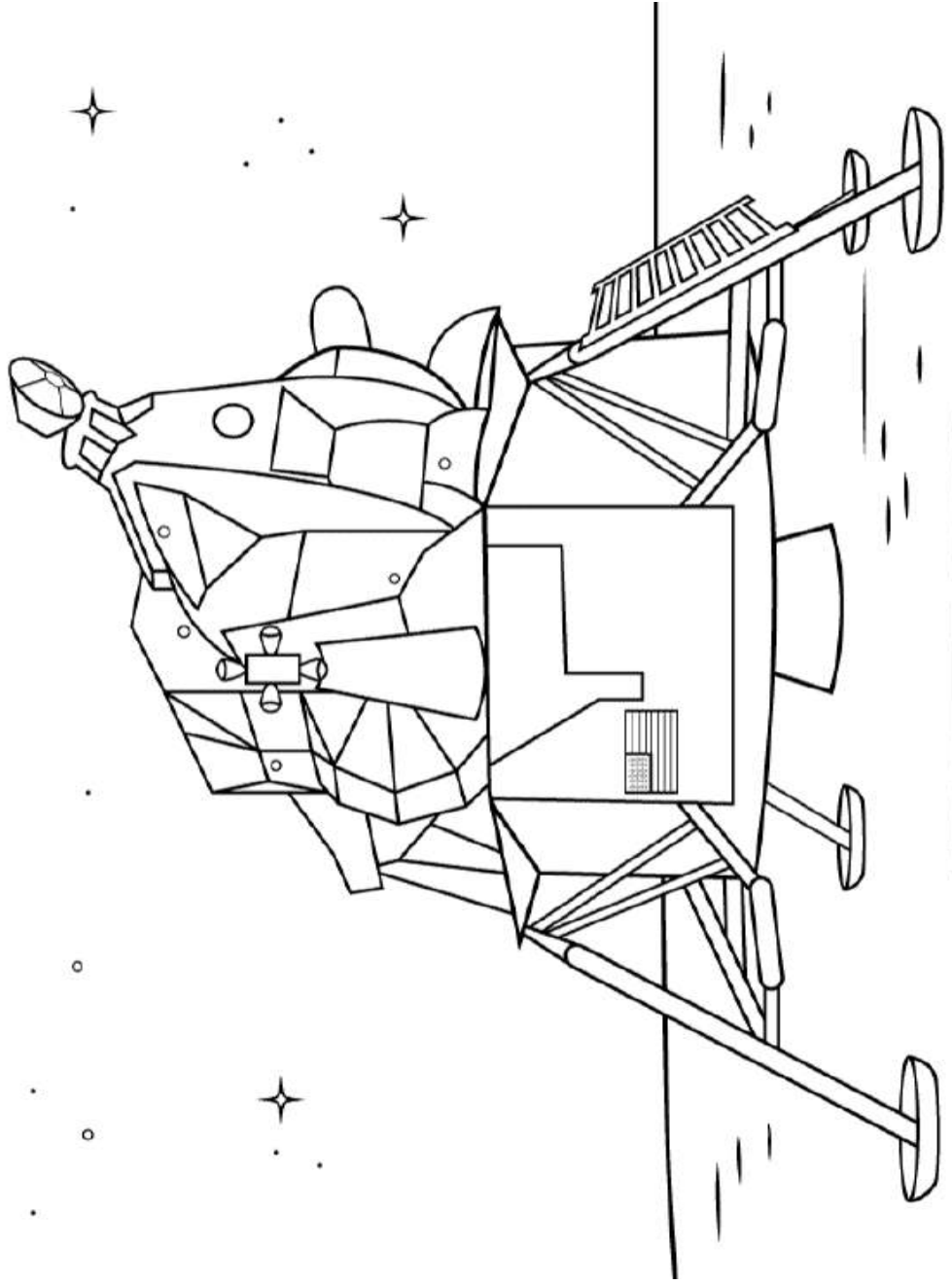
- Activity book - [https://www.unawe.org/static/archives/guides/pdf/Cosmos\\_Activity\\_Pocket\\_book\\_Portuguese.pdf](https://www.unawe.org/static/archives/guides/pdf/Cosmos_Activity_Pocket_book_Portuguese.pdf)

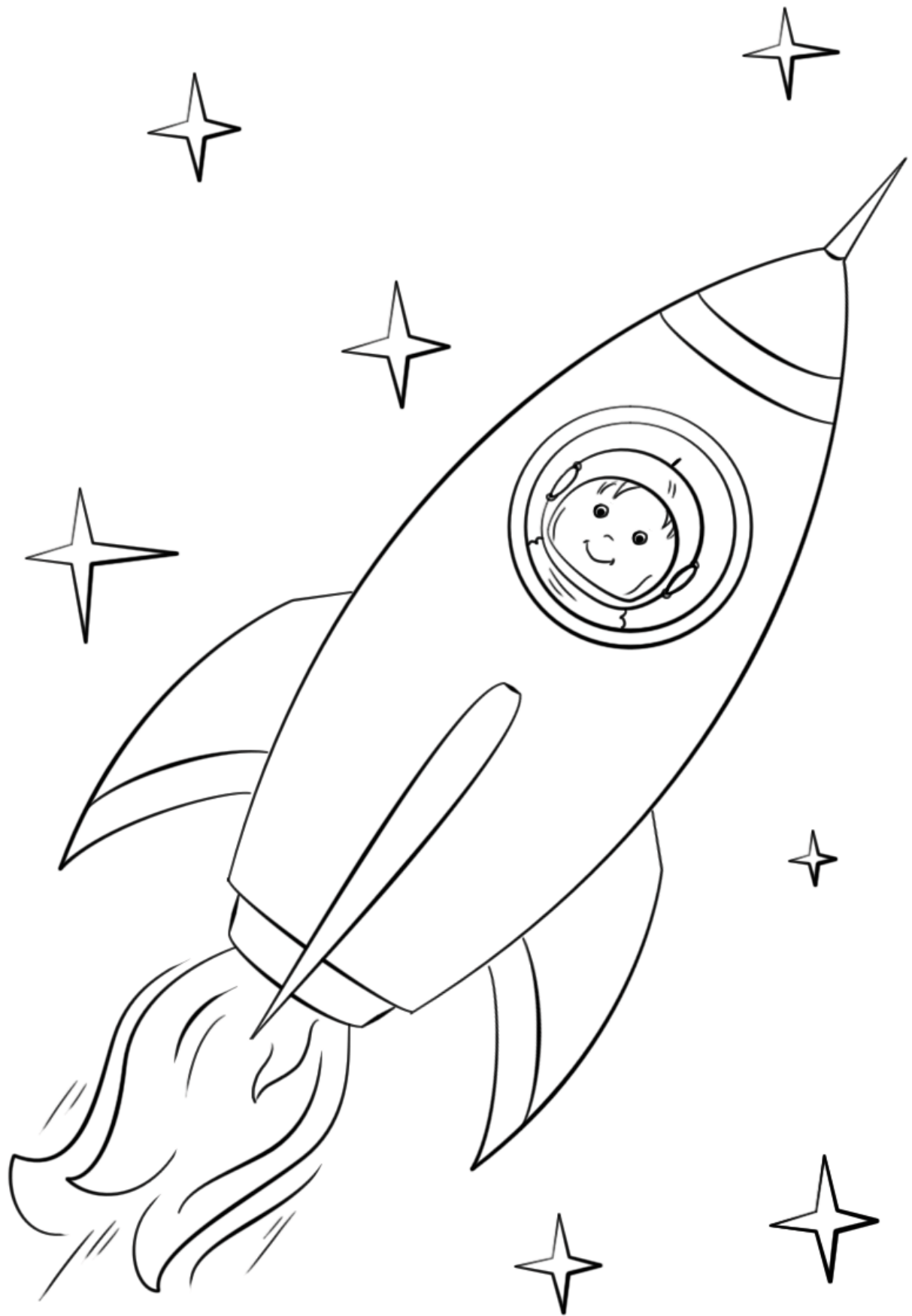


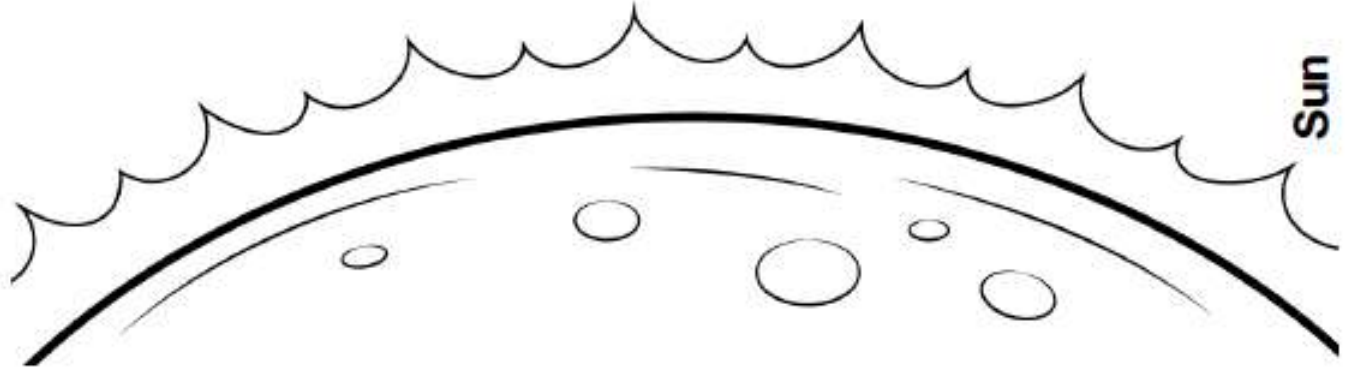












Sun

Mercury

Venus

Earth

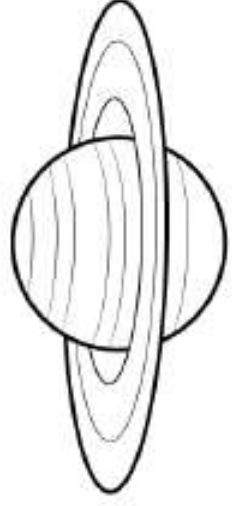
Mars

Jupiter

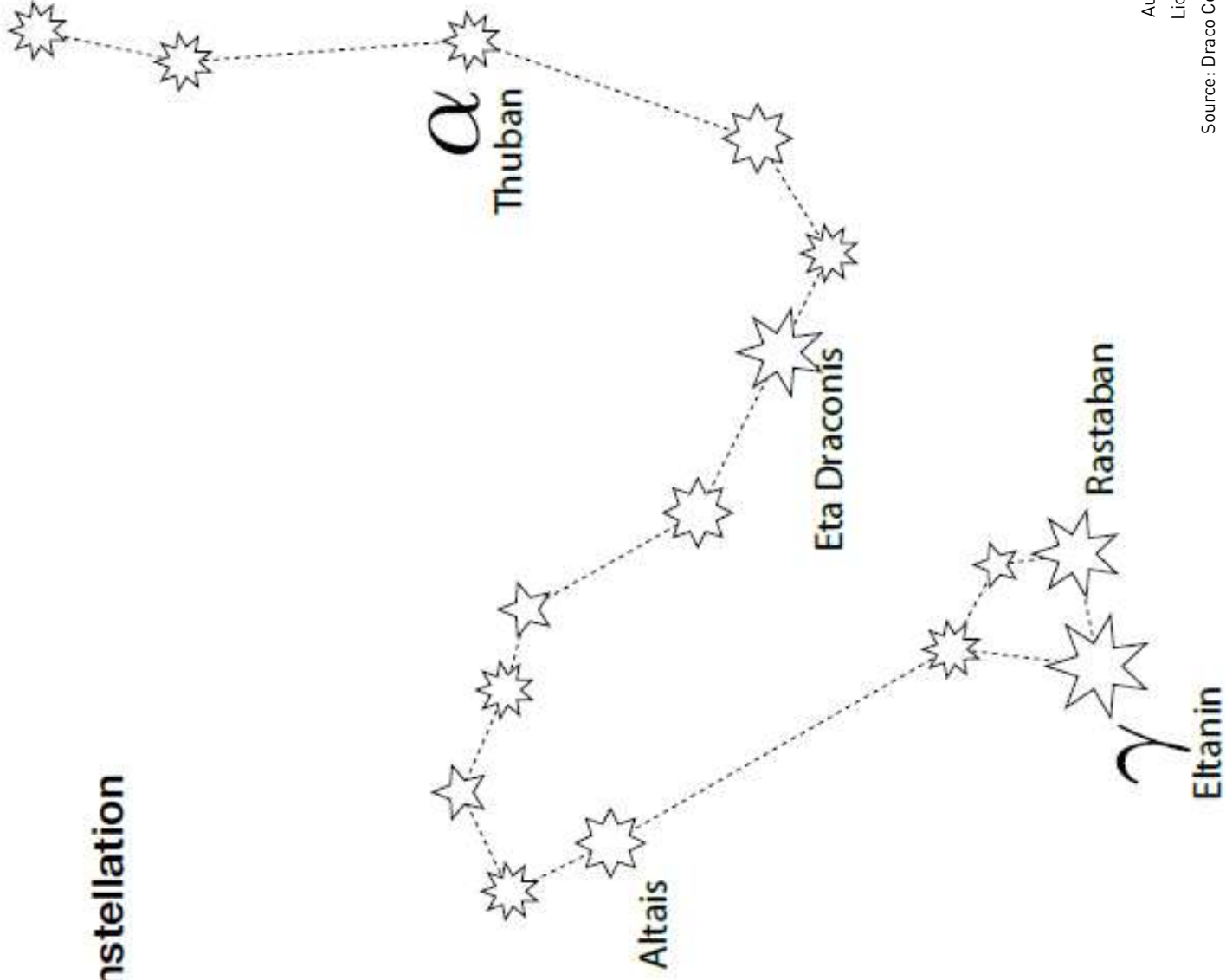
Saturne

Uranus

Neptune



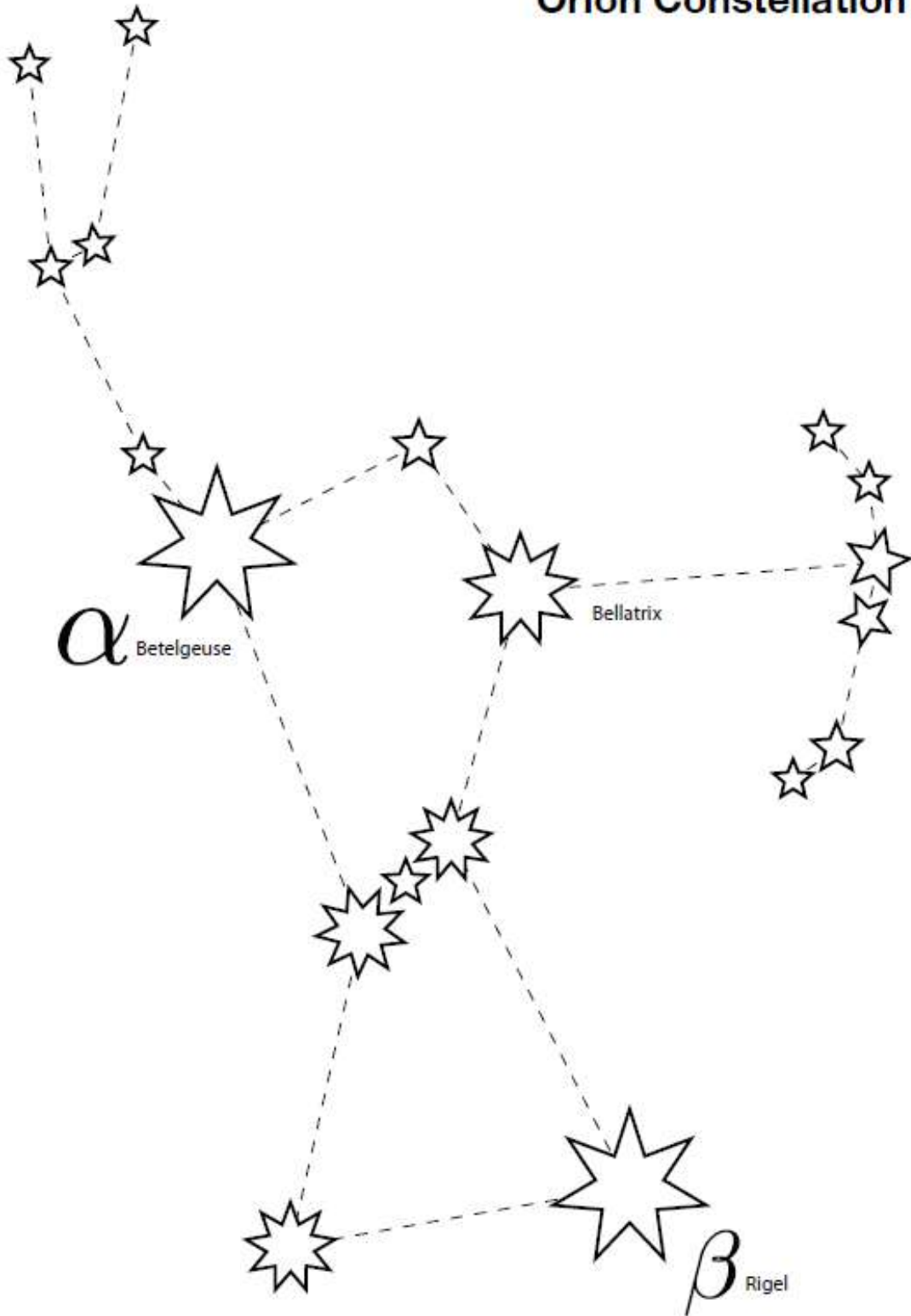
# Draco Constellation



Author: Mara\_ba  
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Source: Draco Constellation Wikipedia Article

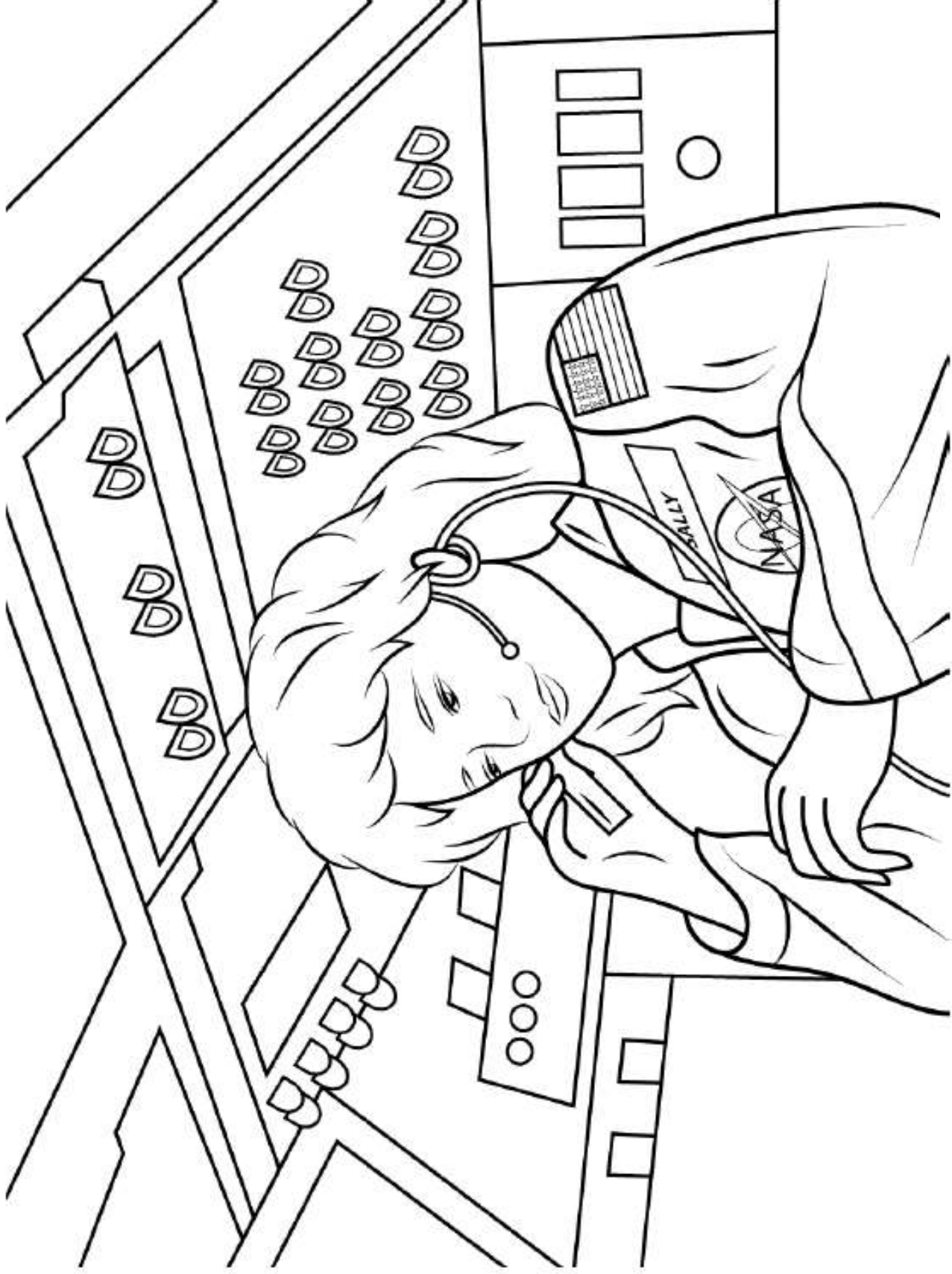
# Orion Constellation



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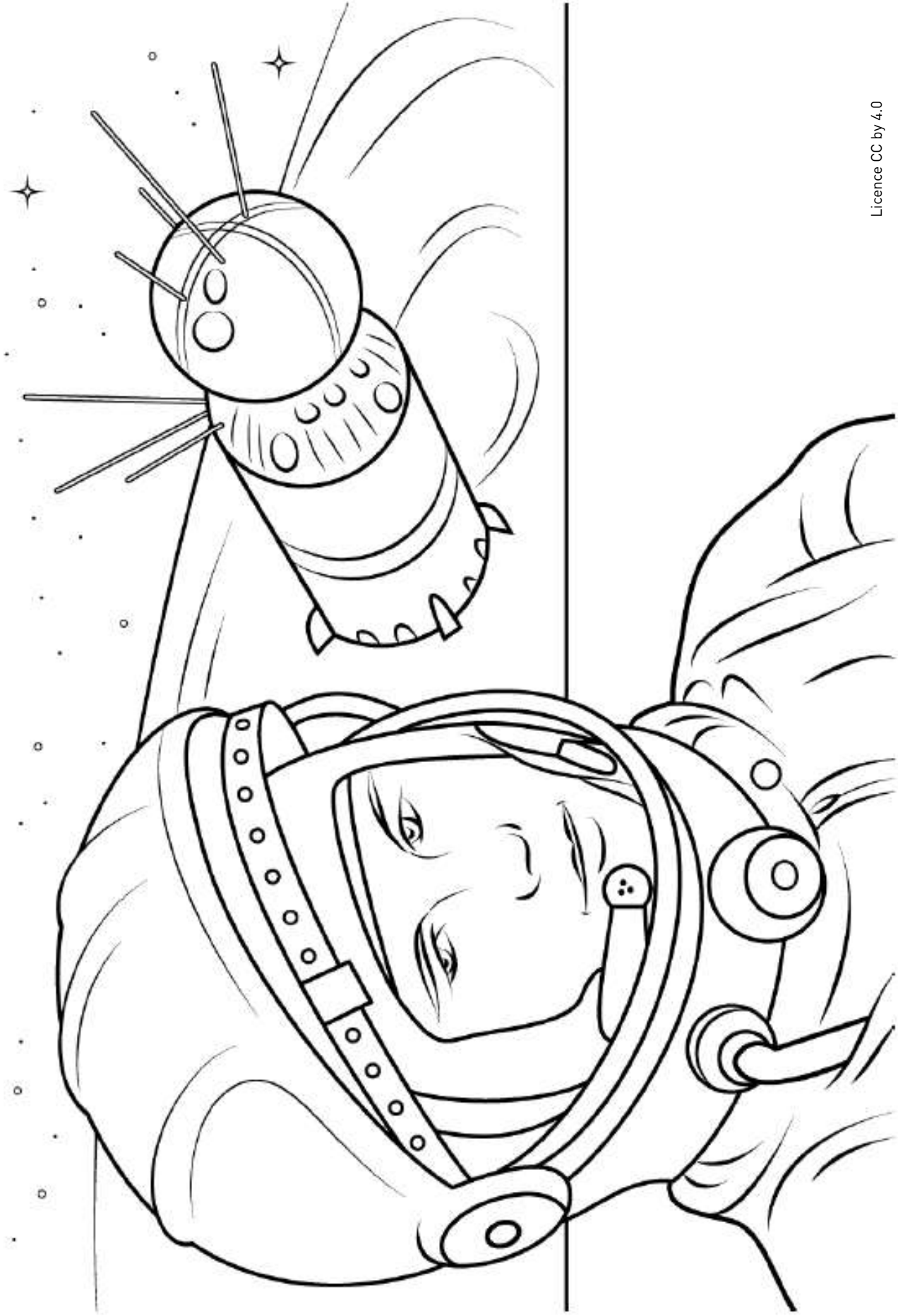
Author: Mara\_ba

Source: Orion Constellation Wikipedia Article



**Sally Ride was the third woman in space. She's drawn from the flight deck of the Space Shuttle Challenger.**

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The photo that inspired this drawing can be seen on wikipedia.



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**Yuri Gagarine was the first men in space. He's drawn with it's Vostok spacecraft.**



