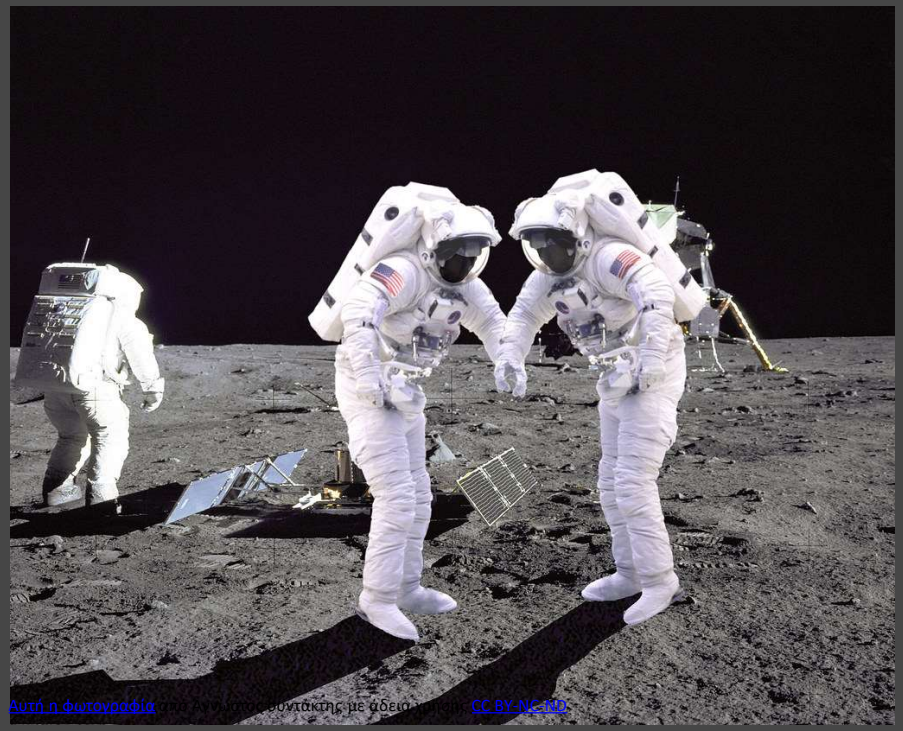
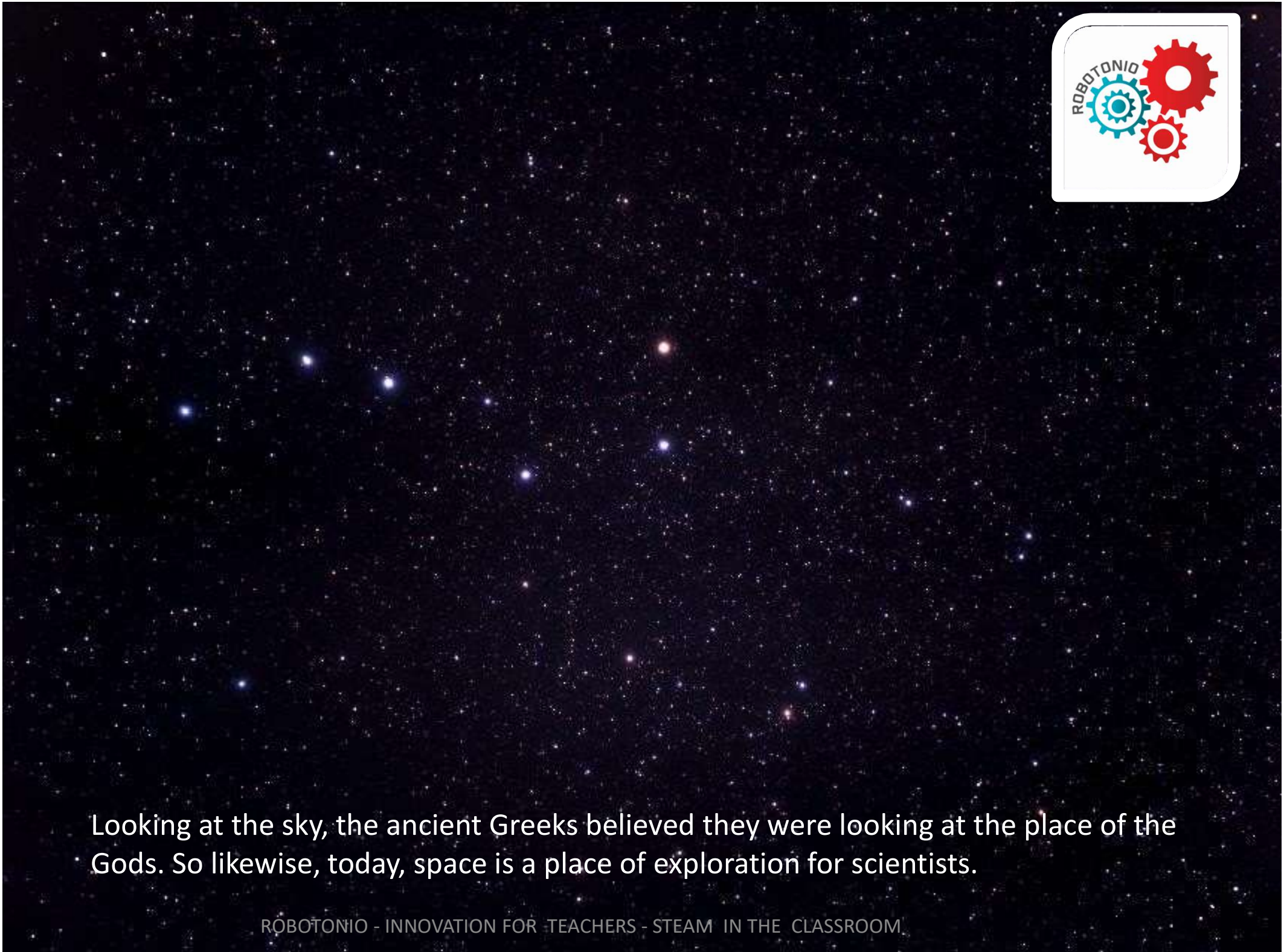
Land your Spacecraft





Looking at the sky, the ancient Greeks believed they were looking at the place of the Gods. So likewise, today, space is a place of exploration for scientists.

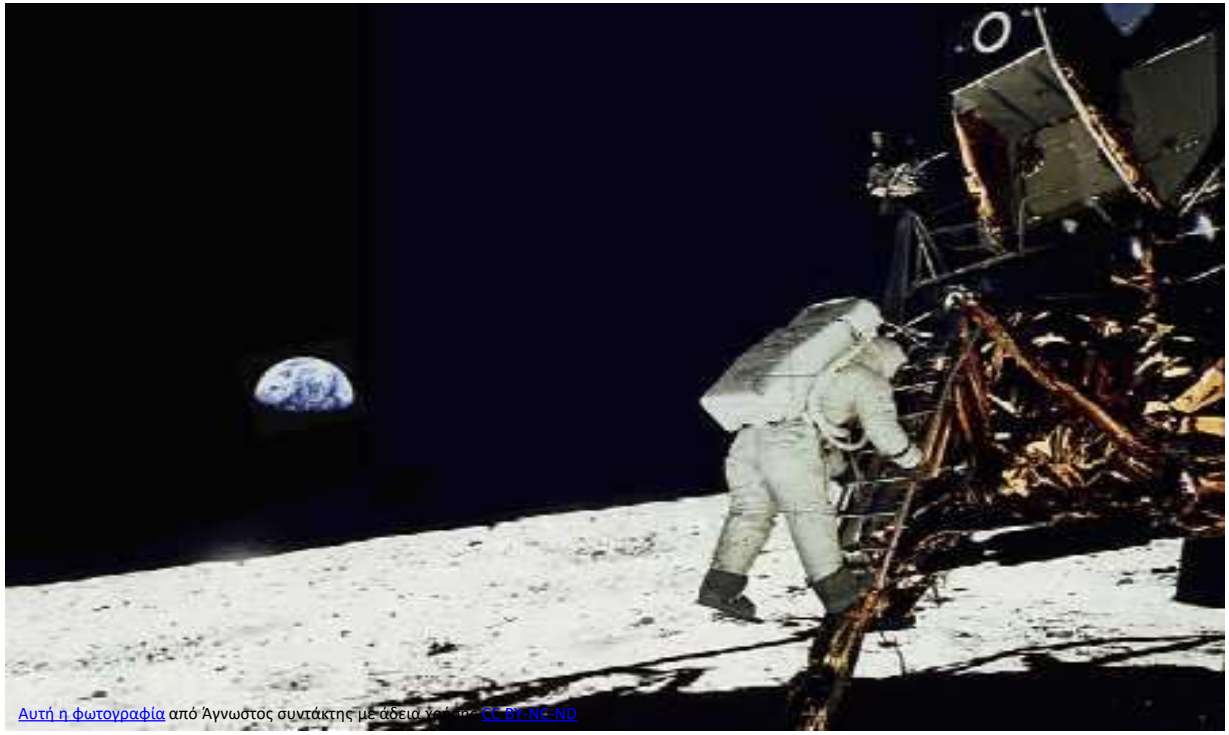
Can man travel in space?

The first man to travel in space was the Russian cosmonaut Yuri Gagarin.

On April 12, 1961, the Vostok-1 spacecraft entered Earth orbit.

What's on the moon?

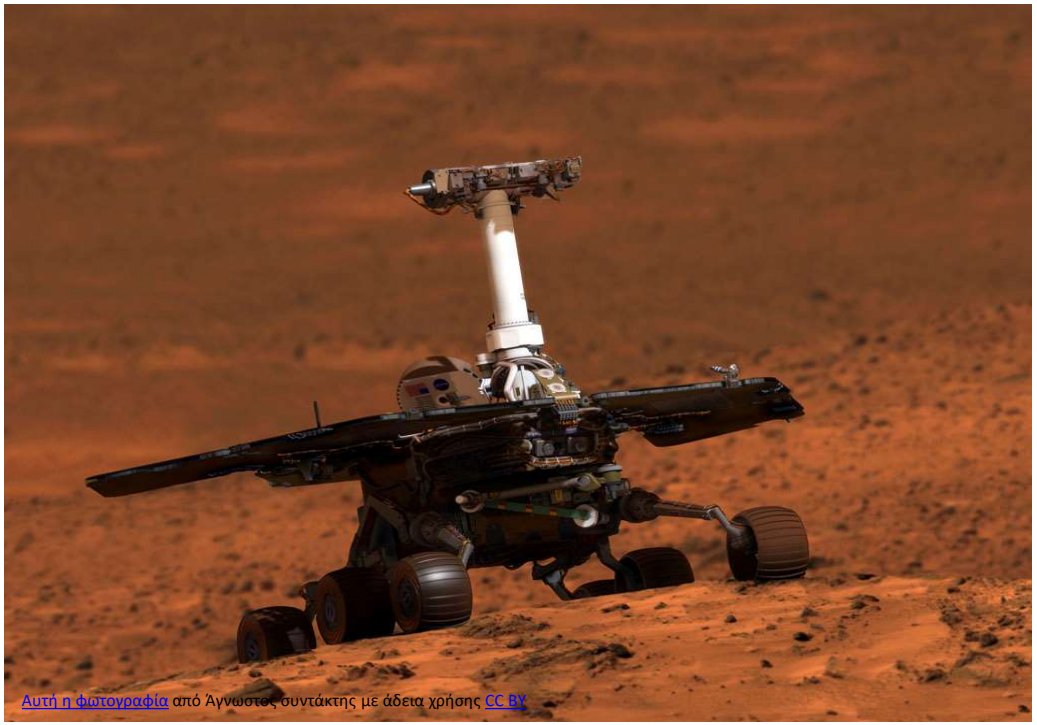
After Gagarin's first space flight, scientists wanted to reach the moon. The Apollo 11 mission landed on the Moon on July 20, 1956. A day later, Neil Armstrong became the first man to walk on the moon.

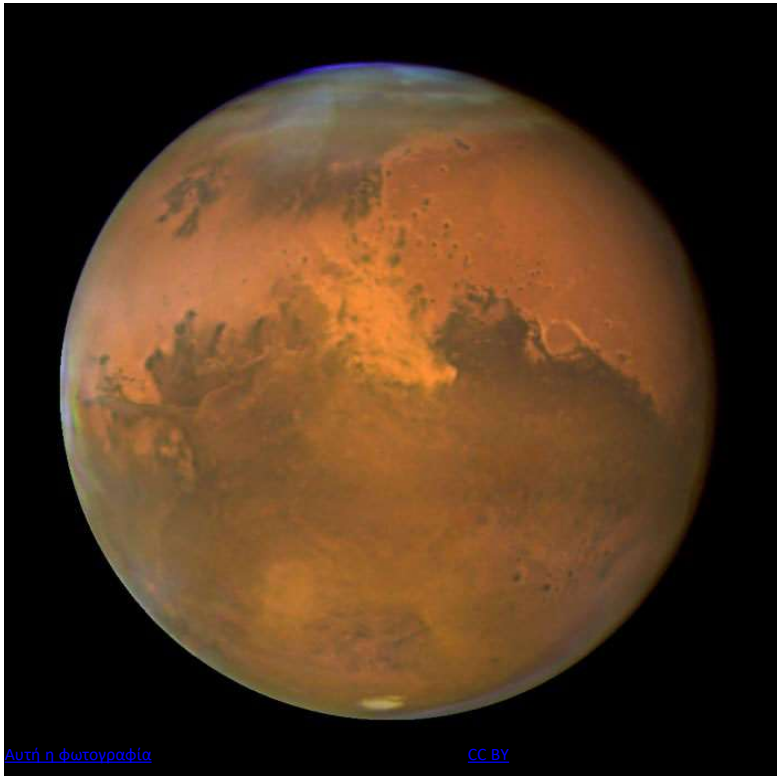


Earth as seen from the Moon's surface

To this day, scientists are still exploring the universe. We know that many planets are rocky, like Earth. And they have high mountains and plains.

- Do earthquakes happen on other planets?
- Could there be some life or water on any of them?



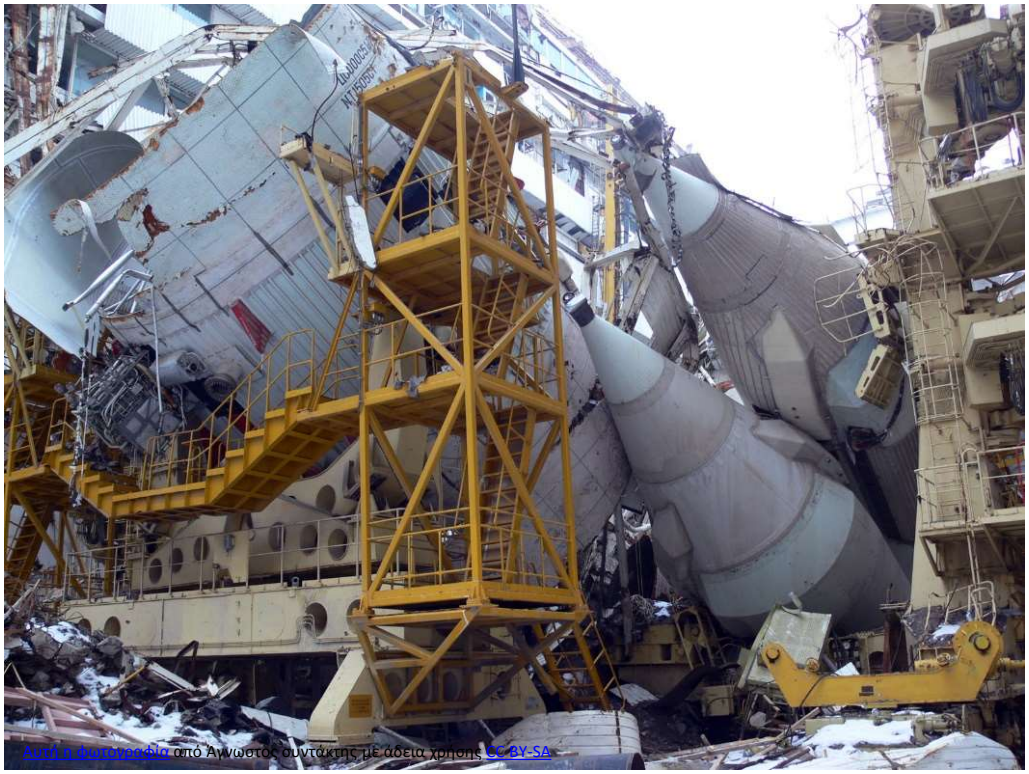


Water on Mars?

The US scientists have announced the discovery of significant water reserves in the form of ice, buried one and a half kilometres beneath the sand at the north pole of Mars.

So now, a new mission is being prepared where unique robots will visit Mars and try to explore its subsoil.

The challenge



Δωρεάν φωτογραφία από Άγνωστος συντάκτης με άδεια χρήσης CC BY-SA

Landing a spacecraft is one of the biggest problems of engineers and scientists. Many spacecraft have been destroyed because of their collision during their landing.

So this is the problem you are solving today by constructing and landing your spacecraft.

Landing your spacecraft

Materials:

- Plastic cups
- CDs
- Straws
- Cardboard from cardboard boxes
- Glue
- Paper tape
- Aluminium paper
- Cotton
- Paints and brushes

Photo by Innovation For Teachers

The centre of gravity.

Photo by Innovation For Teachers

Your spacecraft can be whatever you want it to be! But it mustn’t tip over when it touches the ground. For this to happen, its centre of gravity must be low. So, you must create a broad and quite heavy base to fix the rest of the construction. This base can support by cotton that absorbs the vibrations of the fall.

Time for landing!

Then you can build on your construction.

Try dropping it.

- Is it tipping over?
- Or does it land smoothly?

What if you climb up on a chair and throw it off? What happens, then?

After you have completed the construction, decorate it, give it a name, and tell where you would like it to travel.

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