**Mission: Hello Earth!**

**Info block:** Every space flight begins on Earth. Even the knowledge that we use in space is derived from what we have learned about our mother planet. Therefore, each astronaut initially learns about our planet, its position in relation to the Sun and its companion moon. Such acquainting is the goal of our mission.

**1. Internal structure of the Earth**

**Task assignment block:** The planet structure directly affects the ability to land on it. On Earth, these factors have a direct impact on people's lives - such as volcanic activity, lava eruptions and earthquakes. Therefore, before we take off to other planets, find the Internal structure of the Earth exhibit and find out how many main layers there are in its internal structure.

**Answer - direct question block:** Type the number of inner layers in the terminal?

A) 4

b) 2

c) 5 – correct answer

d) 3

**Well done block:** Thanks for the correct answer! Other planets in the solar system that are at a similar distance from the Sun have similar structures like the Earth.

**Sorry block:** Thanks for the answer. But in fact, there are 5 layers – the crust, upper mantle, lower mantle, outer core and inner core. Try another exhibit; perhaps you will be luckier.

**2. Volcano**

**Task assignment block:** If you land on a strange planet that has a similar structure and size like Earth, you may arrive at dangerous volcanoes. You can learn what such volcano looks like at the volcano exhibit. Do not forget the surrounding legends. You will find what planets host higher volcanoes than the Earth's highest mountain - Mount Everest. You will find the volcano exhibit at the bottom section of the exposition.

* **The correct answer is Mars**

**Answer - direct question block:** explore the exhibit and find out from the legends which nearby planet has very high volcanoes (exceeding 12 km!). Type the name in the terminal.

**Well done block:** Thanks for the correct answer! Now that you know a lot about the Earth's interior. Learn about its gaseous envelope - atmosphere.

**Sorry block:** Such big volcanoes are actually on Mars. This is because the gravity is smaller compared to the Earth, so the volcanoes "grow" higher. Never mind, try another exhibit.

**3. The Earth's atmosphere**

**Task assignment block:** We are all familiar with the Earth's atmosphere. Since our birth, we breathe air that forms at the Earth's surface. As astronauts, we will fly through the atmosphere after take-off. Find the Earth's atmosphere exhibit, and find out at what height above the surface will our rocket face strong and steady winds.

**Answer block - enter:** Type in the terminal at what height will our rocket face strong winds that have major influence on the weather.

a) at a height of about 10 km

b) at a height of 100 km

c) at a height of 1000 km

**Well done block:** Precisely, thanks for the correct answer! These winds (the so called jet streams) blow on the edge of the troposphere - roughly around 10 km high. It is obvious that you are a talented candidate for the astronaut.

**Sorry block:** Unfortunately, these winds (the so called jet streams) blow on the edge of the troposphere - roughly around 10 km high.

**4. Tornado**

**Task assignment block:** In the atmosphere, we may encounter many dangerous phenomena associated with the movement of the air - the wind. One of these elements is a whirlwind - a tornado. Find this exhibit and find out on the surrounding labels on which other planet (besides Earth) in our solar system phenomena similar to tornado were observed.

**Answer - direct question block:** Type in the terminal on which other planet in our solar system scientists observed similar phenomena to tornado.

**Well done block:** Thanks for the correct answer, it was really on Mars and the phenomenon is called the Dust devil!

**Sorry block:** Unfortunately, this is not the correct answer. It was Mars and the phenomenon is called the Dust devil!

**5. Orbit tellurium**

**Task assignment block:** We took off from the Earth and we are already in space. We must be able to establish our position and the position of the Earth (near which we are) to the Sun. On the Tellurium exhibit we discover that the Earth is not at rest, but always revolves around the sun. Can you use the exhibit to find out in which of the constellations of the zodiac the Sun is reflected at the time of the summer solstice?

**Answer - direct question block:** Type in the terminal in which zodiac constellation the Sun is reflected at the time of the summer solstice.

The correct answer is Aries

**Well done block:** Thanks for the correct answer! The phenomena you just learned about through the orbit tellurium are very important – they determine the rhythms of our daily life. Even on the spacecraft we will count days, months and years as on Earth.

**Sorry block:** Sorry, it was Aries. You may be more successful with the next exhibit. The phenomena you just learned about through the orbit tellurium are very important – they determine the rhythms of our daily life. Even on the spacecraft we will count days, months and years as on Earth.

**6. Phases of the Moon**

**Task assignment block:** On our way to space, we passed through the atmosphere. We already know how the Earth orbits the Sun. Now we are moving away from the Earth and the Moon is growing bigger. How do we avoid it or land on it? We need to understand how the moon moves around the Earth. Can you use the Phase of the Moon exhibit and legend to find out on what day of its orbit the Moon is in the first quarter?

**Answer block - enter:** Use the terminal to choose on what day of its orbit the Moon is in the first quarter.

a) Day 7

b) Day 20

c) Day 50

**Well done block:** Thanks for the correct answer! Now you know about the Earth´s structure, its atmosphere and you learned a lot about the functioning of the solar system. Congratulations! You are now ready to embark on follow-up, more challenging missions.

List of follow-up missions

**Sorry block:** The Moon is in the first quarter on the Day 7 of its orbit. Despite this incorrect answer you completed this mission. Congratulations! You are now ready to embark on follow-up, more challenging missions.

**If included:**

**Summary block**

Well done, you have completed our mission with X of Y points.

If he/she gains more than 3 points, the terminal informs: You have been promoted to the rank of Space cadet and you are now ready to embark on follow-up, more challenging missions.

If he/she gains less than 3 points, the terminal informs: Sorry, you did not get enough points to be promoted to Space Cadet. Repeat the mission.

List of follow-up missions