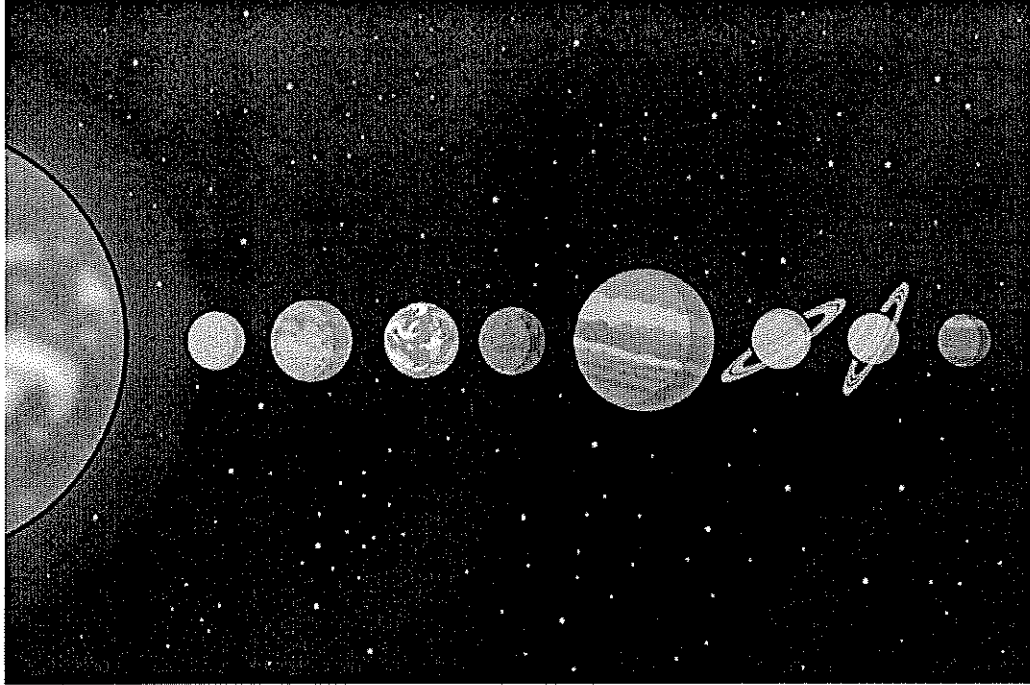


THE SOLAR SYSTEM (based on: "SCIENCE", Keith Kelly, 2007)

- I. Label the planets of the solar system as you can see in the picture. Which one is so called „dwarf planet“? Do you know why?



II The planets

Read the text and fill in the gaps with these words.

asteroids atmosphere belt compressed gas groups hydrogen Mercury nitrogen rocky small

The planets are usually divided into two 1 _____: the inner planets and the outer planets. Inner planets are sometimes called the 2 _____ planets and include Mercury, Venus, Earth and Mars. They are the ones closest to the Sun, they have rocky surfaces and are all relatively 3 _____. The outer planets, Jupiter, Saturn, Uranus and Neptune, are giant planets and are often called the 4 _____ planets. They consist mainly of the gases hydrogen, helium and methane. However, these planets are so cold that the gases are 5 _____ to a liquid or solid state. The two groups of planets are separated by hundreds of thousands of tiny chunks of metallic rock called 6 _____. They orbit the Sun between Mars and Jupiter in what is called the asteroid 7 _____. There are so many asteroids here that there is always a danger of collision for passing spacecraft. Most planets have a layer of gas, called an 8 _____, covering them. The inner planets have a relatively thin atmosphere, while the gas planets have a much thicker atmosphere. Earth's atmosphere is a mixture of 9 _____ and oxygen and smaller amounts of carbon dioxide and water vapour. Jupiter's thick atmosphere, on the other hand, consists mainly of 10 _____ and helium. The gases in the atmosphere are held close to a planet by its gravity. On a large planet like Jupiter, where the gravity is 2.6 times greater than on Earth, the lightest gases are held in the atmosphere. On Earth, however, these gases escape into space. 11 _____ is so small and hot that it has no atmosphere at all.

III. Listen to the recording and fill in the gaps with appropriate words or phrases

In 1989 the spacecraft Galileo was launched to study the 1. _____.
One year later it entered the Asteroid Belt and came close to the Asteroid Gaspra.

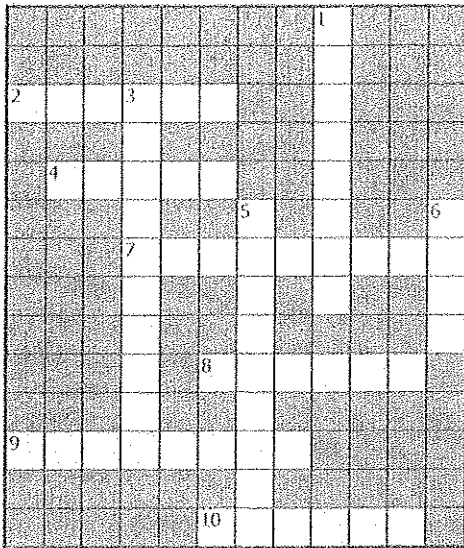
It is a small asteroid 2. _____, composed of 3. _____
typical of most of the many other thousands of asteroids that are 4. _____
the Sun in a wide belt between 5. _____. About
6. _____ asteroids are large enough to be seen from Earth. The largest is
Ceres, which is 7. _____. Astronomers once thought that the asteroids
may have formed from the 8. _____ which shattered into small
pieces. However, when added together, the mass of the asteroid is 9. _____
the size of our Moon. A more widely accepted idea is that they are 10. _____
the formation of the planets billions of years ago.

IV.

Match the sentence beginnings and endings by reordering the endings on the right.

| | |
|---|--|
| The few thousand stars which you can see | together by huge gravitational forces. |
| It contains more than a 100,000 million stars but | observed with a small telescope, was thought to be in the Milky Way. |
| A galaxy is a collection of stars and dust held | was another galaxy about 2.2 million light years away. |
| Galaxies are separated from | was thought to be the whole universe. |
| Until the turn of the 20th century, the Milky Way | each other by vast regions of space. |
| A giant spiral called Andromeda, which can be | it is just one of the millions of galaxies in the universe. |
| In 1923, Edwin Hubble showed that Andromeda | to search for galaxies and now more than 100 million have been identified. |
| Hubble's discovery encouraged other astronomers | with your eyes belong to our galaxy called the Milky Way. |

Complete the crossword.



Across

2. an extremely large group of stars and planets
4. an object in space that leaves a bright stream of gas and dust behind it as it moves around the Sun
7. an exploding star that produces an extremely bright light
8. to spin in a circle around an axis
9. a mass of rock that moves around in space
10. a very large cloud of dust and gas that exists in outer space

Down

1. a curved shape that is wide in the middle and pointed at the ends
3. the air around the Earth or around another planet. It consists of three main layers, the lowest being the troposphere, the middle one the stratosphere, and the highest the ionosphere.
5. a piece of rock that has fallen from space and landed on the Earth.
6. not clear because there is smoke, dust or water in the air.

Vocabulary:

shatter - roztříštit se
compressed – stlačený
relatively – poměrně
inner – vnitřní
outer – zevnější
giant – gigant
tiny – maličký, drobný
chunk - pořádný kus
layer – vrstva
hold (held, held) - držet (se)
launch – vyslat, odpálit
belt – pás(ek)
compose - skládat/složit
collision – srážka, kolize
debris – sutiny, trosky
belong to – patřit, náležet
dust – prach
gravitational force - gravitační síla
vast – rozsáhlý, obrovský
the turn of ... century – přelom století
spiral – spirála
encourage - povzbudit/povzbuzovat
search for – hledat, pátrat
identify – rozpoznat, identifikovat
divide into – (roz)dělit (se)
revolution - otáčení se, rotace
tilt - naklonit/naklánět (se)
axis – osa
square-on – přímo
angle – úhel
spread out - rozšiřovat (se), rozrůstat (se)
revolve – obíhat, kroužit
rotate - točit (se), otáčet
leap year - přestupný rok
clockwise – ve/po směru hodinových ručiček
circular – kruhový, okružní
oval – oválný, elipsovité
path – dráha, trasa