### **The 12th of April is Cosmonautics Day**



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### Russian cosmonaut Yuri Gagarin became the first human in space, making a 108-minute orbital flight in his Vostok 1 spacecraft on 12 April 1961.



# Konstantin Tsiolkovsky (1857–1935)



Konstantin Eduardovich Tsiolkovsky – the founder of astronautics in Russia, put forward several ideas about space travel. Tsiolkovsky's idea of spaceship was based on the use of liquid fuels. **Sergei Korolyov** the lead Soviet rocket engineer and spacecraft designer. He is considered by many as the father of practical astronautics



Sergei Pavlovich Korolyovis a famous scientist and founder of practical cosmonautics. He was the chief constructor of the first Earth sputniks and spaceships. Then followed rockets to the Moon, Mars, Venus.



- For the first time in human history, cosmonaut Alexei Leonov stepped into outer space from the Voskhod 2 spacecraft.



Neil Armstrong - the first person on the Moon, the first person to set foot upon the Moon on 20 July 1969.





Scientists in the Soviet Union were sure that organisms from Earth could live in space. To demonstrate that, they sent the world's second artificial space satellite — Sputnik 2 — to space from the Baikonur Cosmodrome on November 3, 1957. On board there was a dog Laika (Barker in Russian).

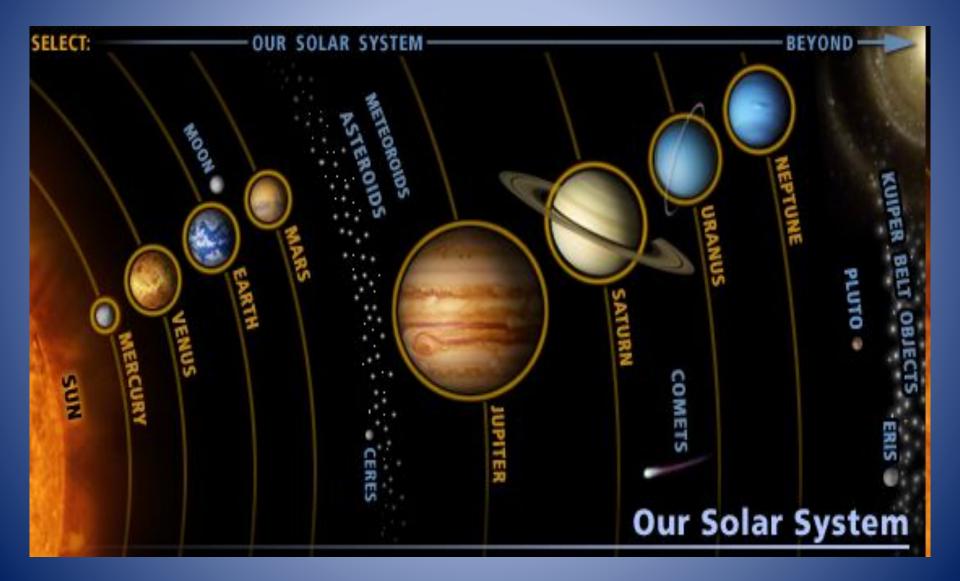
During the Sputnik series of satellites, the Russians prepared to send men to orbit by sending dogs first. At least thirteen Russian dogs were launched toward orbit between November 1957 and March 1961.

#### Valentina Vladimirovna Tereshkova



**Colonel-Engineer Valentina** Vladimirovna Tereshkova (March 6, 1937-) was a Soviet cosmonaut and the first woman in space. She was on the Vostok 5 mission which launched on June 16, 1963, and orbited the Earth 48 times. The flight lasted 2.95 days (=70.8 hours). During her space mission, Tereshkova's radio call name was "Chaika," which means "seagull" in Russian.

### **PLANETS OF THE SOLAR SYSTEM**



Our solar neighborhood is an exciting place. The Solar System is full of planets, moons, asteroids, comets, minor planets, and many other exciting objects.

The solar system is made up of two parts: the inner solar system contains <u>Mercury</u>, <u>Venus</u>, <u>Earth</u> and <u>Mars</u>. These four planets are closest to the <u>Sun</u>. The outer solar system contains <u>Jupiter</u>, <u>Saturn</u>, <u>Uranus</u>, <u>Neptune</u> and <u>Pluto</u>. Planets and their moons of the solar system moves around the sun.



# **Cosmos Science Test**



#### Space

1. How many galaxies are there in the universe? A) hundreds **P**) millions **C**) billions 2. How many kilometres is an astronomical unit? A) 150million B) 170 million C) 180 million 3. An astronomical unit is the distance from... A) the sun to other stars B) Earth to the sun C) Earth to the moon 4. How many kilometres is a light-year? A) 7, 46 trillion km B) 8, 46 trillion km C) 9, 46 trillion km 5. Which planet is closest to the sun? A) Mercury B) Venus C) Mars 6. Which planet is farthest to the sun? A) Saturn B) Uranus C) Neptune 7. How big is the Milky Way galaxy? It is about ... A) 200,000 light-years B) 150,000 light-years C) 100,000 light-years 8. The Milky Way is a...galaxy A) **spiral** B) spherical C) round 9. Proxima Centauri is a (an)... A) planet B) star C) asteroid 10. New stars form near the centre of a ... A) solar system **B**) galaxy C) sun



11. What is a nebula? A) a hot ball of glowing gasses **B) a cloud of dust and gas** C) a dim star 12. Where do stars start life? A) in a nebula B) in a constellation C) in a black hole 13. What does a main sequence star burn as fuel? A) hydrogen B) oxygen C) helium 14. A supergiant might explode and become a ... A) nebula B) white dwarf C) supernova 15. What happens to a red giant at the end of its life? It shrinks and becomes ... A) a white dwarf B) a planet C) a black hole

16. What are comets made of? A) rock and metal B) gasses and metal **C**) ice, rock and gasses 17. Asteroids are large chunks of ... A) rock and gasses **B) rock and metal** C) ice and metal 18. How many moons move around Jupiter? A) about 60 B) about 30 C) about 15 19. How do comets revolve around the sun? A) in oval orbits **B) in circular orbits** C) in triangular orbits 20. The largest planet in our solar system is... A) **Jupiter** B) Neptune C) Earth 21. Halley's comet appears every ... A) 45 years B) 67 years C) **76 years** 22. What does Halley's comet orbit? A) the sun B) Earth C) the moon 23. A comet's glowing tail is made of ... A) metal B) gas C) ice 24. What is Jupiter's Great Red Spot? A) a giant comet **B) a giant storm** C) a giant asteroid 25. Asteroids and meteoroids orbit ... A) the sun B) the C) Earth moon





26. How long does it take Earth to revolve once around the A) 24 hours B) 336 days C) 365 days sun? 27. Earth rotates on its axis once every A) 24 hours B) 336 days C) 365 days 28. The tilt of Earth's axis causes... A) days B) nights C) seasons 29. How many phases does the moon have? A) 8 B) 6 C) 4 30. Who first suggested that Earth moves around the sun? A) Galileo **B) Copernicus** C) Socrates 31. The part of Earth facing away from the sun has ... **A**) winter B) day C) night 32. The part of Earth facing the sun has ... A) night **B**) summer 33. When the northern half of Earth tilts away from the sun, it is .....there. A) summer B) winter C) night 34. What season is it in the USA when it is winter in South America? A) winter B) summer C) autumn 35. An equinox happens on the first day of... A) winter B) spring C) summer



36.The ocean water rises during .... A) high tide B) low tide
C) eclipses
37. The sun, the moon and Earth line up during .... A) a full
moon B) a third-quarter moon C) neap tide
38. In a total solar eclipse, people on Earth see a glow around ...
A) the sun B) Earth C) the moon

Space –

Explorat ion 39. When did scientists first build telescopes? A) in the 17<sup>th</sup> century B) in the 18<sup>th</sup> century C) in the 19<sup>th</sup> century
40. Satellites can send...to and from Earth A) booster rockets B) launchpads C) radio waves

41. When did the USSR launch the first satellite called "Sputnik"? A) in 1957 B) in 1968 C) in 1958
42. Who was the first person to orbit Earth? A) Yuri
Gagarin B) Neil Armstrong C) Buzz Aldrin
43. When did John Glenn orbit Earth? A) in 1965

**B) in 1962** C) in 1964

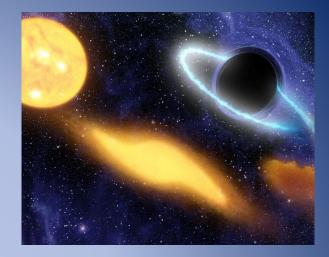
44. Who was the first animal in space? A) Laika the dog B) Strelka the dog C) Vaska the cat

45. When did Apollo11 astronauts walk on the moon? A) in 1966 **B) in 1969** C) in 1967

46. When did the US Space Shuttle make its first flight?A) in 1981 B) in 1982 C) in 1983

47. When was the Hubble telescope launched?A) in1889B) in 1990C) in 1991





Thank you for your job!

