

## 100 things to know about Space

By Alex Frith, Alice James and Jerome Martin, illustrated by Shaw Nielsen and Federico Mariani  
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A fun and informative book packed with 100 fascinating things to know about space, from how to escape a black hole to why astronauts learn wilderness survival skills. With bright, infographic-style illustrations, detailed facts on every page, a glossary and index and internet links to specially selected websites for more information.

If you liked this you might also like...



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Philip Reeve & Sarah McIntyre	Cakes in Space	OUP	978-0192734907
Philip Reeve	Railhead	OUP	978-0192742766

### Activities and things to talk about

#### Scrambled!

The letters in the words below have all been scrambled up – can you unscramble them to find six words to do with space?

1. **MESCOT** Objects in space made of ice, frozen gases and rock
2. **TEC ELOPES** You can look at the stars through this
3. **L PIECES** the Moon turns dark during one of these, when it lines up with the sun and the earth, and passes through the shadow cast by the earth
4. **A STOAT RUN** A person who travels in space
5. **PROVE A SUN** A huge explosion when a star runs out of energy
6. **ADDER MOAN** The galaxy nearest to the Milky Way

## Quiz

Can you pick out the real answer in each of these – 100 Things About Space will help you get them right!

- To be an astronaut you have to be able to speak:**
  - Russian
  - Martian
  - American
- A tardigrade is:**
  - Someone who climbs steps slowly
  - The toughest known outer space survivor creature
  - A creature covered in tar
- Comets are made from:**
  - Diamonds
  - Ice, frozen gases and rock
  - Methane gas
- The first creatures sent from earth into space in 1947 were:**
  - Mice
  - Guinea pigs
  - Fruit flies
- Why is there a piece of Velcro inside a space helmet?**
  - To attach the helmet to the space suit
  - To scratch your nose
  - To hold your drinking straw steady
- How many earths would fit inside the sun?**
  - More than a million
  - 800,000
  - 8,000
- What is the temperature of earth's inner core?**
  - 60 degrees Centigrade
  - 600 degrees Centigrade
  - 6000 degrees Centigrade
- What do you call the explosion of a star that has run out of energy?**
  - A superstar
  - A supernova
  - A starburst
- The first sandwich in space was:**
  - Egg and cress
  - Corned beef on rye
  - Peanut butter and jelly
- What is the Big Bang?**
  - The noise of a star exploding
  - A TV programme
  - The event which created time and space

11. What is spaghettification?

- a. Astronauts making spaghetti in a space craft
- b. Streamers of light in the sky
- c. An object getting drawn out into a string by the force of gravity in a black hole

12. The snow on Mars is:

- a. Diamond-shaped
- b. Square
- c. Black

Favourite Fact

What is your most amazing space fact from this book? See if you can find out even more about it and each create a two minute presentation or podcast to tell your friends all about it!

Design a space suit!

Have a look at the suits on pages 23 and 101 and make a list of all the things you have to think about to create a suit which will be useful and protect you. Can you think of any more things you might need, especially if you were trying out new adventures and explorations such as investigating black holes, or finding life on other planets! Make your space adventures as amazing as you like – and design a suit that is equally amazing!

Be a researcher: the International Space Station

There is a lot of information throughout this book about the International Space Station (ISS). See if you can find out 10 facts about it. You could also do your research from information books and the internet.

Ten facts about the International Space Station
1.
2.
3.
4.
5.
6.
7.
8.
9.
10.

Make your own Board Game

Have a go at the Space Race Board Game! (p44). You could also make up your own game about a journey into space, copying this layout and thinking up things that could happen on the journey. For example a successful lift-off; a near-miss with an asteroid; a safe landing on Mars; what to do if a line breaks and you are floating in space!

## Names and patterns of stars and constellations

Stars and constellations are often named after people and creatures in legends.

For example Orion is named after a hunter in Greek mythology.

Can you find out about the legendary figures which these constellations are named after?

Andromeda  
Centaurus  
Hydra  
Perseus

And can you find out which animals these constellations are named after – probably because their pattern made people think of these creatures.

Canis (Major and Minor)  
Cygnus  
Delphinus  
Ursa (Major and Minor)

## If you discover a comet

Have a look at page 118 about how a comet is named.

If you discovered a comet with an unknown orbit in June next year, what would it be called?!

## Going to Mars

Find out as much as you can from this book about Mars and what it might be like if people could settle there – especially pages 52-55.

Imagine a journey taking as long as 8 months and maybe surviving this journey in a deep sleep! Other space journeys could take even longer. The distances in space are truly mind-boggling! A space ship going at 80 miles an hour would take 124 days to get to the moon; and it would take more than a lifetime to reach even the nearest stars.

In real life the Voyager 1 Space Station, launched in 1977, is now 11 billion miles from earth. Light travels 5,800,000,000,000 miles a year – and so to reach the galaxy Andromeda, which is 2 million light years away, it would take you 2 million years to get there, if you travelled at the speed of light!

The storybook *Cakes in Space* (Philip Reeve & Sarah McIntyre) imagines what such a massive journey might be like. In the story it takes Astra and her family 199 years to get to a make-believe planet called Nova Mundi. It seems almost impossible to imagine how you would survive this! In the story they travel in special sleeping pods, fast asleep and their bodies are cooled down so that they don't age.

Talk about how you would feel about this. You could also research cryonics, which is similar to what Astra and her family used. It's about keeping the bodies of animals or humans at a low temperature, in the hope that they can be revived at a future time.