

Disclaimer

Sensitive and/or upsetting topics may emotionally impact your students due to past experiences. You should consider whether this content is appropriate and ensure adequate support is available for anyone affected. Please note: many animals that travelled into space did not survive. If you intend to conduct child-led independent research about animals in space, you may wish to ensure that information available from other sources is suitable for the children you teach.

Animals That Went to Space

As part of the human race's efforts to explore beyond the Earth's atmosphere, many different animals were sent up in various rockets.



Why Have Animals Been Sent to Space?

As scientists began to discuss the possibility of space exploration, there were many opinions and questions about what space travel might do to a living thing, such as the human body. All these questions had to be investigated before they felt human beings could be sent safely into space.

The first planned launch of a living thing into space took place at White Sands Missile Range, New Mexico, USA, on 20th February 1947. A group of fruit flies were sent into space onboard a redesigned V-2 rocket. Scientists had sent these small insects to see if the Sun's **radiation** would affect them. Once the flies came back to Earth and were recovered, they were examined and found to be unharmed. This flight encouraged scientists to plan further space exploration missions and more animals were launched into space to answer additional questions.



The Soviet Union

The **USSR** sent numerous dogs up into space and beyond the Earth's atmosphere. The most famous of these was a stray called Laika. She was the first dog to not only go to space but orbit the Earth as well. Found on the streets in Moscow, Laika was launched on 3rd November 1957 inside a spacecraft named Sputnik II. She orbited the Earth several times, convincing many scientists that humans might also be able to travel safely in space. Not long after, a Soviet cosmonaut, named Yuri Gagarin, became the first human to successfully travel into space and orbit the Earth.



Did You Know...?

As part of America's space programme, a rhesus monkey called Albert II became the first monkey sent into space in a V-2 Blossom rocket on 14th June 1949.



The United States

On 31st January 1961, a chimpanzee named Ham was sent into space from Cape Canaveral, Florida, USA. During his flight, Ham had been trained to pull and push levers in response to flashing lights. This demonstrated to scientists that astronauts could concentrate on tasks while travelling in space. Ham's mission helped America go ahead with its first successful launch of a human astronaut, Alan B Shepard Jr, in 1961. He followed a similar flight path to Ham's and in the same type of rocket, a Mercury Redstone rocket.

Other Animals

Many other animals have been sent into space to conduct various experiments. France sent the first cat, named Félicette, in 1963. In 1968, two tortoises sent by the Soviet Union became the first living things to orbit the Moon. Months later, Apollo 11 landed on the Moon. In addition, guinea pigs, spiders, mice, jellyfish and other animals have all been sent into space to help us investigate and answer questions.

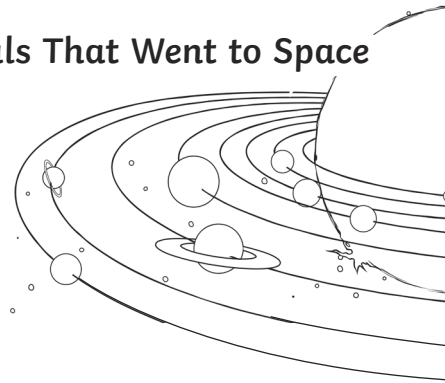


Glossary

radiation: Heat and energy that is given off as rays and can be dangerous.

USSR: A country called the Union of Soviet Socialist Republics that existed from 1922-1991 and was also known as the Soviet Union.

Questions



1. What kind of animal did France send into space? Tick one.

- cat
 dog
 spider
 jellyfish

2. Where were the fruit flies launched into space from? Tick one.

- Cape Canaveral, Florida
 White Sands Missile Range, New Mexico
 Moscow, USSR
 London, United Kingdom

3. What was the name of the first Soviet cosmonaut to go into space?

4. Look at the section called **The United States**.

Find and copy one word that means the same as 'showed'.

5. Fill in the missing words.

As part of the human race's efforts to explore beyond the Earth's _____,
 many _____ animals were sent up in various rockets.

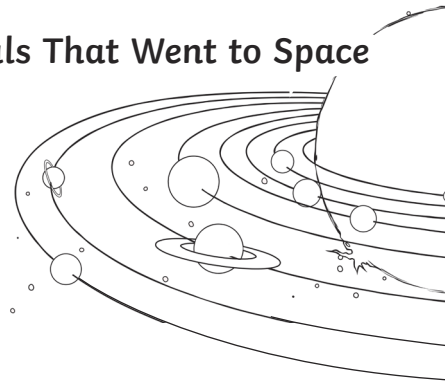
6. Would you like to go back in time and see Apollo 11 land on the Moon?

Explain your answer.

7. Summarise what you have learnt about animals in space in 25 words or fewer.

8. If you could travel into space, where would you like to go and why?

Answers



1. What kind of animal did France send into space? Tick one.

- cat**
- dog
- spider
- jellyfish

2. Where were the fruit flies launched into space from? Tick one.

- Cape Canaveral, Florida
- White Sands Missile Range, New Mexico**
- Moscow, USSR
- London, United Kingdom

3. What was the name of the first Soviet cosmonaut to go into space?

The first Soviet cosmonaut to go into space was Yuri Gagarin.

4. Look at the section called **The United States**.

Find and copy one word that means the same as 'showed'.

demonstrated

5. Fill in the missing words.

As part of the human race's efforts to explore beyond the Earth's **atmosphere**, many **different** animals were sent up in various rockets.

6. Would you like to go back in time and see Apollo 11 land on the Moon?

Explain your answer.

Pupils' own responses, such as: Yes, I think I would like to watch Apollo 11 land on the Moon. It would be amazing to see all of the work that went into it, to watch it live as it happened and to see people's faces as they were watching it happen too.

7. Summarise what you have learnt about animals in space in 25 words or fewer.

Pupils' own responses, such as: Animals, such as dogs, monkeys and chimpanzees, went into space before humans and answered questions about what space travel could do to a living thing.

8. If you could travel into space, where would you like to go and why?

Pupils' own responses, such as: I think I would just like to go to the Moon and be able to sit there and look back on the Earth. I think it would be amazing to really see continents that I've only ever seen drawn on a map.

Animals That Went to Space

Before humans began to travel beyond the Earth's atmosphere, various animals were rocketed into space to study the effects of space travel on living things.



Why Have Animals Been Sent to Space?

When the development of rocket technology led to serious talks of space exploration, there were many opinions about what the effects of space travel might be on the human body. Scientists were concerned about the effects of long-term weightlessness, the speed of space travel itself, the possible radiation of the Sun beyond the protective shield of the Earth's atmosphere and the impact of the return journey through the atmosphere. Their concerns had to be investigated before they felt human beings could be sent safely into space.

At White Sands Missile Range, New Mexico, USA, the first deliberate launch of a living thing into space took place on 20th February 1947; a group of fruit flies were sent into space onboard a modified V-2 rocket. Scientists had sent these small insects to see if the Sun's radiation would affect them. With no negative effects apparent, their flight motivated scientists to continue further space exploration. Over time, more animals were launched into space to answer additional questions.



The Soviet Union

As part of their own investigations, the USSR (a country called the Union of Soviet Socialist Republics that existed from 1922-1991 and was also known as the Soviet Union) sent quite a few homeless, stray dogs up into space and beyond the Earth's atmosphere.

The most famous of these strays was Laika: the first dog to not only go to space but to orbit the Earth as well. She'd been found on the streets of Moscow and was a young, female, mixed-breed dog. On 3rd November 1957, Laika was launched inside a spacecraft named Sputnik II. She orbited the Earth several times. Due to Laika's orbits, scientists felt that humans might also be able to travel safely in space. Almost four years later, Yuri Gagarin became the first Soviet cosmonaut and the first human to successfully travel into space and orbit the Earth.



The United States

As part of America's space programme, a rhesus monkey, called Albert II, became the first monkey sent into space in a V-2 Blossom rocket on 14th June 1949. More monkeys followed, such as Sam, Miss Sam and Yorick. On 31st January 1961, a chimpanzee named Ham was sent into space from Cape Canaveral, Florida, USA. During his flight, Ham had been trained to pull and push levers in response to flashing lights.



This indicated that astronauts could possibly concentrate and perform tasks while travelling in space.

While flying, he experienced over six minutes of weightlessness before splashing down safely in the Atlantic Ocean sixteen and a half minutes after take off. Ham's mission made it possible for the successful launch of America's first human astronaut, Alan B Shepard Jr, in 1961. He followed a similar flight path to Ham's and in the same type of rocket, a Mercury Redstone rocket.

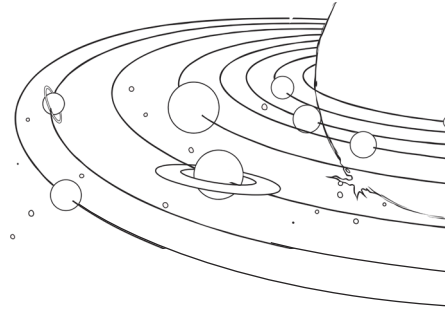
Other Animals

Many other animals have been sent into space to conduct various experiments. France sent the first cat, named Félicette, in 1963. In 1968, two tortoises sent by the Soviet Union became the first living things to orbit the Moon. Months later, Apollo 11 landed on the Moon. In addition, guinea pigs, spiders, worms, cockroaches, mice, jellyfish, rabbits and other animals have all been sent into space to help us investigate and answer questions.

Animals have been an important part of space exploration since it began. They have contributed to our knowledge about space travel and its effects on living things.



Questions



1. Where was Laika found? Tick one.

- New Mexico
 Moscow
 Cape Canaveral
 London

2. Draw **four** lines and match each spacecraft or rocket to its description.

V-2 rocket

landed on the Moon

Apollo 11

launched the first chimpanzee into space

Mercury

launched the first living things into space

Sputnik II

launched Laika into space

3. Who was America's first human astronaut to go up into space?

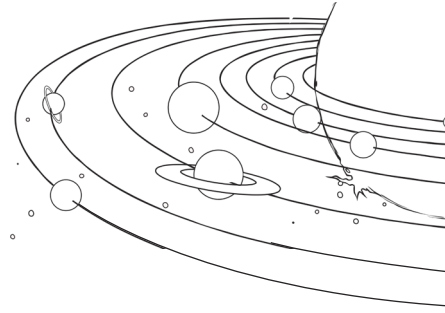
4. Look at the section called **Why Have Animals Been Sent to Space?**

Find and copy one word that means the same as 'on purpose' or 'intentional'.

5. Fill in the missing words.

When the _____ of rocket technology led to serious talks of space exploration, there were many _____ about what the effects of space travel might be on the human body.

6. Why do you think scientists use rocket technology to send people into space? Explain your answer.

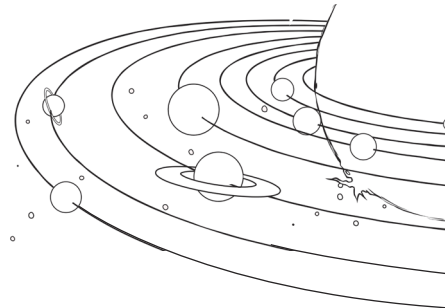


7. Would you like to be an astronaut? Explain your answer.

8. What was your favourite fact about animals in space? Explain your answer.

9. How do you think the scientists on the ground felt when they sent Alan B Shephard Jr up into space? Explain your answer.

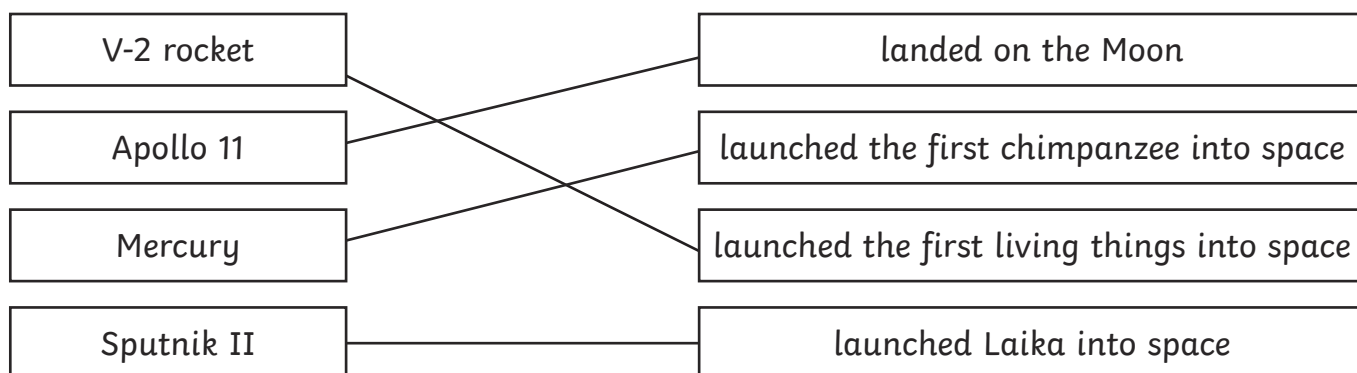
Answers



1. Where was Laika found? Tick one.

- New Mexico
 Moscow
 Cape Canaveral
 London

2. Draw **four** lines and match each spacecraft or rocket to its description.



3. Who was America's first human astronaut to go up into space?

Alan B Shepard Jr was America's first human astronaut to go up into space.

4. Look at the section called **Why Have Animals Been Sent to Space?**

Find and copy one word that means the same as 'on purpose' or 'intentional'.

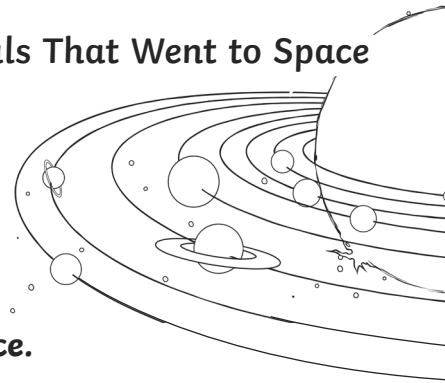
deliberate

5. Fill in the missing words.

When the **development** of rocket technology led to serious talks of space exploration, there were many **opinions** about what the effects of space travel might be on the human body.

6. Why do you think scientists use rocket technology to send people into space? Explain your answer.

Pupils' own responses, such as: I think scientists use rocket technology because it is the only technology strong enough to take humans and spacecraft the distance it takes to be officially in space and past the Earth's atmosphere.



7. Would you like to be an astronaut? Explain your answer.

Pupils' own responses, such as: No, I don't think I would like to be an astronaut. I am not fond of rollercoaster rides and going fast so I don't think I would like the journey into space.

8. What was your favourite fact about animals in space? Explain your answer.

Pupils' own responses, such as: I think my favourite fact about animals in space was that the first animals were fruit flies. I find it funny that it was a small insect and not a mammal that was the first living thing in space.

9. How do you think the scientists on the ground felt when they sent Alan B Shephard Jr up into space? Explain your answer.

Pupils' own responses, such as: I think they were probably nervous in case something went wrong and excited because of what they had just accomplished. It was history in the making and they were there watching it and responsible for it.

Animals That Went to Space

Prior to humans exploring beyond the Earth's atmosphere, the first space pioneers were actually animals. A variety of animals from fruit flies to chimpanzees were rocketed into and beyond the Earth's atmosphere in order to ensure the safety of human astronauts.



Why Have Animals Been Sent to Space?

When technology had advanced far enough that space travel was first discussed realistically, there were many opinions about what space travel might do to the human body. Many scientists were curious and cautious about the possible effects various aspects of space travel could have on astronauts, such as long-term weightlessness, the speed of space travel itself, the radiation of the Sun beyond the protective shield of the Earth's atmosphere and the impact of the return journey through the atmosphere. All of these factors had to be considered and investigated before they felt it was safe to send human beings into space and they chose to use animals to conduct these investigations.

On 20th February 1947, the first intentional launch of a living thing in space took place in White Sands Missile Range, New Mexico, USA; a group of fruit flies was sent into space onboard a repurposed and modified V-2 rocket. The reason for sending these small insects was to see if the Sun's radiation would affect them. Once they returned, they were examined and they were found to be unharmed. This opened the door to space exploration and more animals were launched into space to answer additional questions.



The Soviet Union

As part of their own space programme, the USSR (a country called the Union of Soviet Socialist Republics that existed from 1922-1991 and was also known as the Soviet Union) used numerous dogs to measure and investigate the effects of space travel.

The first dogs launched into space were homeless strays as the Soviet scientists felt that they were better adapted to the cold and stress that a space flight may bring. The most famous of these strays was Laika: the first dog to not only go to space but orbit the Earth as well.

Found on the streets of Moscow, Laika was a young, female, mixed-breed dog that was trained by the Soviet Union to go up into space. She was even given a special spacesuit and helmet. On 3rd November 1957, Laika was launched inside a spacecraft named Sputnik II. She orbited the Earth several times, providing evidence that humans might also be able to travel safely in space. Almost four years later, Yuri Gagarin became the first Soviet cosmonaut and the first human to successfully travel into space and orbit the Earth.



The United States

On 14th June 1949, the US sent a rhesus monkey, called Albert II, into space on a V-2 Blossom rocket, making him the first monkey in space.

More monkeys followed, such as Sam, Miss Sam and Yorick. On 31st January 1961, a chimpanzee named Ham was sent into space from Cape Canaveral, Florida, USA. Trained to pull and push levers in response to flashing lights, Ham was able to prove one of his mission's goals: to see if astronauts could concentrate and perform tasks during space travel.

During his flight, he experienced over six minutes of weightlessness before splashing down safely in the Atlantic Ocean sixteen and a half minutes after take off. When his craft was recovered, he was a bit dehydrated and tired but otherwise fine. Ham's success made it possible for the historic launch of America's first human astronaut, Alan B Shepard Jr in 1961. He followed a similar trajectory to Ham and in the same type of rocket, a Mercury Redstone rocket.



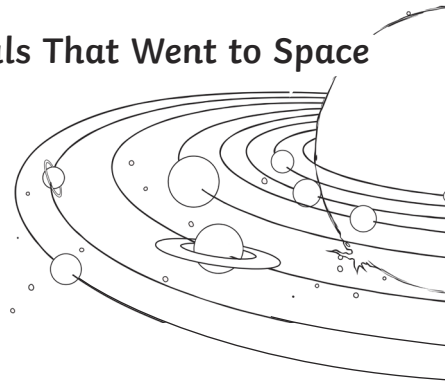
Other Animals

Various other animals have been sent into space to conduct different experiments. France sent the first cat, named Félicette, in 1963. In 1968, two tortoises sent by the Soviet Union became the first living things to orbit the Moon. Months later, Apollo 11 landed on the Moon. In addition, guinea pigs, spiders, worms, cockroaches, mice, jellyfish, rabbits and other animals have all been sent into space to help us investigate and answer questions.

Throughout the history of space travel and exploration, animals have contributed to a large portion of what we know about the effects of space travel.



Questions



1. What was the name of the first monkey sent into space? Tick one.

- Ham
 Sam
 Yorick
 Albert II

2. Draw **four** lines and match each date to its significant event.

20th February 1947

The US sent a rhesus monkey into space.

14th June 1949

A chimpanzee was sent into space.

3rd November 1957

A group of fruit flies were sent into space.

31st January 1961

Laika was launched inside a rocket named Sputnik II.

3. What was the USSR also known as?

4. Look at the section called **Why Have Animals Been Sent to Space?**

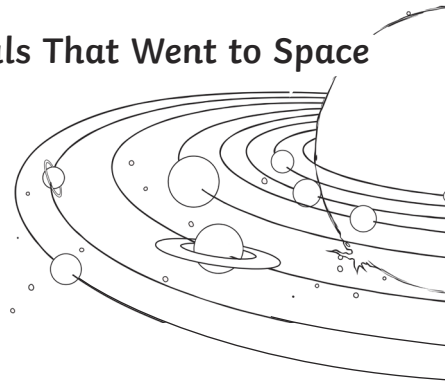
Find and copy one word that means the same as 'careful' or 'not taking any risks'.

5. Fill in the missing words.

_____ the history of space travel and exploration, animals have
 _____ to a large portion of what we know about the effects of
 space travel.

6. Why do you think animals are still taken up into space with astronauts today?

Explain your answer.



7. What surprised you the most about animals in space?
Explain your answer.

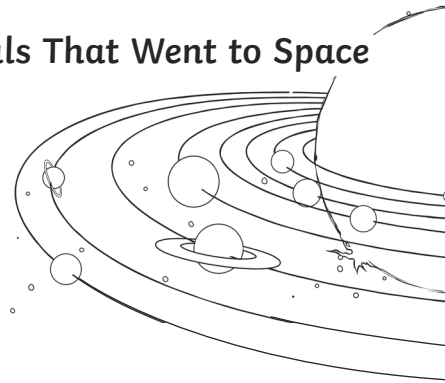
8. How do you think the scientists on the ground felt when they sent Yuri Gagarin up into space? Explain your answer.

9. Would you like to work in a space programme someday? Explain your answer.

10. Tick one box in each row to show whether each statement is **true** or **false**.

	True	False
Laika was a Scottish terrier.		
The fruit flies were sent into space to see if they could still fly.		
Rabbits have been sent into space.		
Two spiders were the first animals to orbit the Moon.		
France sent Félicette into space in 1963.		

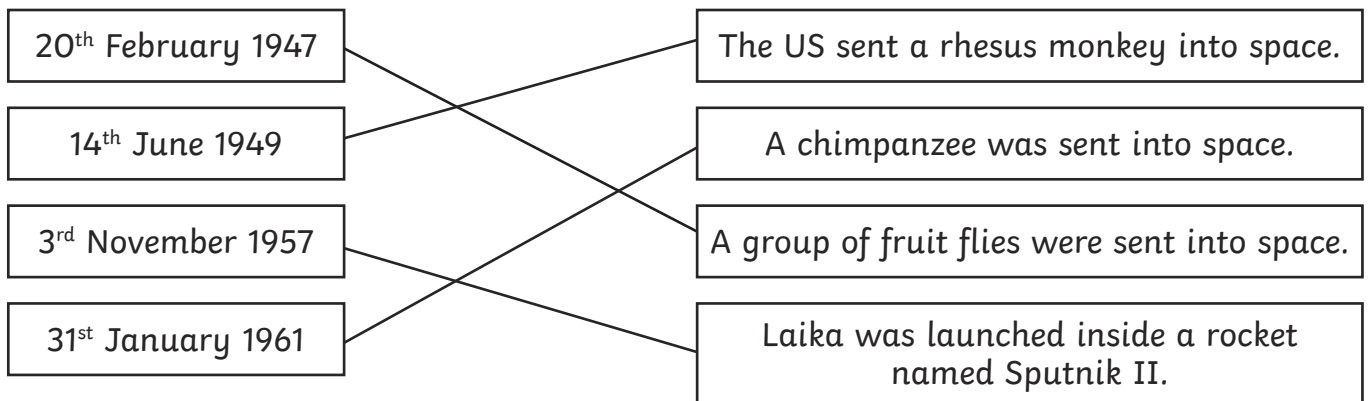
Answers



1. What was the name of the first monkey sent into space? Tick one.

- Ham
 Sam
 Yorick
 Albert II

2. Draw **four** lines and match each date to its significant event.



3. What was the USSR also known as?

The USSR was also known as the Soviet Union.

4. Look at the section called **Why Have Animals Been Sent to Space?**

Find and copy one word that means the same as 'careful' or 'not taking any risks'.

cautious

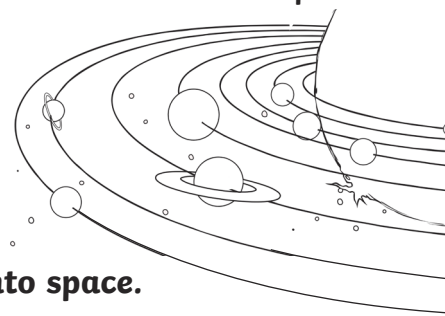
5. Fill in the missing words.

Throughout the history of space travel and exploration, animals have **contributed** to a large portion of what we know about the effects of space travel.

6. Why do you think animals are still taken up into space with astronauts today?

Explain your answer.

Pupils' own responses, such as: I think animals are still taken up into space so we can study what effects space travel has on them. If we ever want to live on another planet, we will have to take these animals with us and we need them to survive.



7. What surprised you the most about animals in space?
Explain your answer.

Pupils' own responses, such as: I think what surprised me the most was the variety of animals that have been sent to space. I had no idea that jellyfish and spiders had made it into space.

8. How do you think the scientists on the ground felt when they sent Yuri Gagarin up into space? Explain your answer.

Pupils' own responses, such as: I think they were probably thrilled to see his mission succeed but also scared in case something didn't go as planned. I think they were also proud of themselves because they had made history.

9. Would you like to work in a space programme someday? Explain your answer.

Pupils' own responses, such as: Yes, I think I would like to work in a space programme someday. It would be incredible to create and program satellites that visit other planets or even send a spacecraft with astronauts to another planet, such as Mars.

10. Tick one box in each row to show whether each statement is **true** or **false**.

	True	False
Laika was a Scottish terrier.		✓
The fruit flies were sent into space to see if they could still fly.		✓
Rabbits have been sent into space.	✓	
Two spiders were the first animals to orbit the Moon.		✓
France sent Félicette into space in 1963.	✓	

Award 2 marks for all five correct.

Award 1 mark for four correct.