



## Children Grow Seeds That Have Been to Space

### What is the ISS?

- The International Space Station (ISS) is a large spacecraft that orbits around the Earth. It travels at more than 17 000mph.
- Astronauts live onboard and use it as a special laboratory to investigate more about space.

### Scientists exploring space and school children have teamed up to grow space lettuce!

600 000 school children were invited by Tim Peake, the British astronaut to help grow space seeds. This was to help research whether lettuce seeds that travelled into space could be grown back on Earth.

To help them find an answer, one million seeds of **rocket** were rocketed into space. They then spent six months on board the International Space Station (ISS).

Dr Jake Chandler, a scientist involved in the project, said that sending seeds to space was crucial to “growing plants that support human exploration of space, Mars and other worlds.”

When the space seeds returned to Earth, they were given to children to look after. The seeds were grown for 35 days and their growth was **monitored**. To keep the experiment a fair test, the children were given two different packets of seeds. One was red, the other was blue. Only one packet contained the seeds from space.

Once the children measured the plants' growth and recorded their data, they sent it off to be examined. The results varied from school to school. **Generally**, the space seeds grew less well.

Scientists think this could be for several reasons. When the seeds were on board the ISS, they absorbed 100 times more **radiation** than the ones on Earth. They might also have been

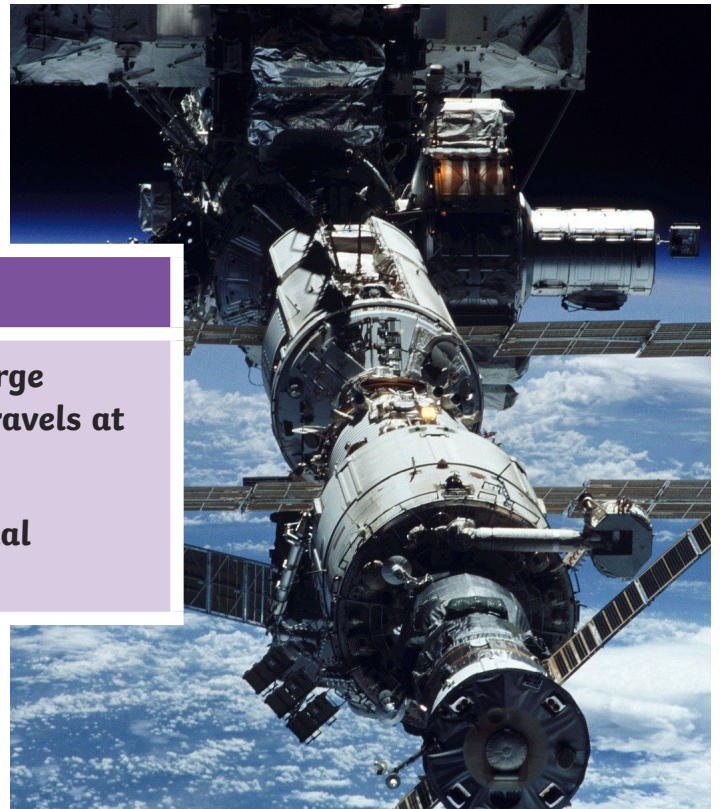


Photo: The International Space Station.

affected by the vibrations of the rocket. Either or both of these things could have affected the seeds, and therefore the growth of the plants, once they were back on Earth.

Although the space seeds did not grow as well as those which never went into space, it is still good news. This is because, despite all they had been through, the plants were still able to grow. Dr Jake Chandler thinks that because the seeds survived, “eating home-grown salad on Mars may be one small step closer.”

### Glossary

<b>rocket</b>	A lettuce leaf often added to salads.
<b>monitored</b>	To be observed.
<b>generally</b>	Most of the time.
<b>radiation</b>	Energy that moves from one place to another, such as cosmic rays.

# Questions

1. How fast is the ISS travelling?

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2. How was the experiment kept a fair test?

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3. 'Once the children measured the plants growth and recorded their data.' Tick the word that is closest to 'data' in this sentence.

- Opinions
- Thoughts
- Results
- Ideas

4. 'Generally, the space seeds grew less well.' This suggests that...

- All the space seeds grew less well.
- All of the Earth seeds grew better.
- There were a small number of space seeds that grew better.
- There were a small number of Earth seeds that grew better.

5. Put a tick in each box to show whether the statement is true or false.

	True	False
The children grew the seeds in space.		
The space seeds grew less well generally.		
Only adults grew the seeds.		
The seeds wouldn't grow.		

6. Summarise the key information in this story in 15 words or fewer.

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# Answers

1. How fast is the ISS travelling?

**More than 17 000mph**

2. How was the experiment kept a fair test?

**Accept any reasonable answer referring to the use of two packets of seeds, e.g. The children were given the two different packets of seeds. Only one had been to space.**

3. 'Once the children measured the plants growth and recorded their data.' Tick the word that is closest to 'data' in this sentence.

- Opinions
- Thoughts
- Results**
- Ideas

4. 'Generally, the space seeds grew less well.' This suggests that...

- All the space seeds grew less well.
- All of the Earth seeds grew better.
- There were a small number of space seeds that grew better.**
- There were a small number of Earth seeds that grew better.

5. Put a tick in each box to show whether the statement is true or false.

	True	False
The children grew the seeds in space.		✓
The space seeds grew less well generally.	✓	
Only adults grew the seeds.		✓
The seeds wouldn't grow.		✓

6. Summarise the key information in this story in 15 words or fewer.

**Accept any reasonable answer that refers to the text, e.g. Seeds that have travelled to space have been able to be grown back on Earth.**