

## ACTIVITY 2.1

### UNITED IN SPACE

From Chapter 2 of the Principia Space Diary

<http://principiaspacediary.org/activities/unity-in-space>

### LEARNING LEVEL

KS1, KS2, P1-5

### CURRICULUM LINKS & DIFFERENTIATION IDEAS

View detailed curriculum links for England, Scotland, Northern Ireland and Wales, plus differentiation ideas for your region and year level.

[principiaspacediary.org/curriculum-planner/](http://principiaspacediary.org/curriculum-planner/)



### Resources Required

- Pen and pencils (including primary colours for the flags)
- Printed fact sheets for the other space agencies (see Running the Activity)
- Encyclopedias or internet for students to find countries' flags

### Background to this Activity

Tim Peake undertook his Principia mission with two other astronauts – NASA's Tim Kopra and Russian commander Yuri Malenchenko. Already on board the ISS were Mission Commander Scott Kelly from the US; Russian cosmonaut and flight engineer for the mission Mikhail Kornienko; and Russian cosmonaut Sergey Volkov.

The International Space Station is used by astronauts of many different space agencies. This activity invites students to explore the differences between some of them.

The official languages on the ISS are Russian and English – most labels, instructions and notices are in both Russian and English and the crew will speak a mixture of both languages to each other. Tim needed to learn Russian to become a fully-fledged astronaut and, as he spent much of his training with the European Space Agency in Germany, he also had to learn some German.

### Running the Activity

This activity can be used to show how the same information can be presented in a lot of different ways. The students will make their own country card using the blank template in the book. The headings on this card allow the reader to quickly pick out the information they are interested in.

You can demonstrate this by showing students the following paragraph alongside the completed ESA country card in the Space Diary:

The European Space Agency (or ESA) has astronauts from lots of different countries. Tim Peake was the very first British astronaut to fly with them! The first astronaut the ESA sent into space was the German Ulf Merbold who flew as part of a NASA mission on 28 November 1983. The ESA also holds the record for the longest single flight by a woman; the Italian astronaut Samantha Cristoforetti was in space for one-hundred and ninety-nine days and sixteen hours in one go. The official languages of ESA are German ("Hallo") and English (Hello).

Place each of the following paragraphs in different spaces around the room. Invite the students to read each of the entries, then fill out the country card for the space agency of their choice. The students will need to use encyclopedias, the internet or classroom displays to find the country's flag and an awesome fact.

The American space agency is probably the most famous – NASA. They sent their first satellite, the Explorer 1, into space on 31 January 1958. Three years later, their first astronaut was sent into space – Alan Shepard's mission was launched on 5 May 1961. NASA's launch base is also one of the most famous (largely because of the film Apollo 13) – Space Centre Houston is in the state of Texas. Their language is English. The NASA astronaut Peggy Whitson spent an amazing three-hundred and seventy-six days in space over two different missions.

Russian astronauts aren't called astronauts, they are called cosmonauts. That's how it's easy to remember the name of their space agency, ROSCOSMOS. To say hello in Russian you can say "privyet". In Russian it's written like this: **Привет**. Russia launches its rockets from the Baikonur Cosmodrome, the most Northern launch base in the world. Sputnik 1 was launched on 4 October 1957 and holds the honour of being the very first artificial satellite to orbit the Earth. The cosmonaut Gennady Padalka has spent an incredible eight hundred and

## ACTIVITY 2.1 (CONT.) UNITED IN SPACE

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seventy-nine days in space across five missions, but the very first Russian cosmonaut was Yuri Gagarin whose first mission launched on 12 April 1961.

The Japanese space agency JAXA is actually quite new. It was formed in 2003 from the merging of three different agencies. In Japanese こんにちは ("konnichiwa") means hello. Although the Japanese astronaut Koichi Wakata has spent three hundred and forty-seven days in space over four missions, the very first Japanese citizen in space wasn't actually an astronaut! Toyohiro Akiyama flew with the Soviet space agency in December 1990, and he was a journalist! The first Japanese satellite, called Osumi, was launched on 11 February 1970. It weighed only twenty-four kilograms.

### Questions for the Class

- What languages do you speak at home or within your family? Can you create a list of languages and greetings that represent you, your friends and your community?
- What about non-verbal communication methods? How do you say 'hello' in British Sign Language, Finger Spelling and Braille?
- What do you notice about the dates of the first missions? What can you discover that might explain the differences?

### Extensions & Digital Resources

**ZAP!** Use the Zappar app to see a slideshow of some of the astronauts who have been to the ISS. This includes astronauts from different countries in Europe plus Russia, the US and Japan. See Zappar instructions at the link below and note that the mobile/tablet will need to be connected to the internet: <http://principiaspacediary.org/using-zap-codes-to-strengthen-digital-literacy/>