

# CAREERS IN SPACE

The space sector in the UK is one of the fastest growing industries and by 2030 around 30,000 new jobs are expected to be created in the sector.

Although opportunities are available all around the world to work in this industry, and most space projects work collaboratively between countries, the UK is a world leader in space technology and science.

Jobs can involve working on space missions: from robots visiting distant planets to satellites monitoring the Earth's climate. Roles can involve analysing and interpreting data, writing computer code, engineering new machines and producing new ideas about our Universe. Space sector technology is vital for many industries, including communications, navigation and finance.

There are an enormous number of opportunities available in the space sector. This activity will introduce students to some of these careers.

## Learning Objectives, students will learn:

1. about the diversity of careers available in the space sector
2. how different people and job roles must work together
3. about the skills and experiences needed to succeed in the sector
4. to assess their own interests and skills and think about where this could take them

## Each group will require the following:

### REQUIRED RESOURCES

☆ Pens/Pencils

☆ Access to the internet\*

\*For the extra (optional) activity only

## Before the session:

There is very little preparation needed for this session because most of the activities will involve discussion. Students will need to complete sections in their sheets as you go through the tasks. If you have time, you might like to familiarise yourself with some of the careers available by visiting: [www.schoolsobservatory.org/careers](http://www.schoolsobservatory.org/careers) or take a look at websites such as [SpaceCareers.uk](http://SpaceCareers.uk).

## At the beginning of the session:

- ☆ Start an initial discussion into the topic of space careers. You can use some of the information in the introduction above.
- ☆ Ask the students to think of careers that involve space or astronomy.
- ☆ Find out if any of the students are thinking about a career in this sector.

## ACTIVITY 1: MANAGING A SPACE AGENCY

The students will assume the role of the head of a space agency. Their task is to assemble a team to travel on a 2-year crewed mission (this assumes new technology not yet invented) to a recently discovered dwarf planet. Their mission is to scope out the planet's surface for potential future base camp locations. Start the activity by discussing as a group what skills or job roles might be needed on this mission.

- ★ You may want to discuss what could go wrong and who they would want in that situation; e.g. a medic?
- ★ What does it take to get a crewed mission into space; e.g. might they want a pilot, a mechanic or engineer?
- ★ How about when they reach the planet and want to explore?

They might consider a drone pilot, a geologist, or a botanist. There are a huge number of possible combinations of people and skills needed.

1. Give the students some time to work independently, or in small teams, to decide upon ten job roles they would like to be covered by the mission crew.
2. It's likely that all of the teams will have at least 3-4 job roles in common, for example a pilot, a medic of some kind, and a scientist of some kind. Find out which roles each of the groups have in common.
3. Ask the students to share with the wider club one of the roles they think is the most interesting, such as a role other people might not have thought about.
4. Ask the students which role appeals to them most personally. They can make a note of this on their sheets.

## ACTIVITY 2: CAREER FOCUS

Ask the students to independently select one of the job roles they have chosen for the mission crew. This could be a role they see themselves in, or just one that they find interesting.

The students must then create a CV for an imaginary person who could fill this role. The student sheets contain a blank CV form to guide their thinking process. Students can fill in the blank form or they can create their own from scratch.

Students will need to think about:

- ★ What skills this person needs.
- ★ What experience do they have?
- ★ What qualifications have they achieved?
- ★ What did they study at school/college/university?
- ★ What personal attributes do they have?
- ★ What are their interests outside of work?

## ACTIVITY 3: JOB TASKS

During this activity, students must think about the tasks the person fulfilling their chosen job role will need to carry out on the mission. There is space in their sheets for students to list a few of the main tasks and explain why they are important to the mission.

Bring the students back together and get them to discuss anything that has surprised them while carrying out this session.

Take a vote:

- ☆ How many of your students would like to take part in a crewed mission to space?
- ☆ How many might like a career in the space sector, but one that is based on Earth?

### **Extra Activity:**

If you have some keen students, why not encourage them to visit the Careers section of the NSO website ([www.schoolsobservatory.org/careers](http://www.schoolsobservatory.org/careers)) to explore the careers profiles of some real people working in the space sector.

There are a wide range of careers in space and astronomy, some of which might be surprising! We have a great video highlight in these career options: [www.youtube.com/watch?v=ly4xLtnChc&t=1s](http://www.youtube.com/watch?v=ly4xLtnChc&t=1s)