



LIFE BEYOND

Imagining our Future in Space

SHORT ACTIVITIES



**UK Centre for
Astrobiology**



SPS
SCOTTISH
PRISON SERVICE



Fife College

INTRODUCTION: PARTICIPANT'S GUIDE

WELCOME TO LIFE BEYOND!

One of the great ambitions of humanity is to explore and settle space. **'To boldly go where no one has gone before'**, as they say in Star Trek.

In this course, you will make your own contribution to making a home in space. You don't need to be an engineer, artist or have any special knowledge to do this course. We'll guide you through and give you a step-by-step introduction to each activity. As you go along, the pieces of work you do can be contributed to the **Life Beyond project**, which is a collection of drawings, art and writing made by participants across different prisons. They'll be displayed as part of the University of Edinburgh project (see the information about the Life Beyond project in the box below). There is even the opportunity to contribute to a **Lunar and Martian Cookbook**.

This introductory sheet explains what the project is about, what you can expect to get out of it, and what you will learn.

ABOUT LIFE BEYOND

The **Life Beyond course** was started as a partnership between the **University of Edinburgh**, the **Scottish Prison Service** and **Fife College** by **Professor Charles Cockell** at the University of Edinburgh in 2016. It brings together participants in Scottish prisons to imagine the future of society beyond the Earth.

So far, participants have written **two books** (Life Beyond: From Prison to Mars and Life Beyond: From Prison to the Moon) that were published by the UK space advocacy charity, the **British Interplanetary Society**, with proceeds going to space education projects. These books have been sent to space organisations such as the **European Astronaut Centre** (part of the **European Space Agency**), space engineers in **NASA**, and other organisations.

Now you can contribute to the next phase of this project!

Participants taking part in Life Beyond have won awards with **Koestler Arts** for their work and the project was cited as an example of best practice across European prisons in the **EuroPris report**. We have used this experience to develop this course to be done by anyone with an interest.

Now is your chance to take part in this thrilling activity!


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YOUR QUESTIONS ANSWERED

WHAT IS THE LIFE BEYOND PROJECT?

The **Life Beyond project** is a course to engage the prison population in the design of settlements beyond the Earth. It leads a participant (you!) through the process of making a home on another planet. **You don't need to be an engineer, artist or have knowledge of space exploration** to take part – you just need to be interested in the idea of exploring space.

The result is that participants can submit these designs and other creative art work from the project to be part of a book. All entries will be considered for publication by the **Life Beyond team** at the **University of Edinburgh**.

Throughout this project, **activities** or **sub-activities** denoted by an **ENVELOPE ICON**  are ones you can submit to the Life Beyond project if you'd like to. We have provided boxes for you to do your activities, but **feel free to use additional materials or paper if you like**.



Lunar Station design and rover. A station design conceived and drawn by participants in the Life Beyond project at **HMP Glenochil, Scotland** in 2019.

DO I NEED TO BE A SPACE NERD?

No! Some participants had no previous interest in space exploration at all. In this course, there are huge opportunities for **art, creative writing, music, poetry etc**. One group of participants wrote Martian Blues music! You do need to have a tiny amount of enthusiasm for space exploration, because that's what this course is about, but this course is about **creative expression** and **ideas**.

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HOW LONG DOES IT TAKE?

Life Beyond comes in two forms: our **Full Course** and a set of standalone **Short Activities**. You can do either. **This pack is the Short Activities.**

If, after doing these short activities, you'd like to do more, you can still do the Full Course. This is comprised of four modules, each of which involves between four and eight study hours. Each module can be completed over two to three weeks, depending on your interest, time and commitment. So, the whole course is about two to three months of individual study time. However, at the end of each module, there are additional activities that you can do if you want to carry on doing more work. There is also a bonus, hands-on activity which invites you to do an origami paper-folding task that Japanese astronauts have to do. You can also try your hands at building a paper replica of some space station building materials that you might use on the Moon or Mars.

You are not limited to the activities set out in the course materials. You are free to submit any creative work related to the project that you develop. **We welcome all submissions including art, short stories, poems, music etc.**

There is a bonus hands-on activity, **Practical Activities: Origami for Space**, which invites you to do an **origami paper-folding task** that Japanese astronauts have to do. You can also try your hands at building a paper replicate of some space station building materials that you might use on the Moon or Mars.

CAN I DO THIS ON MY OWN?

Life Beyond is a **stand-alone project** that you can complete as an **individual or with others** in your institution if you have a learning centre that can bring interested participants together.



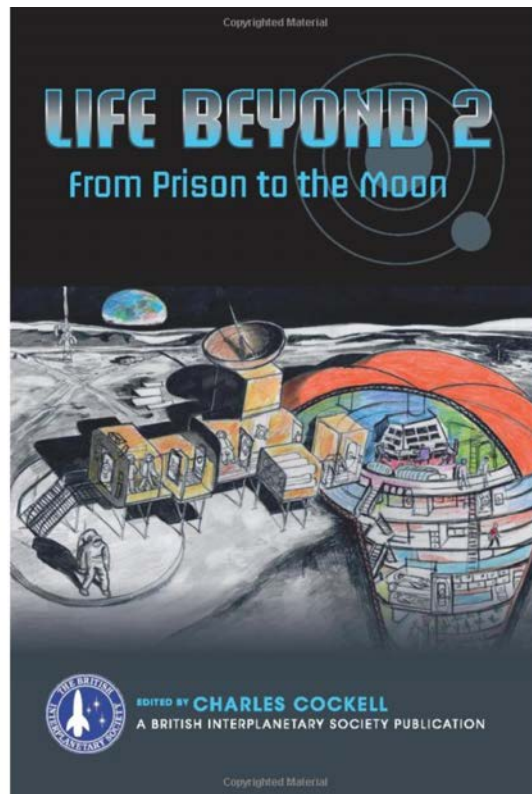
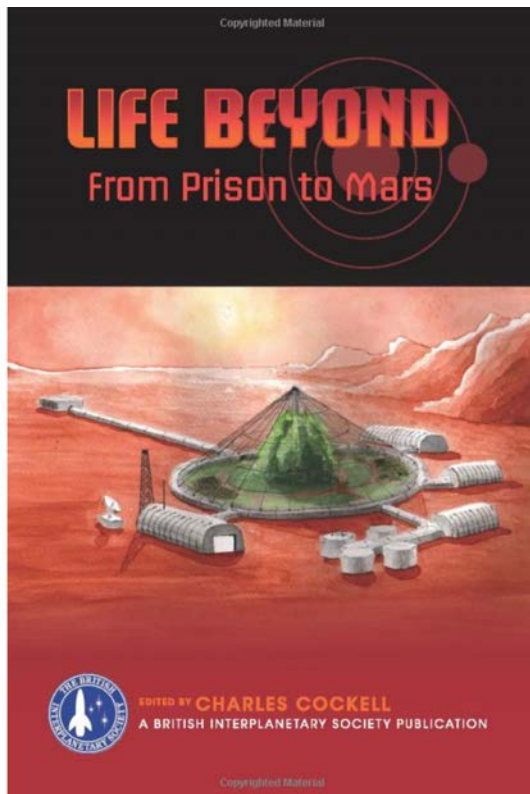
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WHAT'S IN IT FOR ME?

This project will take you through the design of a home in space. Your ideas, whether they be drawings, writing or any other form of creativity, will be **published as part of a Life Beyond project**, either in a **book** or **online**, allowing you to **contribute directly to a global effort** to design stations for the human settlement of space in partnership with the Life Beyond team at The University of Edinburgh.

In the process of doing this course, you'll learn some interesting things about **science, design, art, creative writing** and of course, the settlement of space.

As well as **publishing your work**, the Life Beyond project can also give you an opportunity to create things that you could **submit to competitions**. Previous participants have submitted work to **Koestler Arts** and **won awards** for their art. They have published two books with the **British Interplanetary Society**, proceeds of which go to advancing space education projects in the UK.



WHAT HAPPENS IF I REALLY GET INTO THIS?

The activity sheets provide you with boxes in which to present your contributions, but you are not limited to these. You can use additional paper and materials if you'd like to and we welcome any further contributions. **You can send as much as you like.**

At the end of each module you will also find suggestions for additional activities if you'd like to explore this project more.

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WHAT ARE THE LEARNING OUTCOMES?

Completing this course will contribute to a range of learning outcomes, including:

- Improve your **literacy skills**.
- Improve your **science knowledge**.
- Improve your **numeracy skills**.
- Improve your **organisational skills** (studying, collating and analysing information).
- Engage you in **art projects, including creative writing**.
- Engage you in **discussions about the long-term goals of society**.
- Engage you in **what it takes to hold together a society**.
- Give you a taster of what **distance learning** is like and whether that's something you might want to do in future.

CAN I PROVIDE FEEDBACK?

At the end of this pack is a **short evaluation form**. Please do fill this in and send it back with your work. We need to know what you think about this course so that we can improve it for future participants. Beyond that, many people ask us about the value of our work and it's important for us to be able to provide evidence that the course has been of benefit and interest to you. It won't take long to complete. Please feel free to criticise the course! **Tell us what you don't like, so we can modify the course to make it better for the future.**

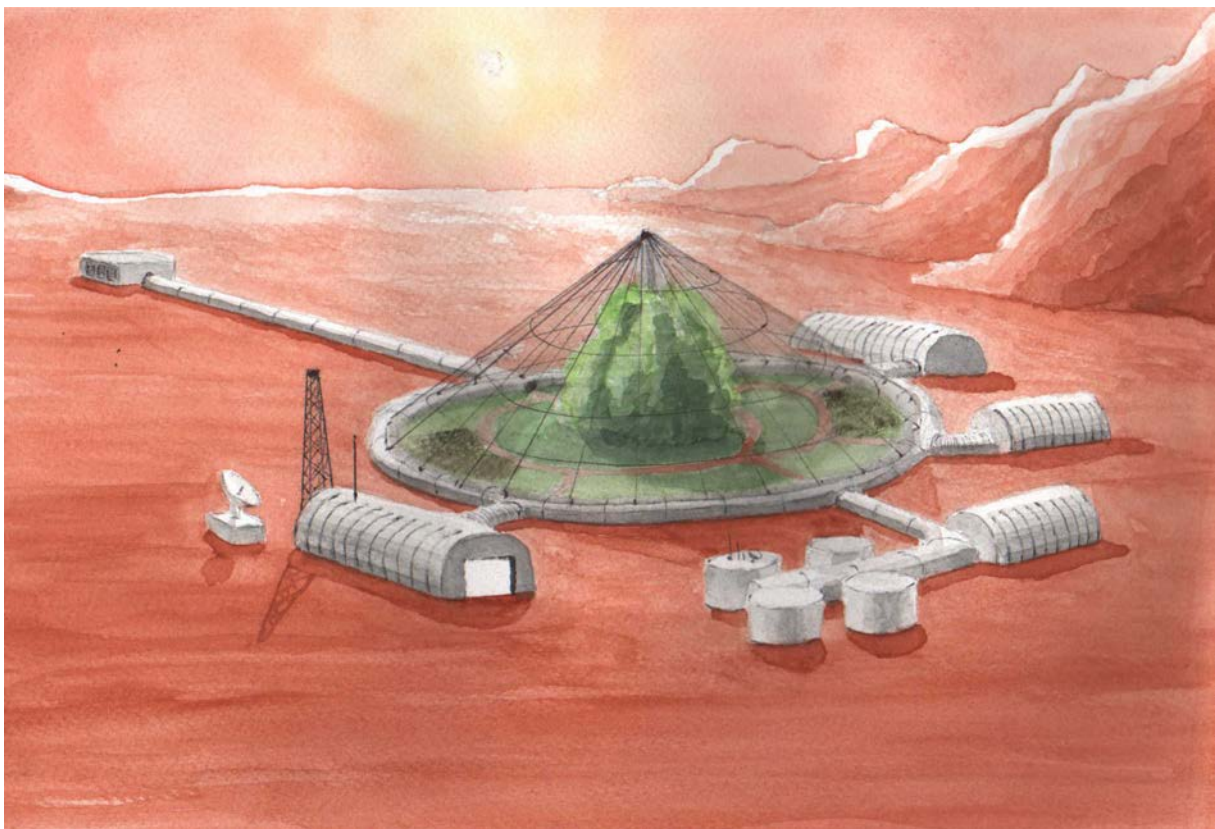


SHORT ACTIVITY 1 - A LETTER FROM MARS

WRITING A LETTER FROM MARS

You have arrived at a station on the planet Mars, which you can see below. The outside environment is cold and almost a vacuum. You had to wear a spacesuit to come from your rocket to the station. But now you are safely inside. You've had a chance to meet your fellow astronauts on Mars and tour the station. You've seen the special crop modules where your food is grown. You've seen the giant oxygen-producing machines that produce the air you breathe. You've just had a hearty meal in the kitchen galley where you've had a chance to talk about what it's like on Mars with your new friends.

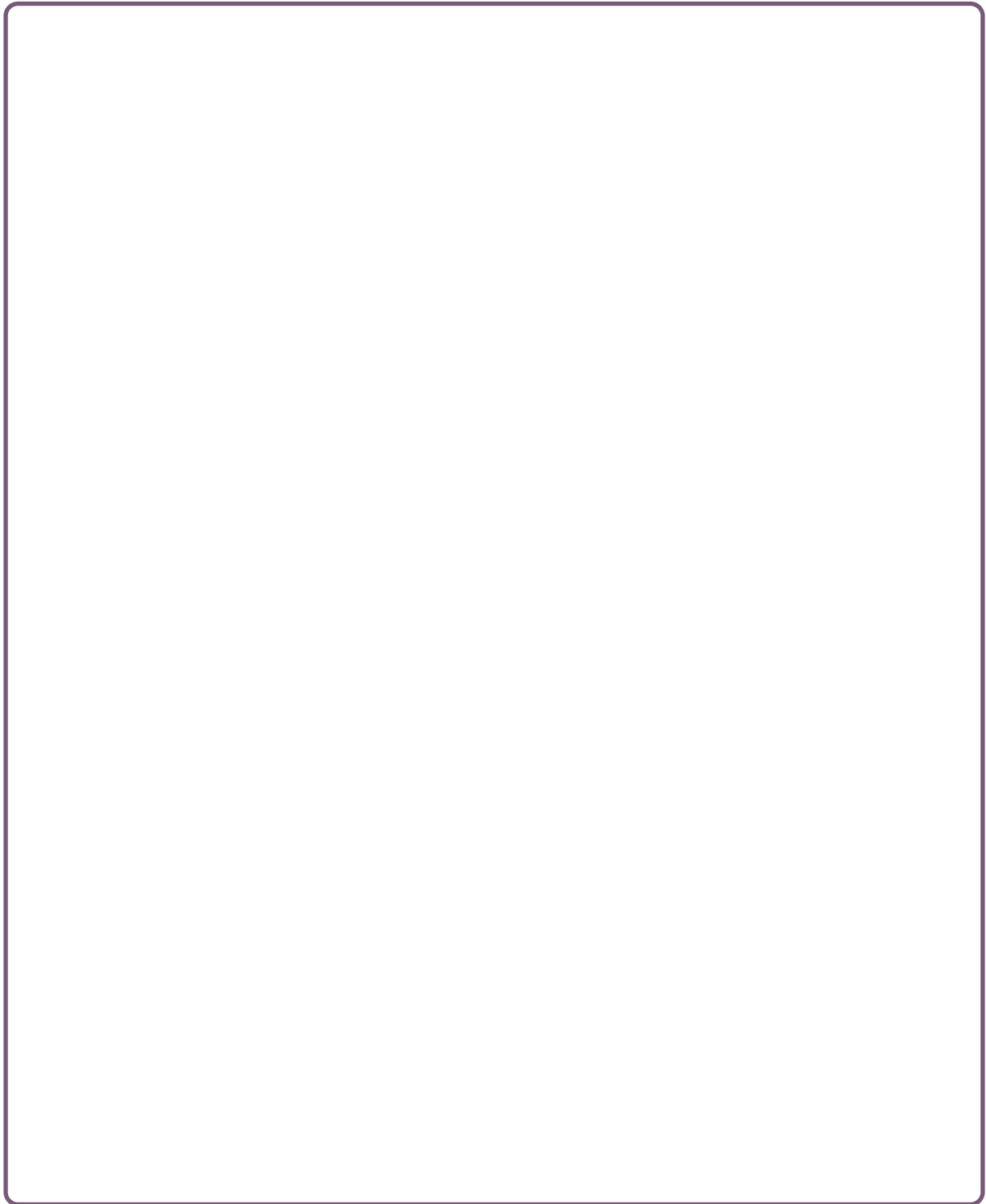
In this activity, you'll write a letter home from Mars. It can be as long or as short as you want and it can be about anything you like. Maybe it's some first impressions about Mars, or some thoughts about what you miss on Earth. Perhaps something dramatic has happened at the station on your first day, like a major discovery or a big celebration that you'd like to tell friends and family about on Earth. Let your imagination roam and write the first letter from Mars!



Elysium Station on Mars. This is your new home on Mars. Write a letter to Earth about your first day on Mars. This station design was created by participants in the Life Beyond course at **HMP Glenochil**.

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My contribution to A Letter from Mars



YOU CAN SEND YOUR CONTRIBUTION TO THE LIFE BEYOND PROJECT TO JOIN OUR COLLECTION OF WRITING, DRAWINGS AND OTHER OUTPUTS FROM THE LIFE BEYOND PROJECT IN WHICH PARTICIPANTS IMAGINE THE HUMAN FUTURE BEYOND EARTH.

SHORT ACTIVITY 2: CONTRIBUTE TO THE LUNAR AND MARTIAN COOKBOOK!

DESCRIPTION OF THE COOKBOOK ACTIVITY

You are living in a station on the Moon or Mars. Like everyone, your fellow astronauts need some good food and they like some variety. You have been asked to make a contribution to a new **Lunar and Martian Cookbook** that will be distributed to cooks and chefs across the Solar System. In this activity, you will make your own contribution to the book. It can be anything you like, including:

- A **recipe for a dish** that you think would be nice to eat on the Moon or Mars.
- A **description of a dish** that you think would be nice to eat on the Moon or Mars.
- A **drawing of a dish**.
- A **drawing of a special banquet or meal** happening on the Moon or Mars.
- A **love song or sonnet** about a food that you miss.
- **Anything else that you think would be fun** to have in a Lunar and Martian Cookbook – writing, drawings, poems or absolutely anything food-related.

Here's the surprise! We really are going to collect together contributions from this activity to make a 'Lunar and Martian Cookbook' from the Life Beyond participants!

**YOU CAN SEND YOUR CONTRIBUTION TO THE LIFE BEYOND PROJECT
AND WE WILL GATHER THESE TOGETHER AND EVENTUALLY PUBLISH THEM.**

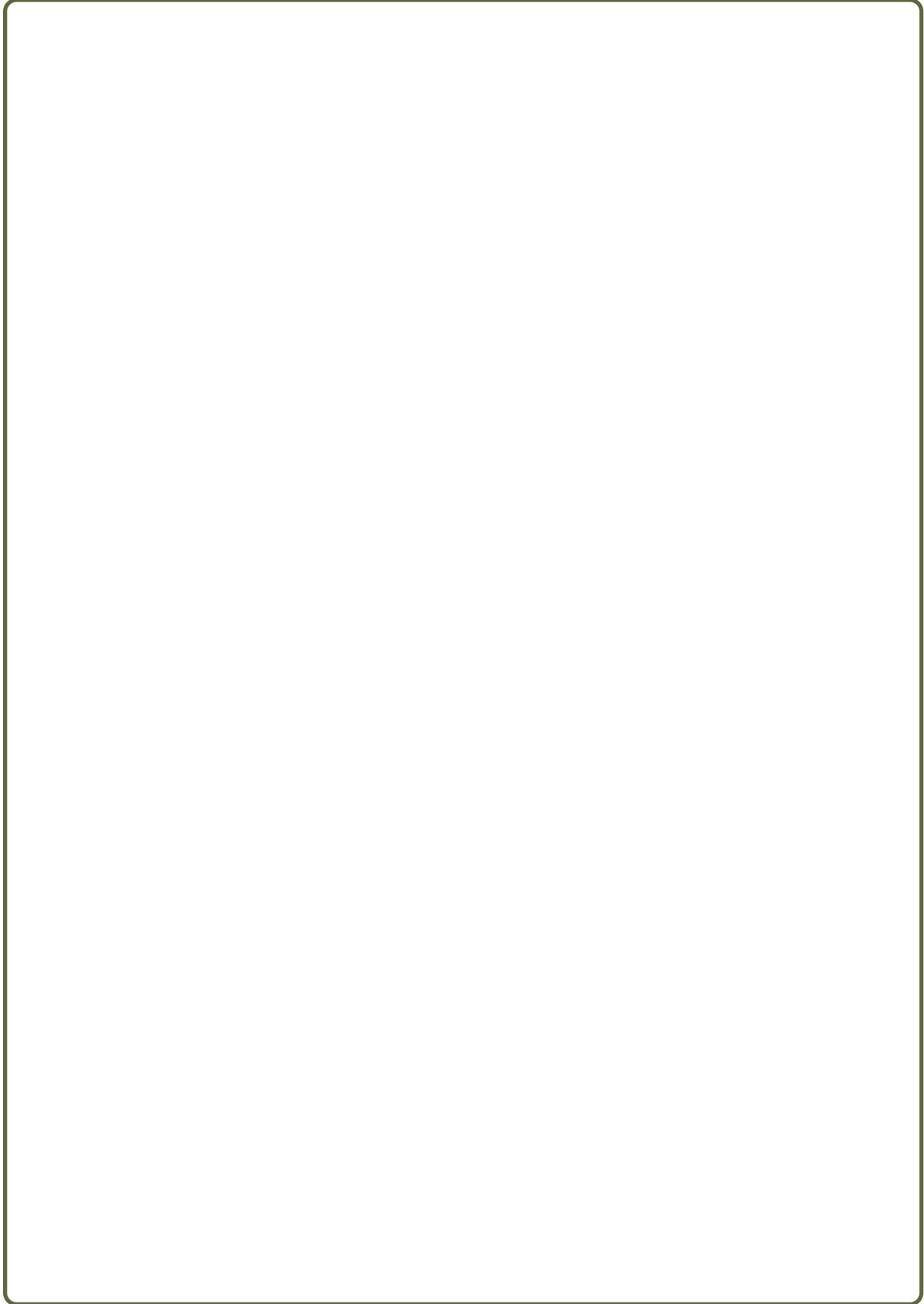


Perhaps one day, people on the Moon or Mars will read your contribution as they mix their ingredients together in a lunar or Martian kitchen! So be as creative as you like.



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My contribution to the Lunar and Martian Cookbook

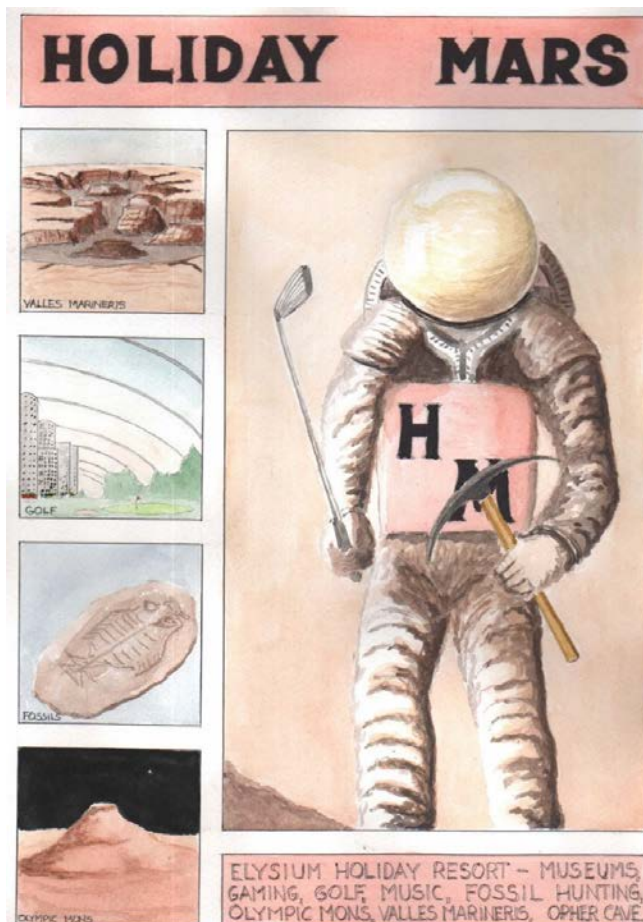


SHORT ACTIVITY 3: THE MARTIAN ADVENTURE!

MAKING A MEMENTO OF YOUR MARTIAN ADVENTURE

You are living in a station on Mars. Maybe you're a tourist and came to see the giant volcanic mountains of Mars, or you're a miner on a five-year contract to the Red Planet to extract precious metals. Perhaps you are a scientist and you've been on an exciting adventure to look for life. You could even be a station crew member whose job is to look after the oxygen machines. In this activity, you are going to produce something creative related to your life on Mars. This can be absolutely anything you like! Here are some ideas:

- A **diary entry** of a recent task you had to complete.
- A **drawing of a poster for tourists** (see below) or a **drawing of your expedition vehicle**.
- A **short timeline** of an expedition you went on or a typical day in your life at the station.
- A **poem or some lyrics to a song** about your time on Mars.



Holiday Mars! A tourist poster enticing people to come to Mars for a holiday. Image drawn by a participant of the Life Beyond project at HMP Glenochil.

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My contribution to the The Martian Adventure



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SHORT ACTIVITY 4: SPORTS ON THE MOON

PLANNING SOME SPORT ON THE MOON

You are living in a station on the Moon. In your spare time, you need some recreation. It could be anything from going for a short walk, getting some exercise, to growing some plants. Maybe you like woodwork or strumming on a guitar. You could be ambitious and design a whole new game or sport for the Moon. Imagine tennis in just one-sixth of Earth's gravity, where you could jump twice as high as on the Earth and the tennis balls would fly much further! **In this activity, you'll plan some activities and sports for your station occupants.** You can do anything that takes your interest, but here are some ideas for activities:

- **List the sports** that will be available to your station crew.
- **Draw the layout of the recreation area or gym** on the Moon.
- **Design a new sport**, give it a name, and describe how it works and what the rules are.
- **Write a short story** about a famous sports match on the Moon.
- **Write an advert** to attract some people to a team you are trying to set up.
- **Write a short newspaper report** of a sports match on the Moon.



Moon Base. In a Moon station, people will need some recreation and sports. Image drawn by participants of the Life Beyond project at HMP Glenochil.

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My contribution to the Sports on the Moon



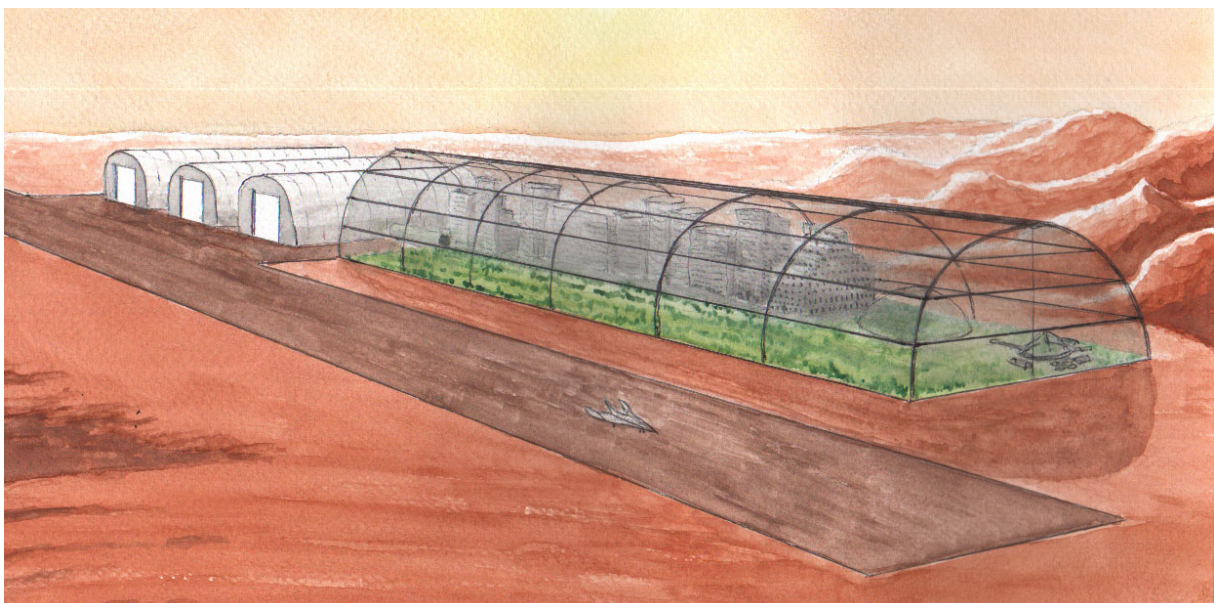
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SHORT ACTIVITY 5: GOVERNANCE ON MARS

DESIGNING YOUR OWN MARTIAN SOCIETY

You are living in a station on Mars. One of the big questions is how it will be run. What sort of jobs will the crew have to do? What sort of government will Mars have? What health and safety protocols will the station have? Who is responsible for ordering the food? And so on! In this activity, you will contribute to imagining how a Mars station would be managed and governed. There are all sorts of things we need to think about, but you can choose something that interests you about managing and planning a Mars station, from designing a full-scale government to writing down the job specs of some of your station crew. Here are some suggested activities that other participants have done:

- **Write a short description of your Martian government** (will it be a military-style command like a submarine or a small democracy?).
- **Write a job advertisement** for your new station commander.
- **Draw a picture** of your government/parliament building.
- **Draw the uniform** of your Martian President.
- **Write a timeline** of a typical day's business of the Martian government.
- **Write a short health and safety protocol** for the station for some newly arrived tourists to make sure they stay safe.



Tourist Station on Mars. A giant tourist station on Mars. How will it be managed? Image drawn by participants of the Life Beyond project at **HMP Glenochil**.

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My contribution to Governance on Mars



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EVALUATION FORM

Below is a short evaluation form. Please do fill this in and send it back with your work. It's not compulsory, but it's important for us to know what you think about this course so that we can improve it for future participants. Beyond that, many people ask us about the value of our work and it's important for us to be able to provide evidence that the course has been of benefit and interest to you. It won't take long to complete. Of course, you may also feel free to criticise the course! **Tell us what you don't like, so we can modify the course to make it better for the future.**

Did you find this course interesting (yes/no)?

What did you most like about this course?

What would you improve in this course?

Did this course make you think any differently about educational projects and courses of this type?

**Thank you for your invaluable contribution to
the Life Beyond Project!**



**UK Centre for
Astrobiology**

