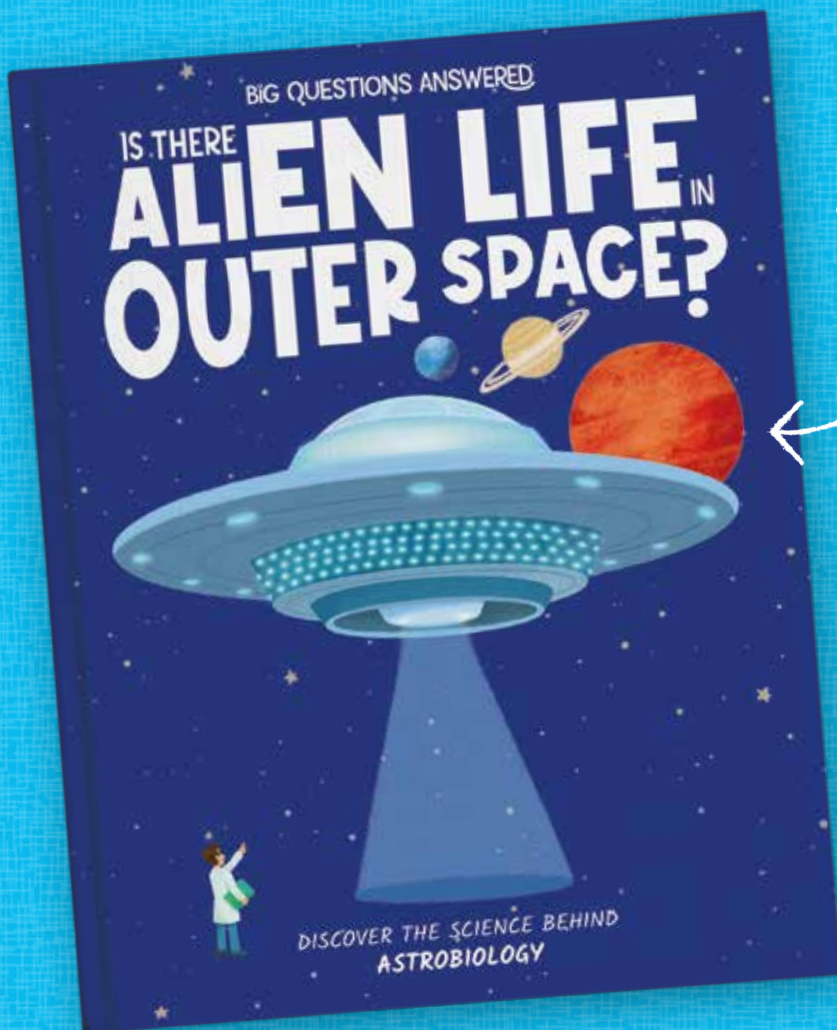


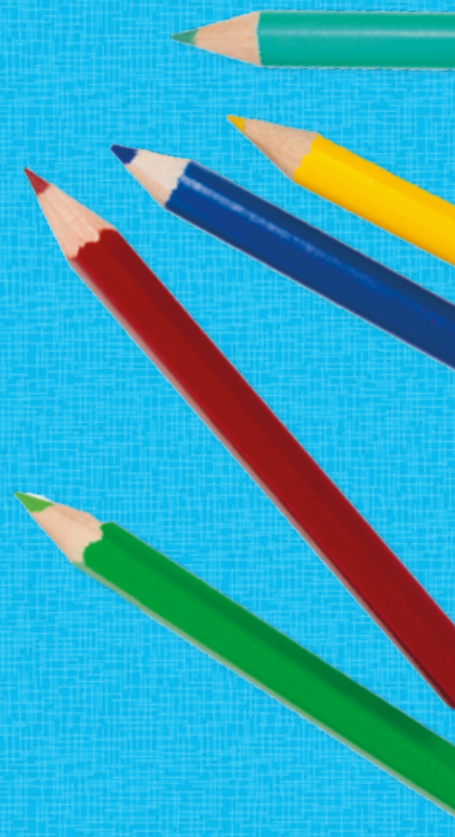
THE BIG QUESTIONS ANSWERED

YOUNG ASTROBIOLOGISTS'

# ACTIVITY PACK



*Full of fun and exciting activities to accompany this book!*



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# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'Our Solar System: Scene 1'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## PLANET FACTS

Choose a planet – any you like – and see what amazing things you can find out about it! Draw your chosen planet, colour it in, and fill in all of the information below.

*Draw your planet in here!*

This planet is called .....

How big is this planet? .....

Does this planet have an atmosphere? .....

This planet is ..... light-years from Earth.

This planet orbits a star called .....

Extra cool facts: .....

.....

.....



Why not print this sheet off multiple times to create a planet booklet full of lots of different planets!

# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'The Invention of Telescopes: Scene 2'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## OUTER SPACE MIX-UP

Looking at things through a telescope helps scientists see things that are really far away. Can you work out what each zoomed in picture actually is? Draw a line to match up the each picture with the correct name.

*I am...*  
**THE MOON**

*I am...*  
**THE SPACE STATION**

*I am...*  
**MARS**

*I am...*  
**A SHOOTING STAR**



**Fact:**  
I'm sometimes called the "red planet".



**Fact:**  
I float around the Earth.



**Fact:**  
I'm a floating home for astronauts working in space.



**Fact:**  
I fly super quickly through the sky.

# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'Modern-Day Astrobiology: Scene 3'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## SPACECRAFT ADVENTURE

Below are some sentences. Draw a picture to match each sentence and create your own comic. There are also clues as to what to draw for each picture in bold.



An astrobiologist adds the finishing touches to their brand-new rocket. Now it's ready to fly!



3...2...1...**LIFTOFF!** The rocket shoots off into space. An exciting adventure is about to begin.



Oh no! There are so many **asteroids** in this part of space - the rocket must be careful to fly around them.



Finally, the rocket reaches its destination - a new planet! A **rover** is unloaded to explore.



The rover searches the alien planet. It travels through deep valleys and over high mountains until...



It stumbles upon a group of **aliens!** The rover takes photos to send back to scientists on Earth.

### KEY:



**ROCKET**



**ASTEROID**



**ROVER**

# IS THERE ALIEN LIFE IN OUTER SPACE?

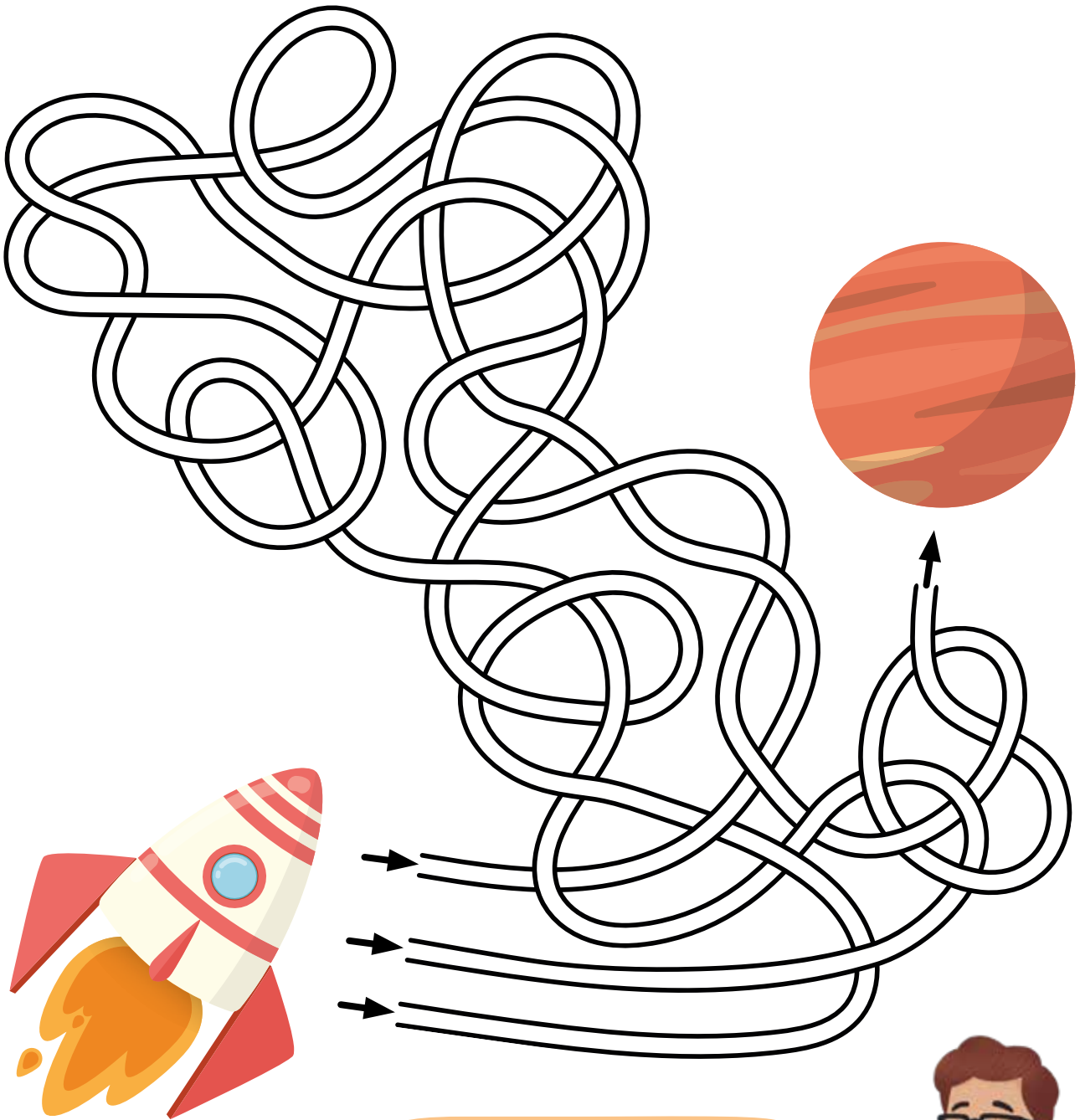
For reference to the Teachers' & Parents' Resources, this goes with 'Exploring Mars: Scene 4'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## LOST IN OUTER SPACE

Oh no! This rocket has got lost in outer space.  
Can you help the rocket complete the maze and reach Mars?



Did you know that scientists think a real-life journey to Mars could take up to nine months?



# IS THERE ALIEN LIFE IN OUTER SPACE?

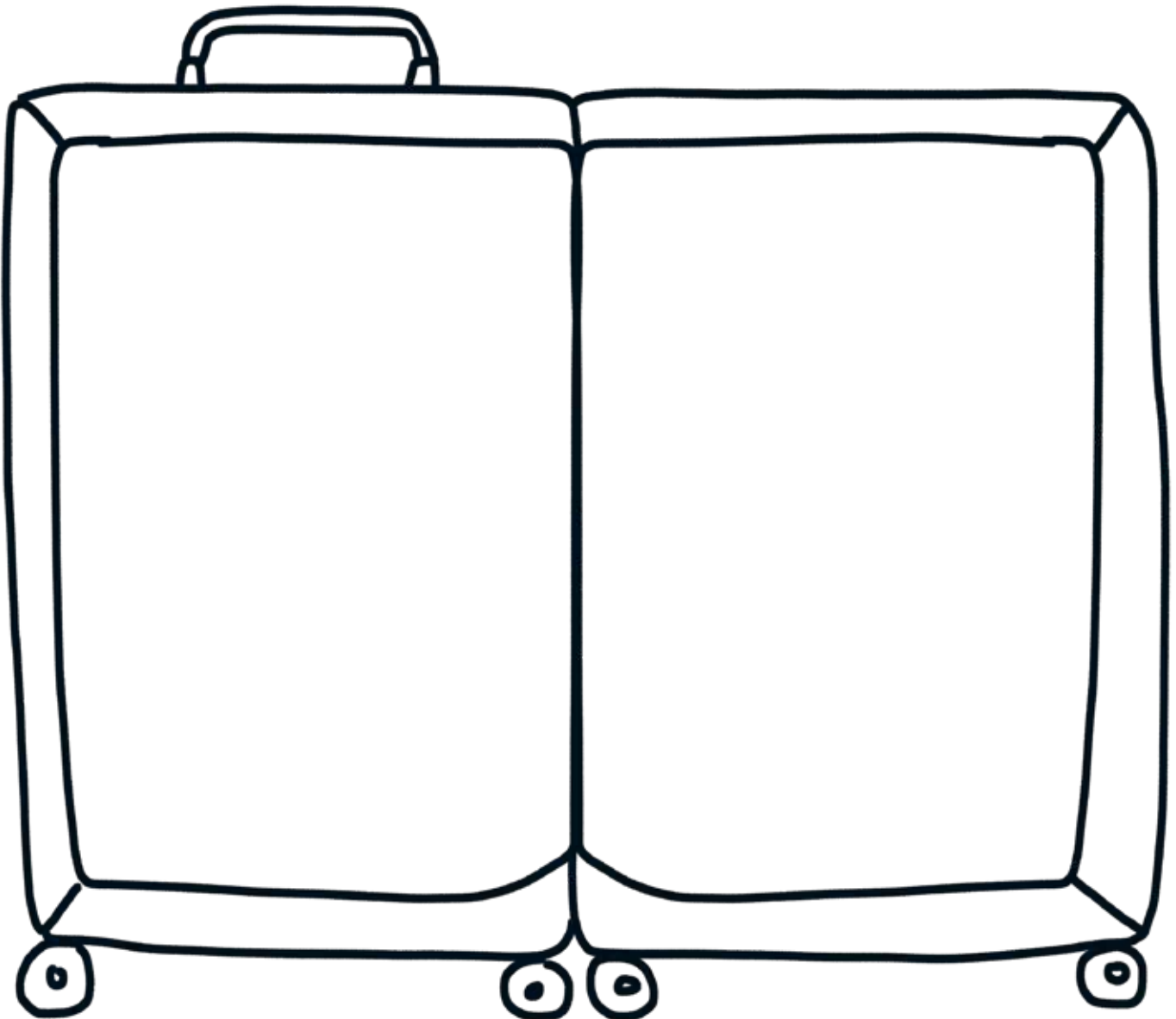
*For reference to the Teachers' & Parents' Resources, this goes with 'Surviving on Earth: Scene 5'.*

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## A TRIP INTO OUTER SPACE

Imagine you've been chosen to go on a trip into outer space to help scientists learn more about it. What would you pack in your suitcase? Draw the items in, but choose carefully - you can only take 10 things with you!



What do you think would be the strangest thing about going into outer space?

## IS THERE ALIEN LIFE IN OUTER SPACE?

*For reference to the Teachers' & Parents' Resources, this goes with 'The Habitable Zone: Scene 6'.*

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## OUR PLACE IN SPACE

Can you use the words below to fill in the blanks and uncover some out-of-this-world facts? Each answer can only be used once.

Mars

moon

Earth

universe

Sun

zone

1. The planet that we live on is called \_\_\_\_\_.
2. It is the third planet from the \_\_\_\_\_. It comes after Mercury and Venus, but before \_\_\_\_\_.
3. Unlike some of the other planets in the solar system, Earth only has one \_\_\_\_\_ which orbits the planet, affecting the tides and presenting an exciting opportunity for space travel.
4. Earth is within our solar system's 'habitable \_\_\_\_\_'. Its distance from the Sun means it's not too hot and not too cold – it's just right for living things.
5. It is currently the only planet in the \_\_\_\_\_ that is known to hold life.



# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'The Search Is On: Scene 7'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## WORDS LOST IN OUTER SPACE

Find and circle the words listed below, in the grid. Words can be found in any direction (including diagonals) and can overlap each other.

V	V	R	T	X	K	X	G	E	I	S	E	T	U	A	C
T	L	U	V	E	T	I	Q	E	H	G	I	W	M	U	K
P	X	W	I	A	K	P	B	W	V	B	I	S	I	H	O
R	U	N	M	X	V	C	Z	F	Y	M	T	M	Z	M	P
A	Y	W	Y	P	N	R	O	E	O	E	H	A	Q	H	R
Z	A	D	P	L	W	O	S	R	N	L	N	R	T	E	L
E	X	Q	S	T	A	R	S	A	J	P	M	S	E	C	S
A	S	Y	N	E	E	N	L	P	C	X	U	N	M	A	S
I	L	O	F	V	P	P	Y	B	P	V	N	O	C	P	J
W	R	I	I	U	X	O	T	U	A	N	O	R	T	S	A
A	C	N	E	D	O	A	C	C	Z	N	R	M	N	R	J
E	U	J	F	N	V	M	H	S	U	X	D	A	L	E	X
X	P	Y	V	C	S	Y	T	F	E	P	R	E	R	T	L
Q	E	I	R	E	Q	F	R	U	G	L	K	Y	D	U	T
Z	A	Z	O	F	B	Y	A	A	Q	R	E	O	M	O	X
D	G	J	P	H	O	H	E	J	B	L	A	T	J	L	J

TELESCOPE  
ROCKET  
EARTH  
PLANETS

STARS  
ALIENS  
MOON  
UNIVERSE

MARS  
ASTRONAUT  
OUTER SPACE



# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'Incredible Exoplanets: Scene 8'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## DIARY ENTRY

Imagine you were working in an astrobiology lab one day when you discovered new exoplanet! Use the space below to write a diary entry all about it.

A large, light-orange, irregularly shaped area containing 15 horizontal lines for writing a diary entry.



Feeling stuck? Try some of these...

- **Describe the location of the planet.**  
What galaxy is it in? What star does it orbit?
- **Describe what it looks like.**  
Think about the size and colour.
- **Describe how you would be feeling.**  
Would you be excited, nervous, or something else?



## IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'Imagining Alien Life: Scene 9'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



# CREATE YOUR OWN ALIEN

Astrobiologists haven't found aliens, but they have ideas about what they could look like if they did exist. Try creating your own alien, making sure to include all the body parts below.

HEAD

ARMS

LEGS

EYES

MOUTH

*Draw your alien in here!*

Get creative with the size and number of the different body parts!





## IS THERE ALIEN LIFE IN OUTER SPACE?

*For reference to the Teachers' & Parents' Resources, this goes with 'Imagining Alien Life: Scene 9'.*

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



# CREATE YOUR OWN ALIEN GROUP

Now that you've created one alien, why not create a whole group of different ones! This time, choose whichever body parts you want to include... or not include!



*Draw your aliens in here!*

It looks like you've discovered lots of new aliens! What will you name them all?



## IS THERE ALIEN LIFE IN OUTER SPACE?

*For reference to the Teachers' & Parents' Resources, this goes with 'Strange New Moons: Scene 10'.*

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



# DESIGN YOUR OWN SPACE BASE

Scientists are planning to create a space base on Earth's Moon in the future, which they will use for scientific research and as a base from which to explore deeper into outer space. Try creating your own space base, using the prompts below.

**Think about:**

- Where will you build your base?
- Will the buildings be above ground or underground? What shape will they be?
- What will the people eat? Will they grow food in space or have it transported?
- Will the people need to wear special equipment to breathe on the planet?
  - How will the people get around the planet?

*Draw your space base in here!*

What will you call your new space base?





# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'Stories of UFOs: Scene 12'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## UNDERCOVER UFO

This sneaky UFO is trying to catch us out! Can you spot the **10** differences between the two scenes? Circle them when you spot them.





# IS THERE ALIEN LIFE IN OUTER SPACE?

For reference to the Teachers' & Parents' Resources, this goes with 'The Milky Way: Scene 13'.

[www.thebigquestionsanswered.com](http://www.thebigquestionsanswered.com)



## INTO THE UNKNOWN

Outer space certainly is a fascinating place and the future of space travel and space science is very exciting, but is space travel something you would want to get involved in? Read the questions below and think about your own opinions before filling in your answers.

If you had the chance, would you travel into outer space and explore faraway planets? Why or why not?

.....  
.....  
.....

What do you think living on another planet would be like?

.....  
.....  
.....

What 3 things would you take with you on your space journey and why?

.....  
.....  
.....

What would you miss the most about Earth?

.....  
.....  
.....





# **MORE FUN ASTROBIOLOGY ACTIVITIES**

## **COLOURING SHEETS & MORE!**

The following activities aren't based on any specific scenes in the book. They can be used on their own or alongside the book as extra activities.

# FIND THE SCIENTIST

There are lots of different scientists below. Can you find the astrobiologist?  
Circle them when you find them - there's only one!



# MATCH THE SHAPE

Can you match each shadow to the correct picture? Draw a line to connect them.



# SIMPLE SUMS

Below are three objects which represent different numbers.

Work out the sum based on what each object represents and write your answers in the boxes.



= 1



= 3



= 4



+



-



+



=



-



+



=



+



+



-



=



+



+



+



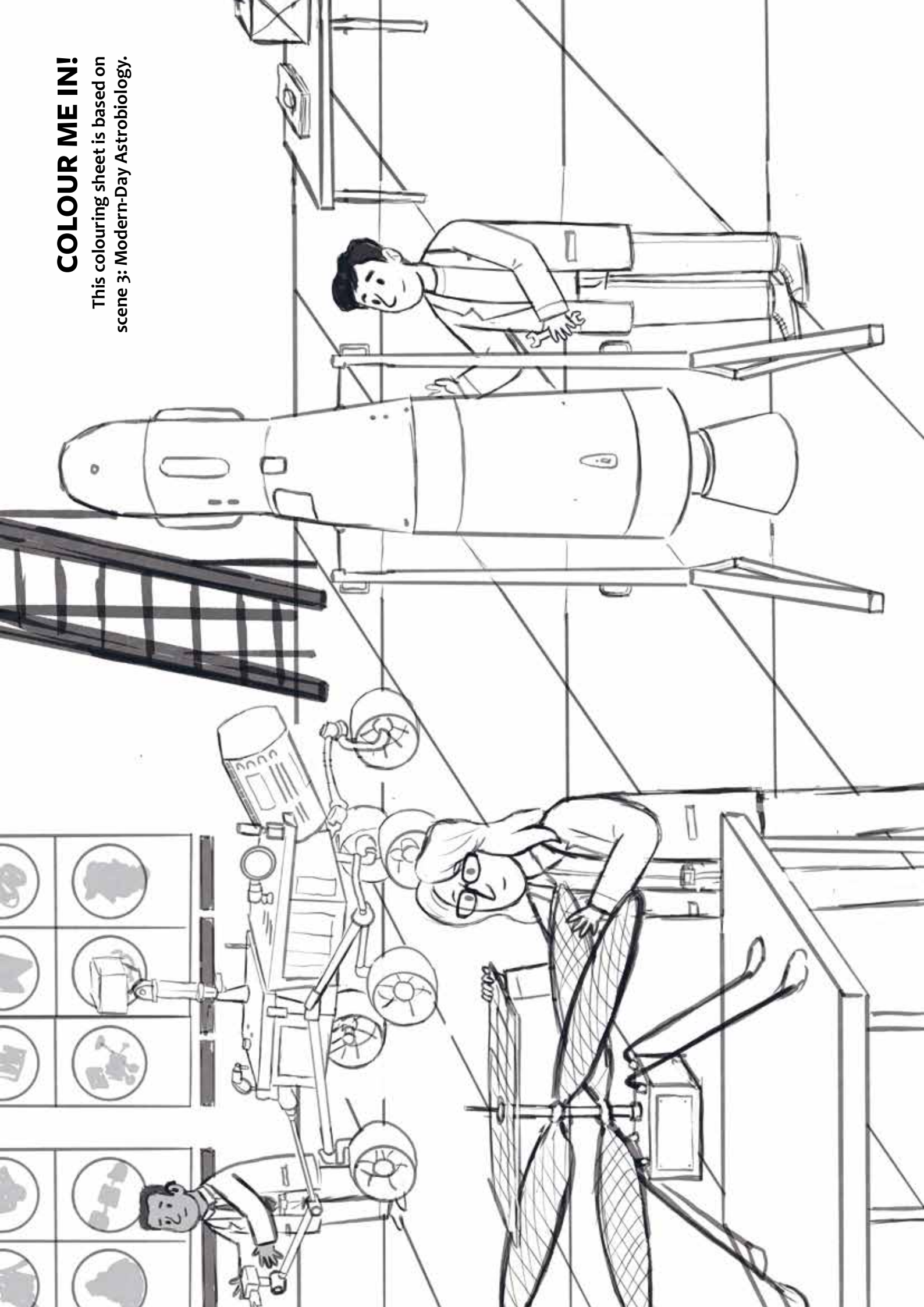
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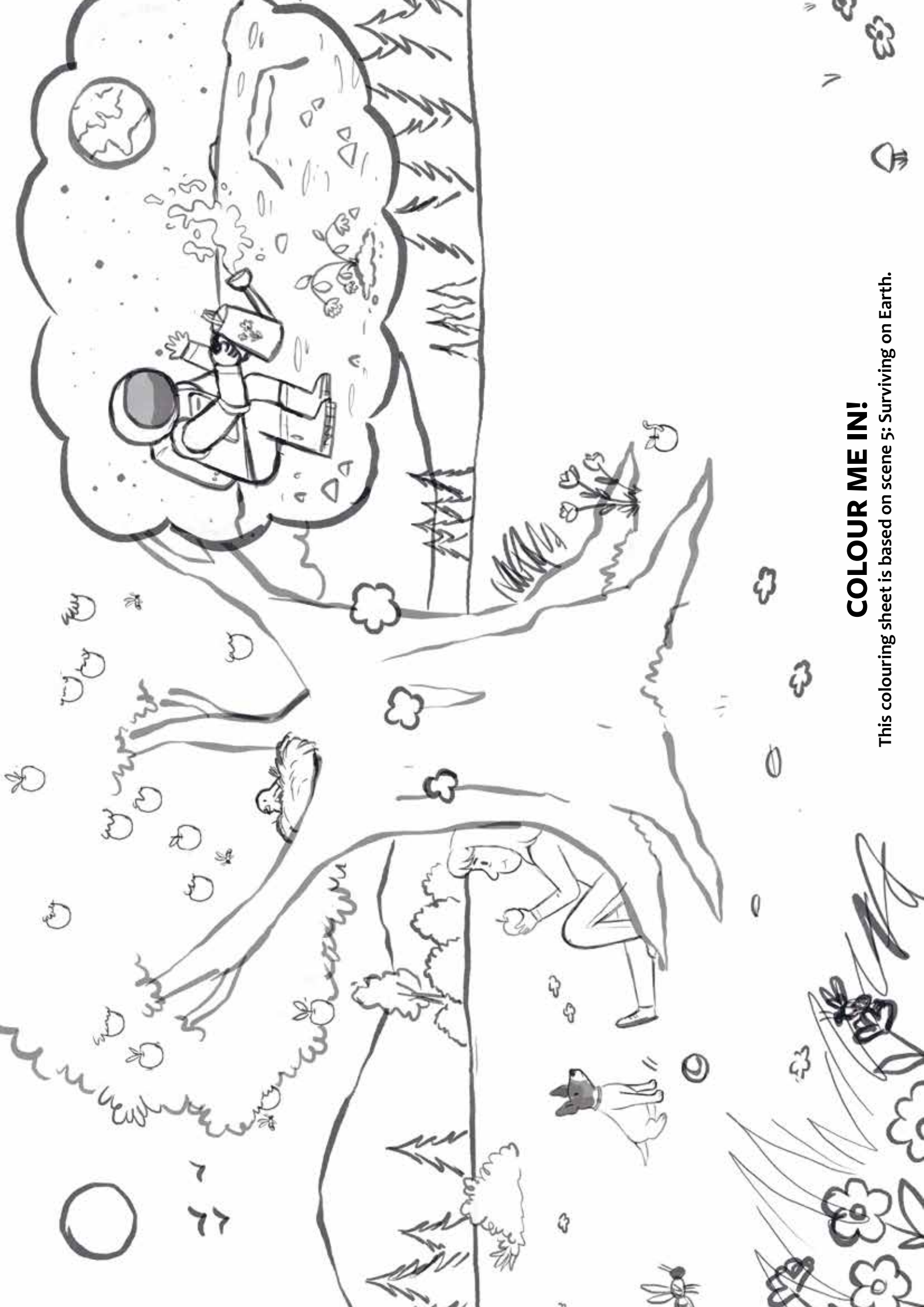


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# COLOUR ME IN!

This colouring sheet is based on scene 3: Modern-Day Astrobiology.



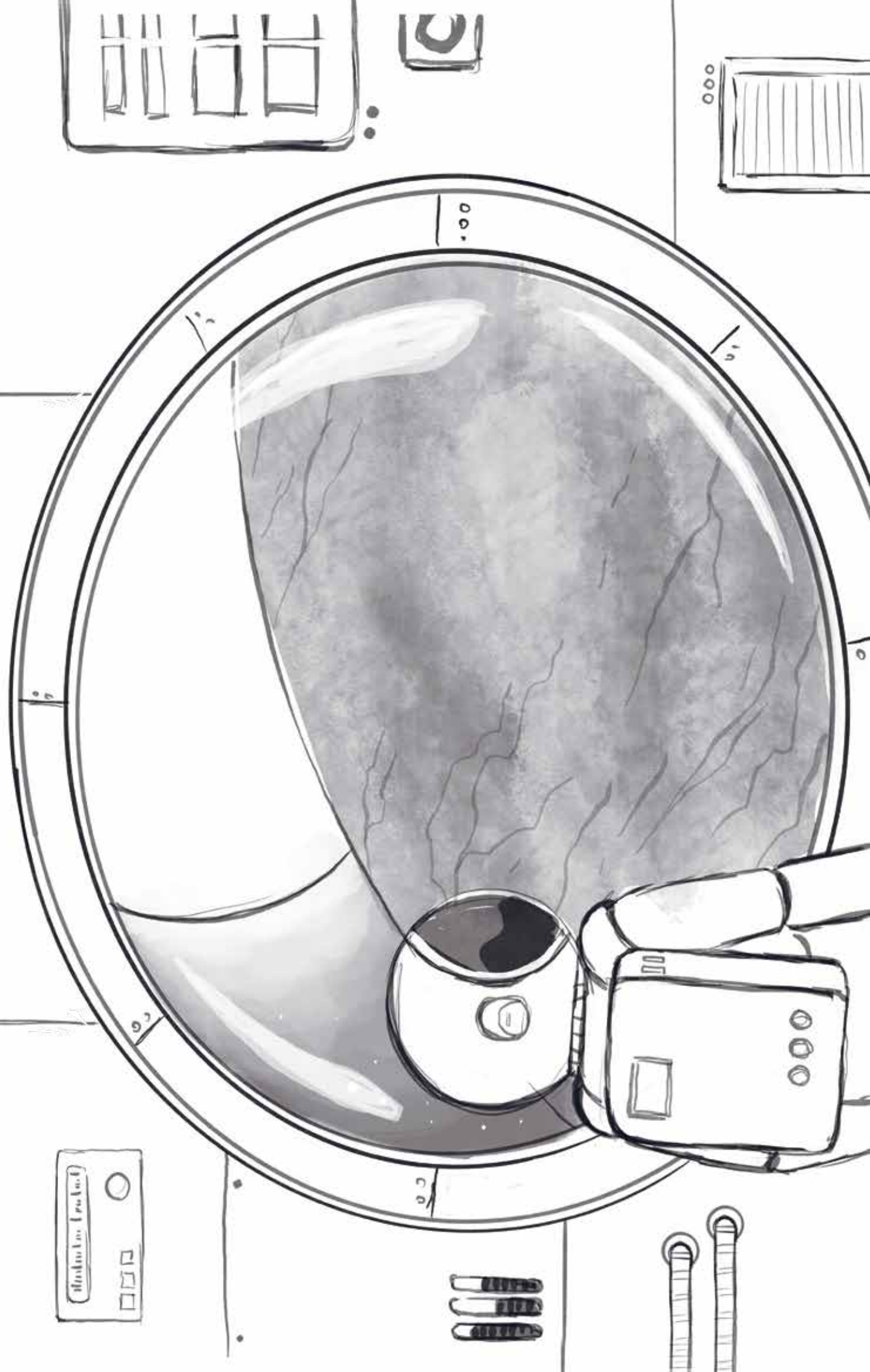


# COLOUR ME IN!

This colouring sheet is based on scene 5: Surviving on Earth.

# COLOUR ME IN!

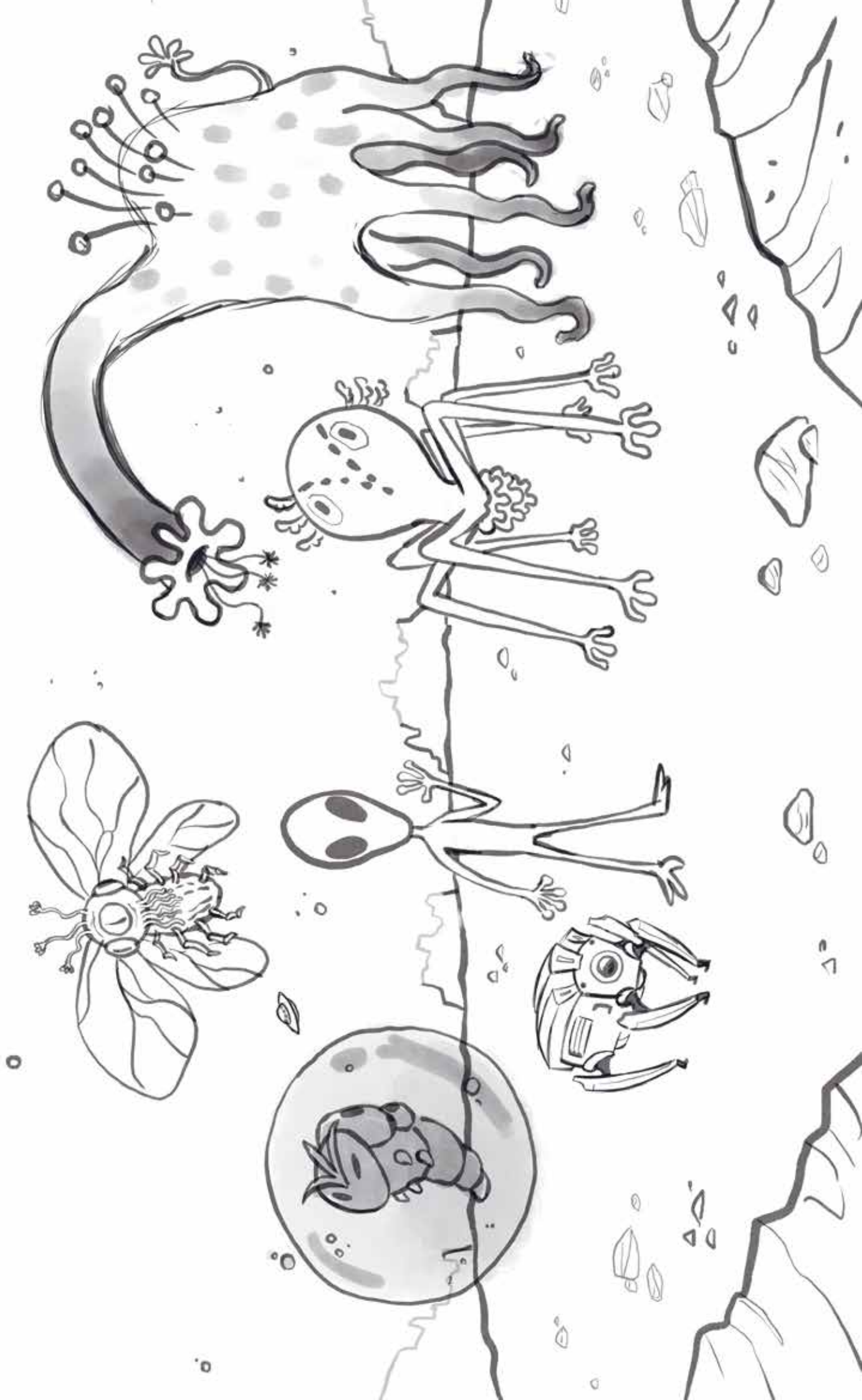
This colouring sheet is based on scene 6: The Habitable Zone.





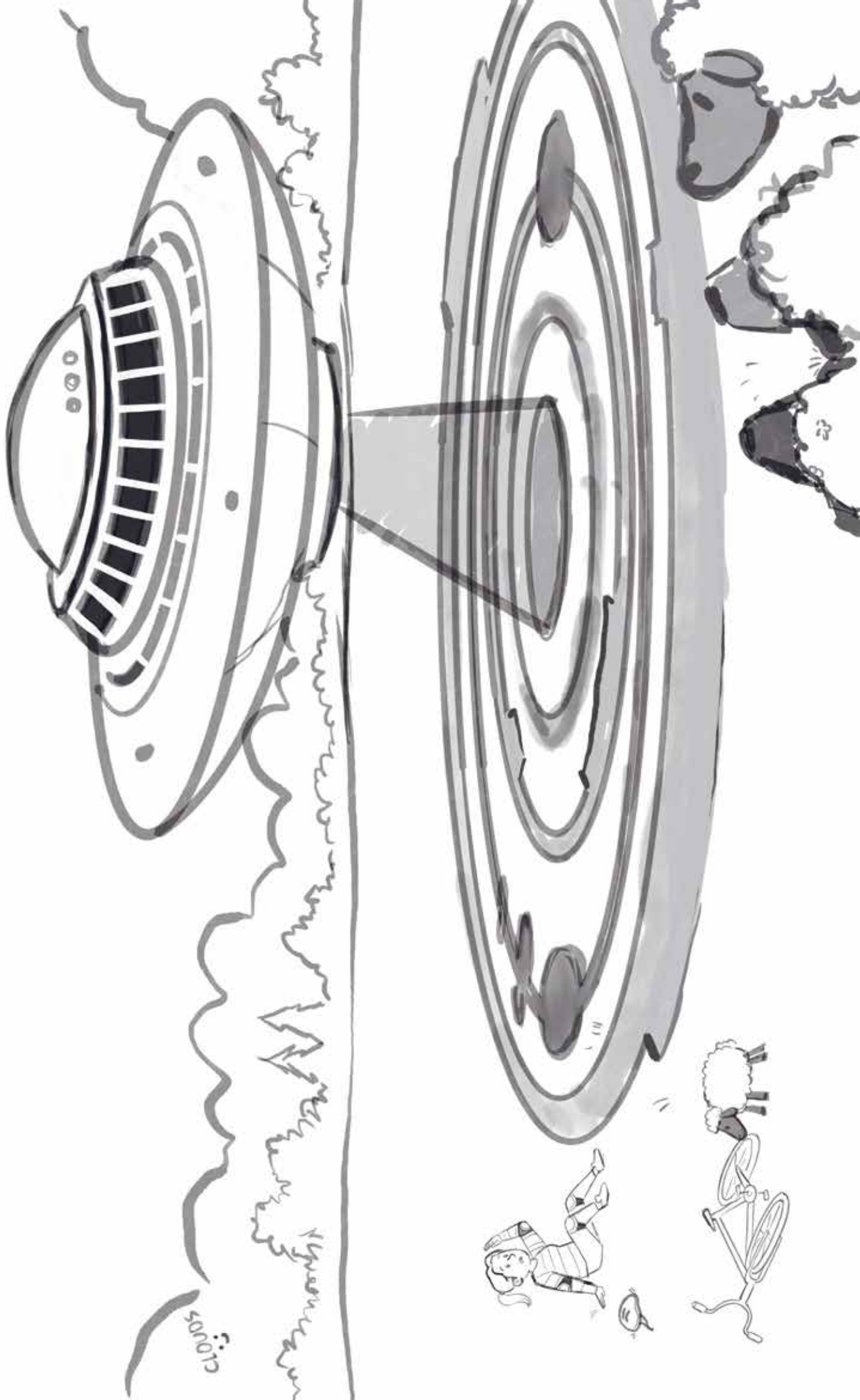
# COLOUR ME IN!

This colouring sheet is based on scene 9: Imagining Alien Life.



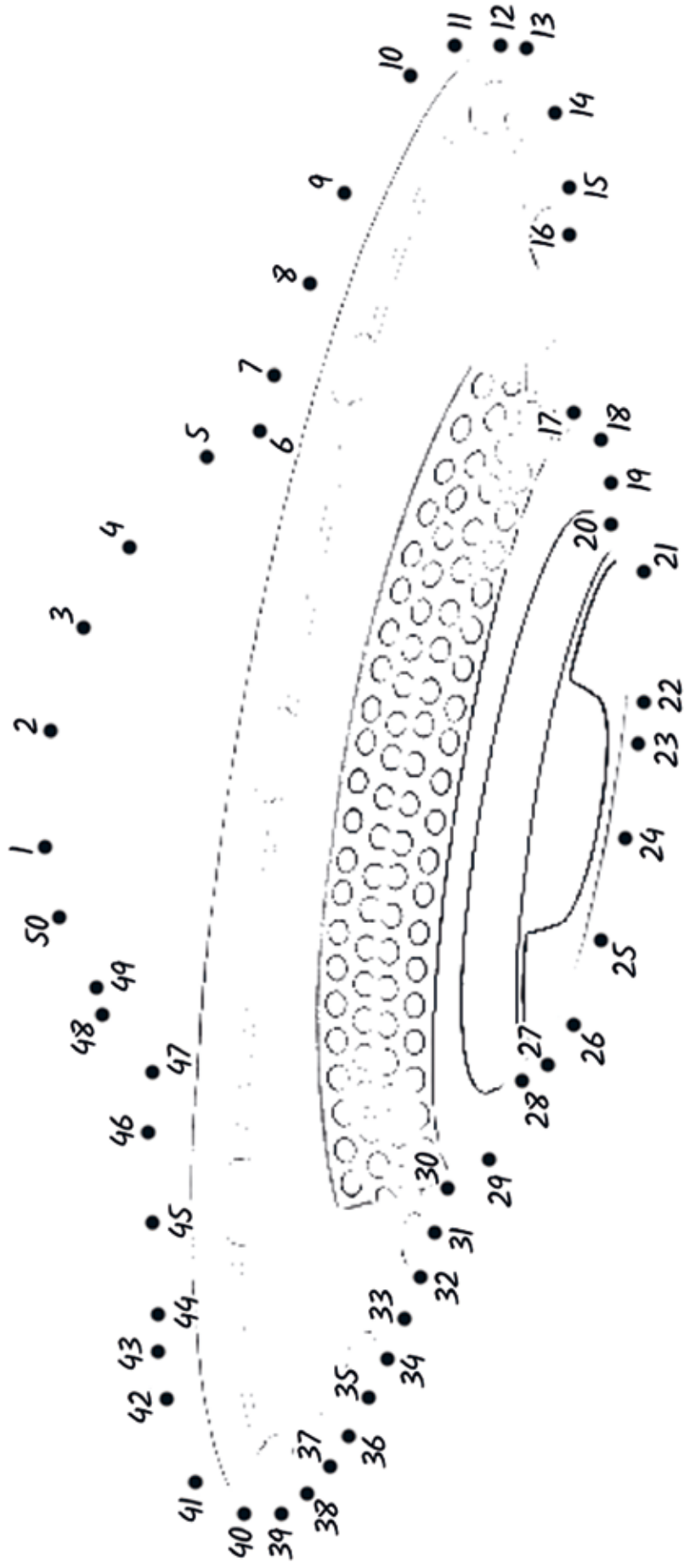
# COLOUR ME IN!

This colouring sheet is based on scene 12: Stories of UFOs.



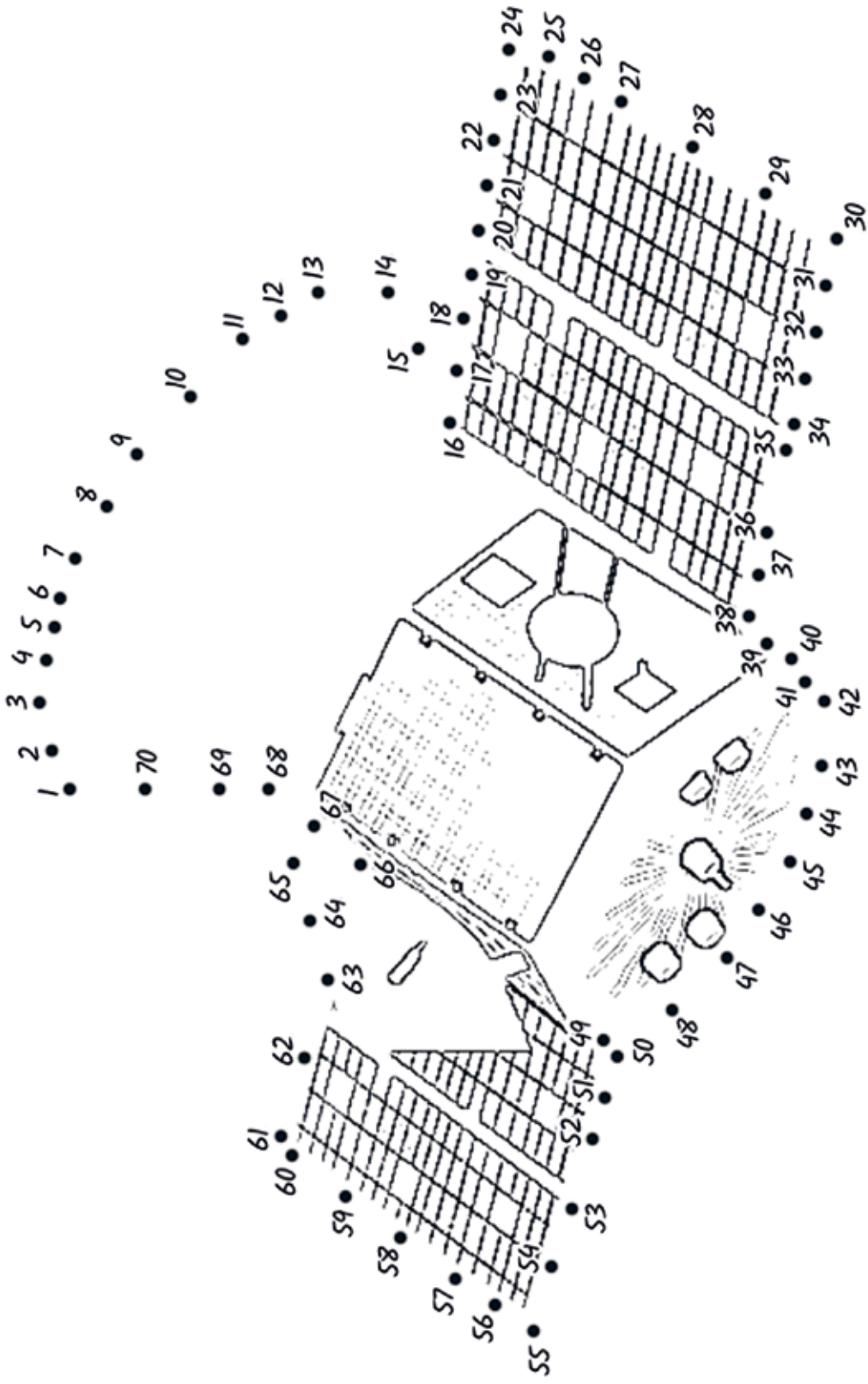
# DOT-TO-DOT

Starting from 1, draw a line connecting the numbers to create a picture. Why not colour it in afterwards?



# DOT-TO-DOT

Starting from 1, draw a line connecting the numbers to create a picture. Why not colour it in afterwards?



# **YOUNG ASTROBIOLOGISTS' ACTIVITY ANSWERS**

Find the answers to the activities on the following pages.

# ACTIVITY ANSWERS

Check your answers against the correct answers below!

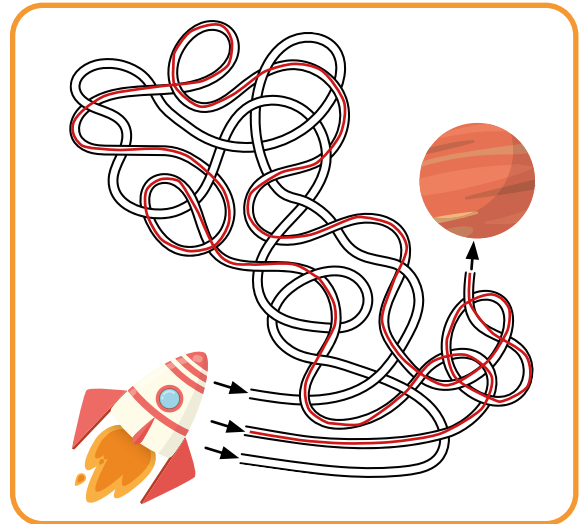
## OUTER SPACE MIX-UP ANSWERS

The answers below are for the 'match up' activity on page 4.



## LOST IN OUTER SPACE ANSWERS

The answers below are for the 'maze' activity on page 6.



## OUR PLACE IN SPACE ANSWERS

The answers below are for the 'fill in the blanks' activity on page 8.

1. The planet that we live on is called **Earth**.
2. It is the third planet from the **Sun**. It comes after Mercury and Venus, but before **Mars**.
3. Unlike some of the other planets in the solar system, Earth only has one **moon** which orbits the planet, affecting the tides and presenting an exciting opportunity for space travel.
4. Earth is within our solar system's "habitable **zone**". Its distance from the Sun means it's not too hot and not too cold – it's just right for living things.
5. It is currently the only planet in the **universe** that is known to hold life.

## WORDS LOST IN OUTER SPACE ANSWERS

The answers below are for the 'word search' activity on page 9.



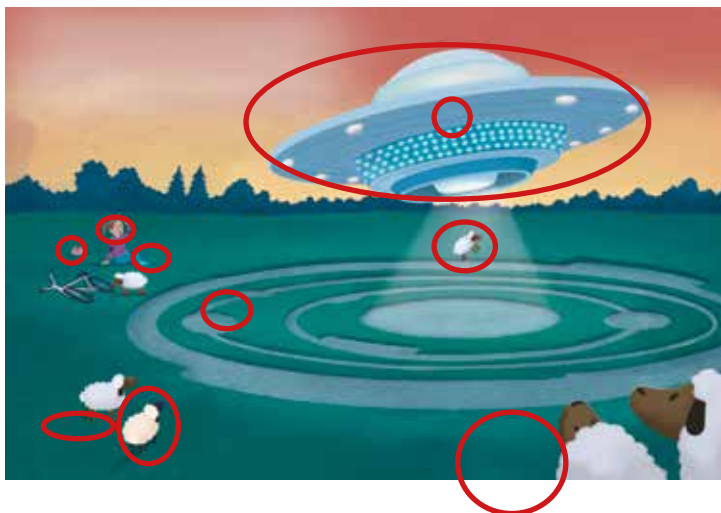
## A MESSAGE FROM SPACE! ANSWERS

The answers below are for the 'decoding challenge' activity on page 14.



## UNDERCOVER UFO ANSWERS

The answers below are for the 'spot the difference' activity on page 15.



# EXTRA ACTIVITY ANSWERS

Check your answers against the correct answers below!

## FIND THE SCIENTIST

The answers below are for the activity on page 19.



















## MATCH THE SHAPE

The answers below are for the activity on page 20.



## SIMPLE SUMS

The answers below are for the activity on page 21.

	+		-		+		=	<b>9</b>		
	-		+		=	<b>6</b>				
	+		+		-		=	<b>8</b>		
	+		+		+		-		=	<b>2</b>