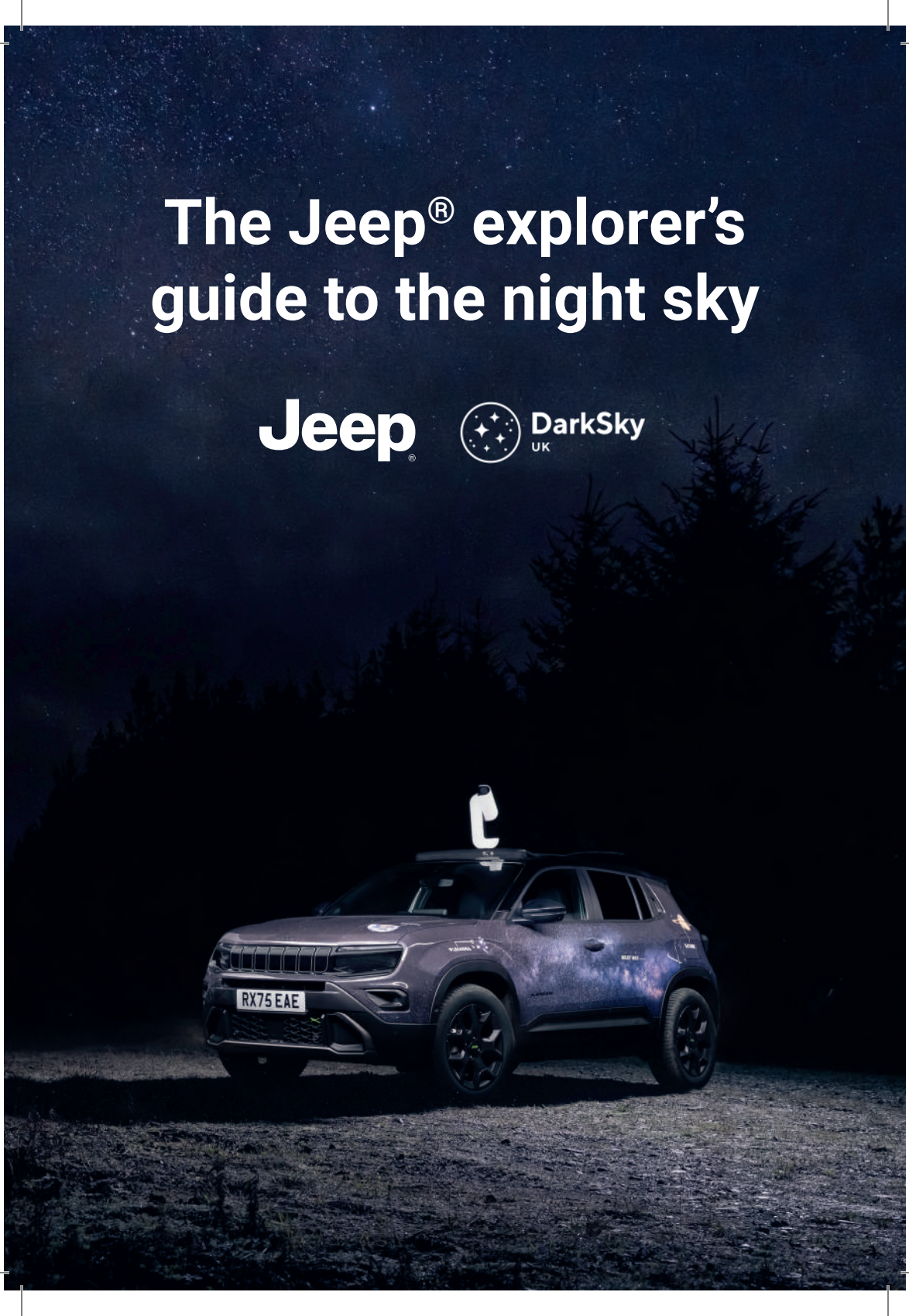
The Jeep® explorer's guide to the night sky

Jeep®

DarkSky UK



Contents

Go anywhere, do anything - that's the Jeep motto	3
Did you know?	4
Top 5 tips for stargazing	5
Constellations & how to spot them	6
Places to stargaze	8
Stargazing locally & reducing light pollution	10
Astronomy and space word search	11
Join the dots	12
Answers	13
The solar system	14

This handy downloadable guide is filled with tips and tricks for budding stargazers and those curious about the night sky.

Explore. Stargaze. Be more Jeep.

Go anywhere, do anything – that's the Jeep motto

Embodying their philosophy of freedom and adventure, Jeep has launched a one-off concept, the Avenger Stargazer, a unique Avenger 4xe designed for exploring the night sky. Featuring all the equipment required to see the wonders of the night sky, including a smart telescope fitted into the sunroof, Avenger Stargazer offers the adventure and exploration synonymous with Jeep.

Avenger Stargazer was born out of a collaboration between Jeep and Dark Sky UK, a non-profit organisation dedicated to protecting the night sky. Together their mission is simple: encourage people to get outdoors and explore the night sky responsibly.

The new concept from Jeep is equipped with a smart telescope mounted on the vehicle's sunroof, which can be controlled by a smart device from the comfort of inside the car.

A custom-built, integrated cabinet fitted into the boot houses all the essential kit needed for a night exploring the cosmos, the telescope and mount, binoculars, red-light head-torches and touch-screen gloves

Did you know?

Did you know, according to research carried out by Jeep on the UK's knowledge of the night sky...

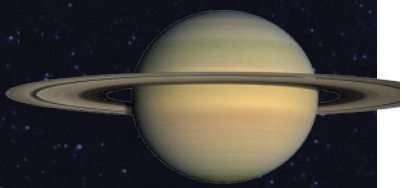
- **49%** of UK adults did not, or could not, name the Milky Way as the galaxy which is home to planet Earth
- **36%** of Brits admit they would not be able to identify any constellations
- **38%** have no idea what a supernova is

Despite this...

- **44%** of those polled know exactly what light pollution is
- **53%** believe that local councils should do more to tackle light pollution in their local area

And...

- **73%** of UK adults are interested in learning more about the night sky
- **53%** do stargaze, but with the majority (38%) only doing so occasionally



SATURN

JUPITER

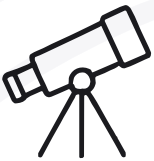
MOON

Top 5 tips for stargazing

Here are some quick-fire tips to help you on your stargazing journey:

1) Give your eyes time to adjust to the dark – 'dark adaptation' takes about half an hour, and you'll be able to see lots more stars.

2) The best times to stargaze are on the days before, during and just after a new Moon – the Moon is not visible then, meaning its light doesn't wash out the fainter stars.



3) Use the naked eye in addition to equipment – Mars, Jupiter, Venus and Saturn are visible to the naked eye. You can distinguish planets from stars by seeing whether they 'twinkle'.

4) Search for celestial events – events such as meteor showers and eclipses enhance the experience.

5) Avoid areas affected by light pollution as much as possible – more information on this can be found on page 10.

Constellations
(& how to spot them)

Now you're ready to stargaze, so what do you need to look for?

An **asterism** is a small pattern of stars found within a constellation.

A **constellation** is an officially recognised pattern of stars that often looks like a particular shape.

One of the most famous constellations in the northern hemisphere is the **Ursa Major**, commonly known as the **Big Bear**, and features on the **Avenger Stargazer**...

Interesting facts:

- In ancient times, constellations were used to help keep track of the calendar; this was very important so that people knew when to plant and harvest crops
- Ursa Major (Big Bear) is visible all year round in the UK
- The Plough, is an asterism found within Ursa Major and today is known as The Saucepan with four stars making the pan and the remaining three forming the handle

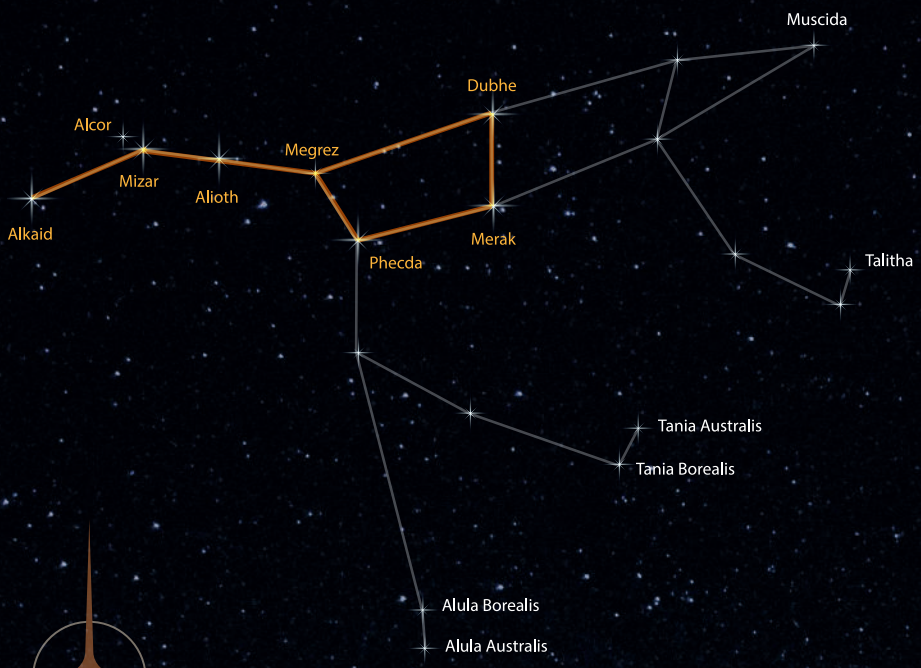
The Avenger Stargazer is wrapped in a luminescent night sky livery, displaying planets and well-known constellations

Step 1) Follow the invisible line from Megrez to Dubhe (this is the head of the bear)

Step 2) Continue along the same distance from Dubhe until you reach a fainter star (this is the ear of the bear)

Step 3) Follow this straight line for the same distance to reach the bear's nose

The Plough



Ursa Major

Places to stargaze

Officially recognised by Dark Sky UK

There are many publicly accessible places to stargaze in the UK - considering widespread light pollution, this may come as a surprise!

Most of the sites listed here are Dark Sky Discovery Sites, places officially recognised as excellent locations for stargazing and can be found across the country...

Northern Scotland
- North Ronaldsay Dark Sky Island, Orkney
- Tomintoul and Glenlivet – Cairngorms, Scottish Highlands
- Isle of Rum, Inner Hebrides
- Isle of Coll, Inner Hebrides

Southern Scotland
- Galloway Forest Park, Dumfries and Galloway
- Moffat village, River Annan

Northern Ireland
- OM Dark Sky Park & Observatory, Omagh, County Tyrone

Northeast England
- Northumberland National Park and Kielder Water & Forest Park, Northumberland
- North York Moors National Park, North Yorkshire

Northwest England
- Yorkshire Dales National Park, West Yorkshire

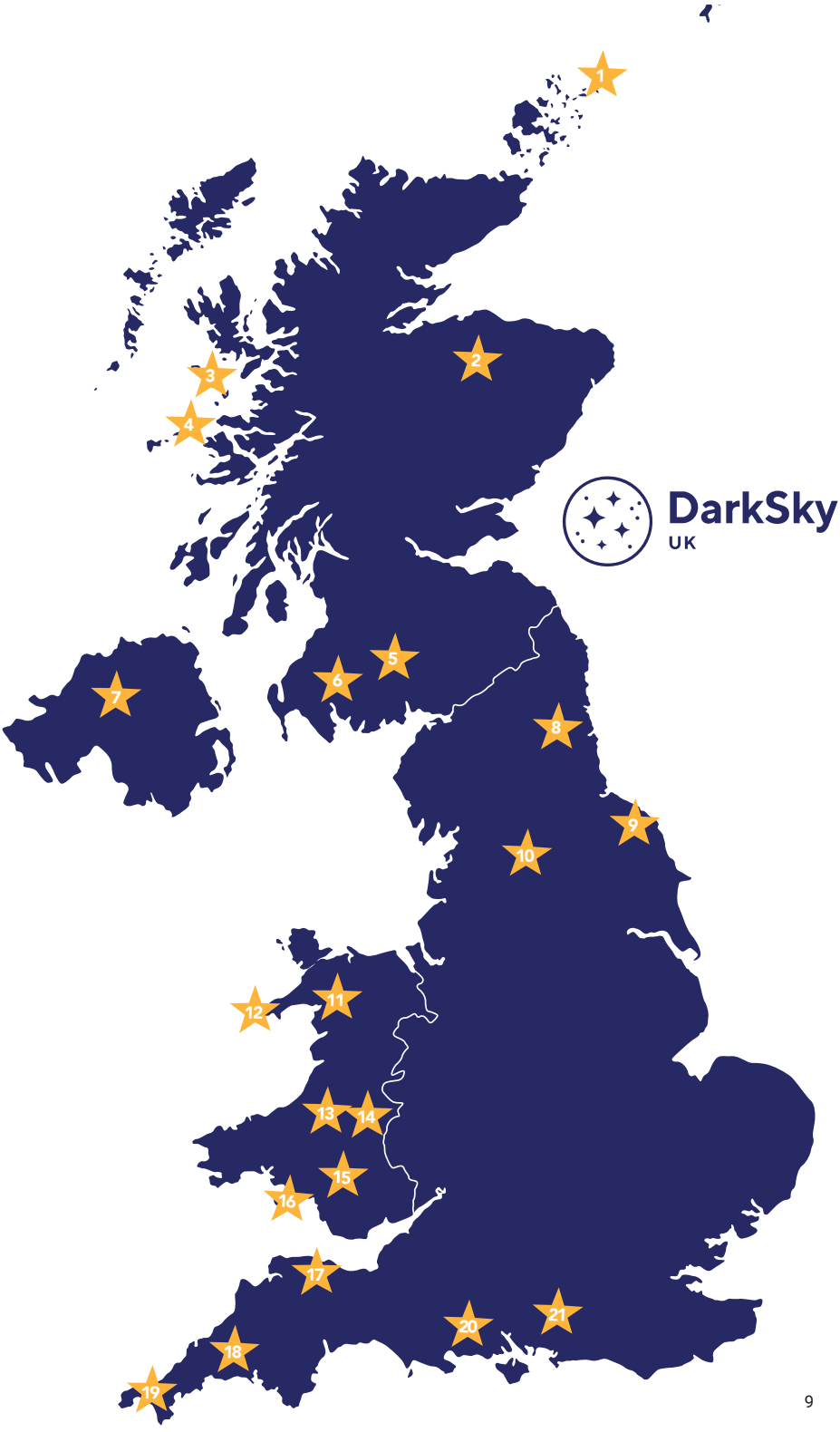
North Wales
- Eyri National Park, Snowdonia
- Ynys Enlli – Bardsey Island, Gwynedd

Central Wales
- Elan Valley Estate, central Wales
- Presteigne & Norton Dark Sky Community, central east Wales

South Wales
- Bannau Brycheiniog National Park, Brecon Beacons
- Gower National Landscape, Swansea

Southwest England
- Exmoor National Park, Somerset and Devon
- Bodmin Moore Dark Sky Landscape, Cornwall
- West Pinweth, Cornwall

Central southern England
- Cranborne Chase National Landscape, Wiltshire
- Moore's Reserve, South Downs National Park, Sussex and Hampshire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DarkSky
UK

Stargazing locally & reducing light pollution

If there isn't a Dark Sky site near you, you can always stargaze locally, in nearby parks or from your own garden.

However, you may come up against a major barrier - light pollution. Light pollution is the human-made alteration of outdoor light levels from those occurring naturally. It occurs when too much artificial light brightens the night in the wrong places.

As well as blocking our view of the stars, light pollution harms wildlife, affects our health and wastes energy.

Top tips for reducing your light pollution footprint:

1) Use light only when and where it's needed - always point it downwards

2) Use motion sensors or timers instead of leaving lights on all night

3) Shield your outdoor lights or angle them down – this keeps the light from spilling into the sky

4) Close blinds and curtains after dark – this stops light escaping outside

Astronomy and space word search

Words can be found in any direction (including diagonals) and can overlap each other. Use the word bank below.

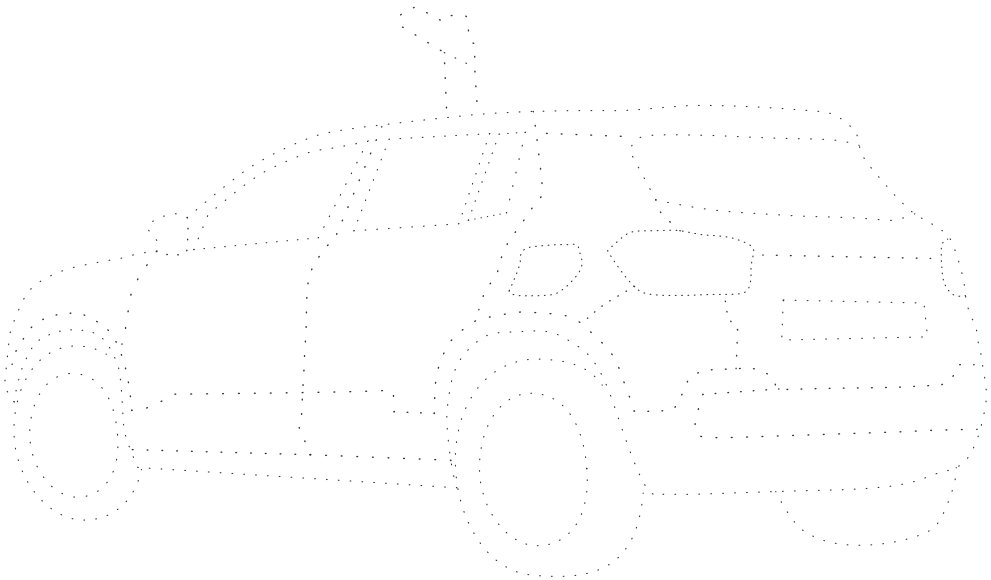
M Q B S L W B F Z X N C P Q S D R G B Y
Q R E Y U S P A C E G M O G V D A Z S C
J V A M O O N V Y P L J Q M R M T K K S
B F X E R E H P S O M T A T E A S X F N
K R R C Y X H H I B Z C M T N T V C W C
G R E E X E V M C V H C E H Q T O I Q G
Z A E S E I R D I Z D O J N O N V N T Z
O W L G P D Y U Y L R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

Word Bank

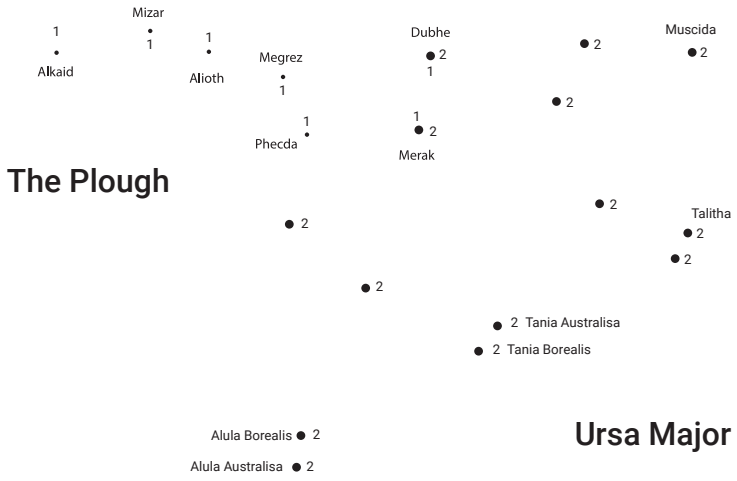
ADVENTURE
JEEP
ECLIPSE
MILKYWAY
ROTATION
STAR
COMET
MOON
ATMOSPHERE
GRAVITY
ASTEROID
AVENGER
SPACE
LUNAR
PLANET
SEASONS
FREEDOM
GALAXY
METEOR
ORBIT
STARGAZER
CONSTELLATION
OUTDOORS
SOLARSYSTEM

Join the dots

1 Join all the dots together to make your very own Jeep Avenger Stargazer.

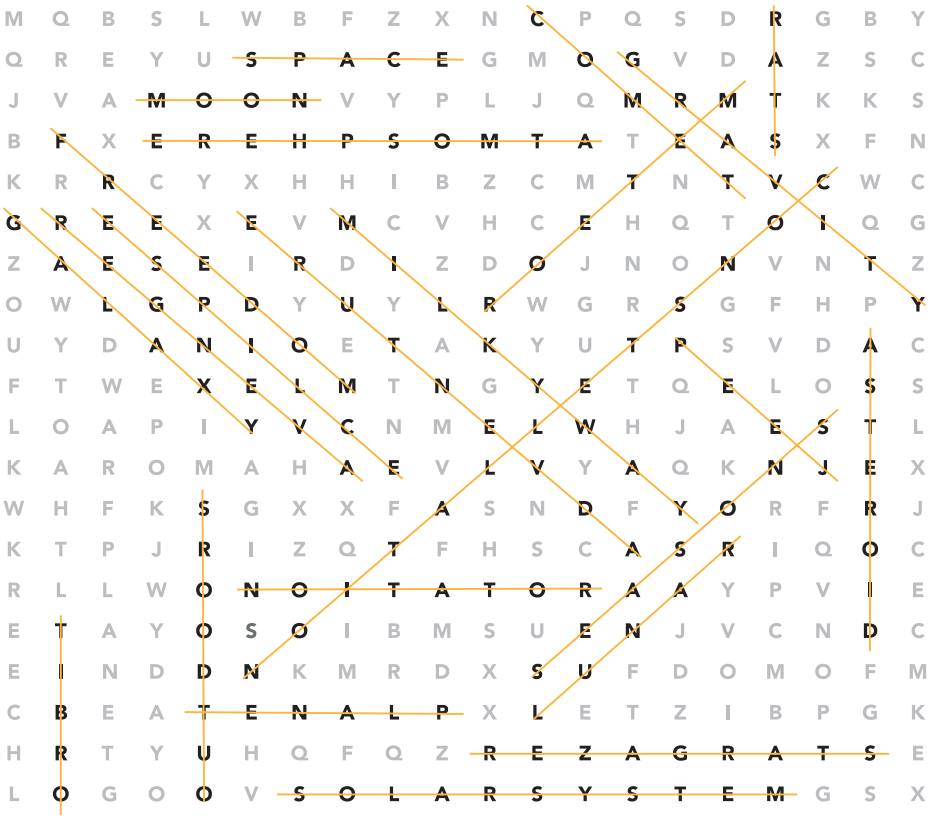


2 Can you create the Plough and Ursa Major from memory?



Astronomy and space word search

The answers to the word search are below



Word Bank

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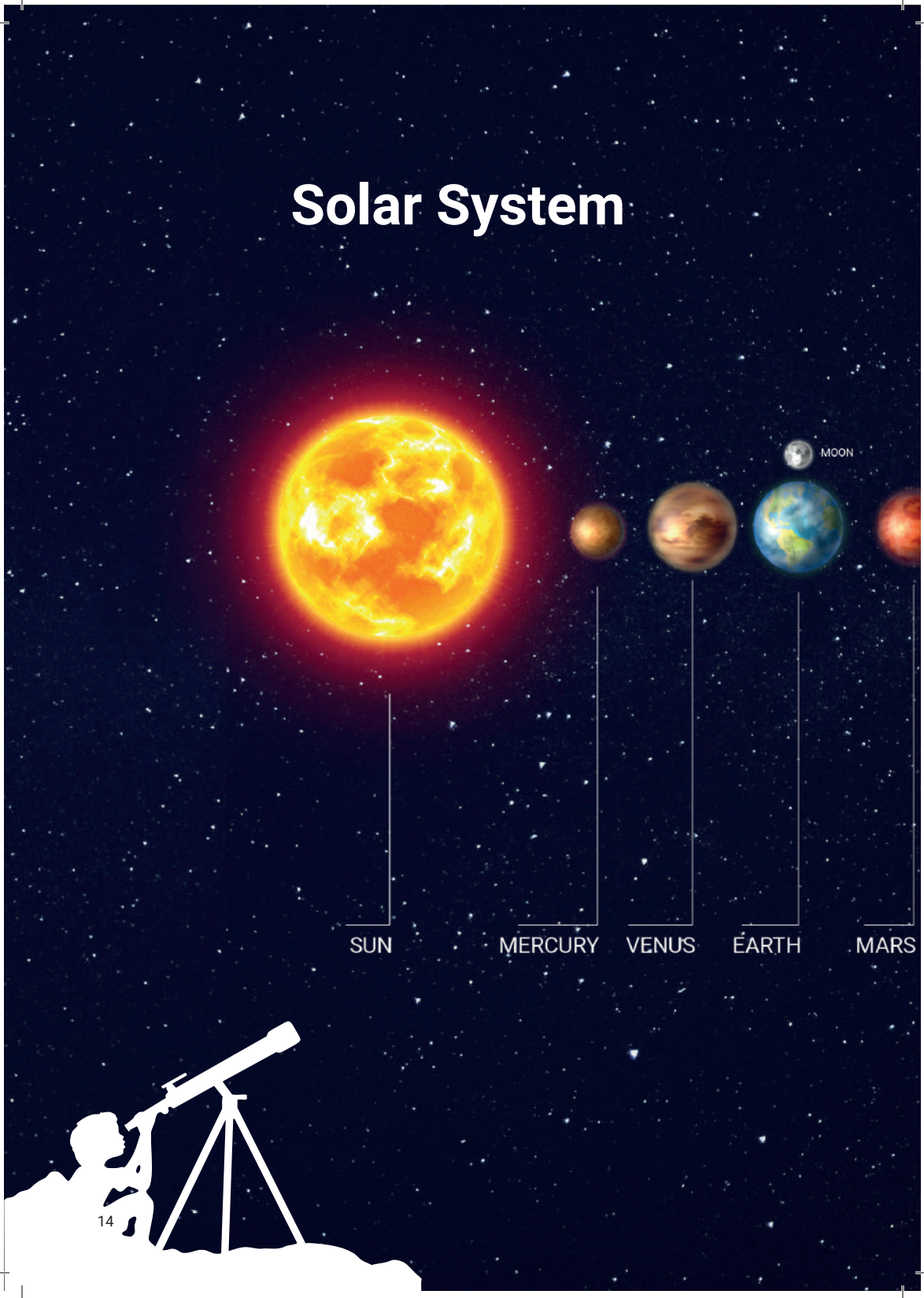
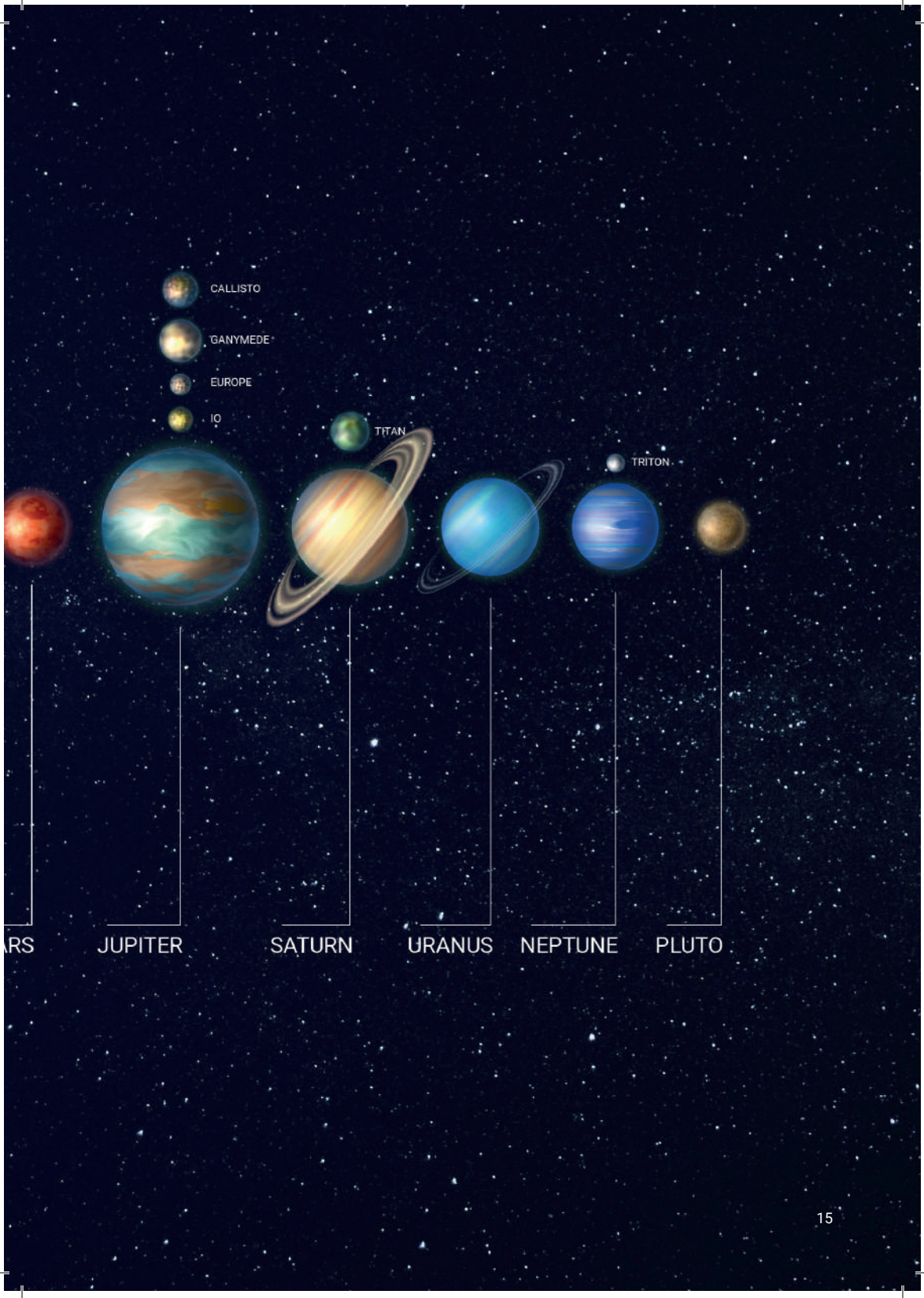
CONSTELLATION
OUTDOORS
SOLARSYSTEM

Solar System

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TITAN
TRITON
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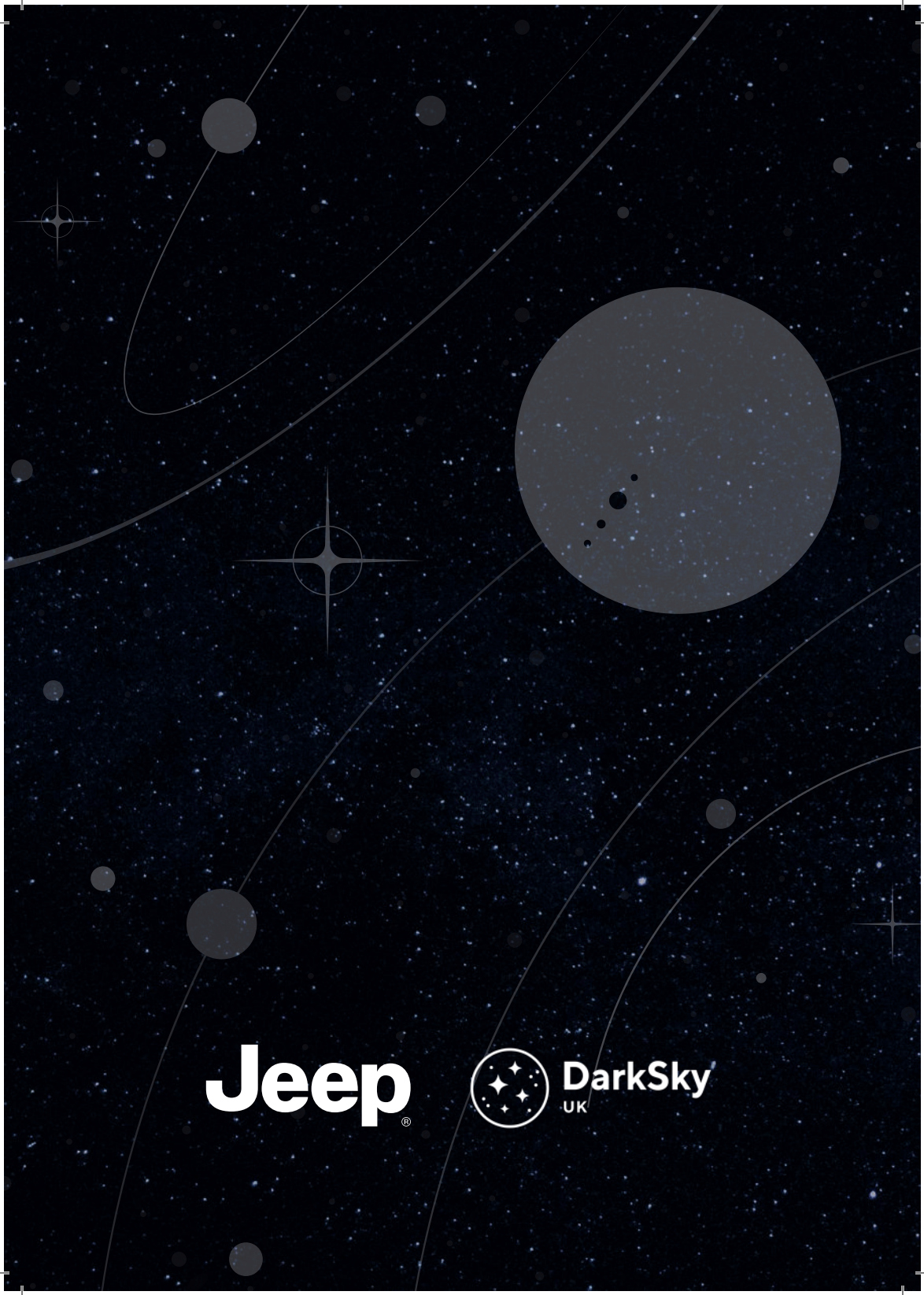
JUPITER
SATURN
URANUS
NEPTUNE
PLUTO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