

EXPLORE MORE

For more information on NASA and its Journey to Mars, visit these websites:

<http://mars.nasa.gov>

<http://marsmobile.jpl.nasa.gov>

http://www.nasa.gov/mission_pages/mars/missions/index.html

<http://mars.nasa.gov/msl/mission/communicationwithearth/communication>

http://mars.nasa.gov/mer/mission/comm_orbiters.html

http://mars.nasa.gov/files/resources/MarsAsArt_Booklet.pdf

<http://mars.jpl.nasa.gov/participate/funzone>

<http://www.nasa.gov/education>

National Aeronautics and Space Administration

NASA Headquarters

300 E Street SW

Washington, DC 20546

<http://www.nasa.gov/centers/hq>

www.nasa.gov

NP-2015-09-2084-HQ

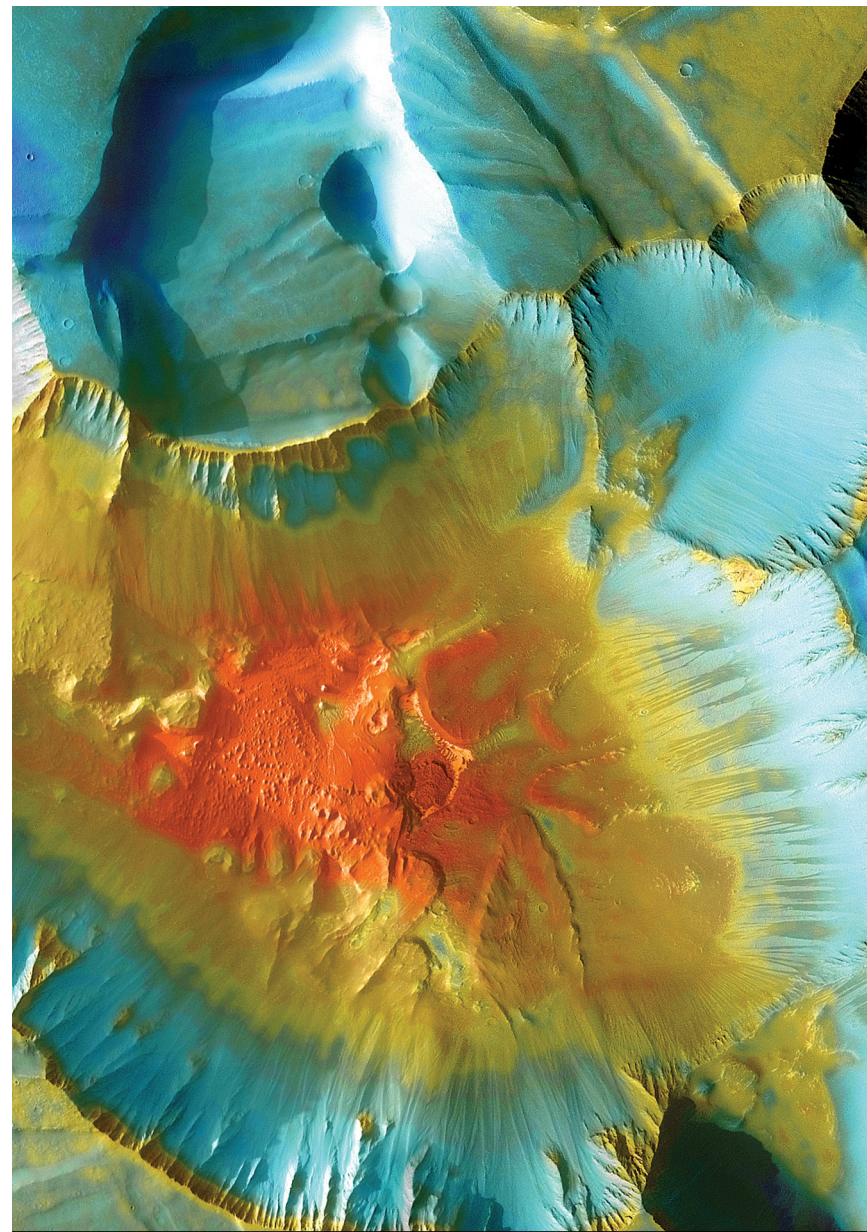
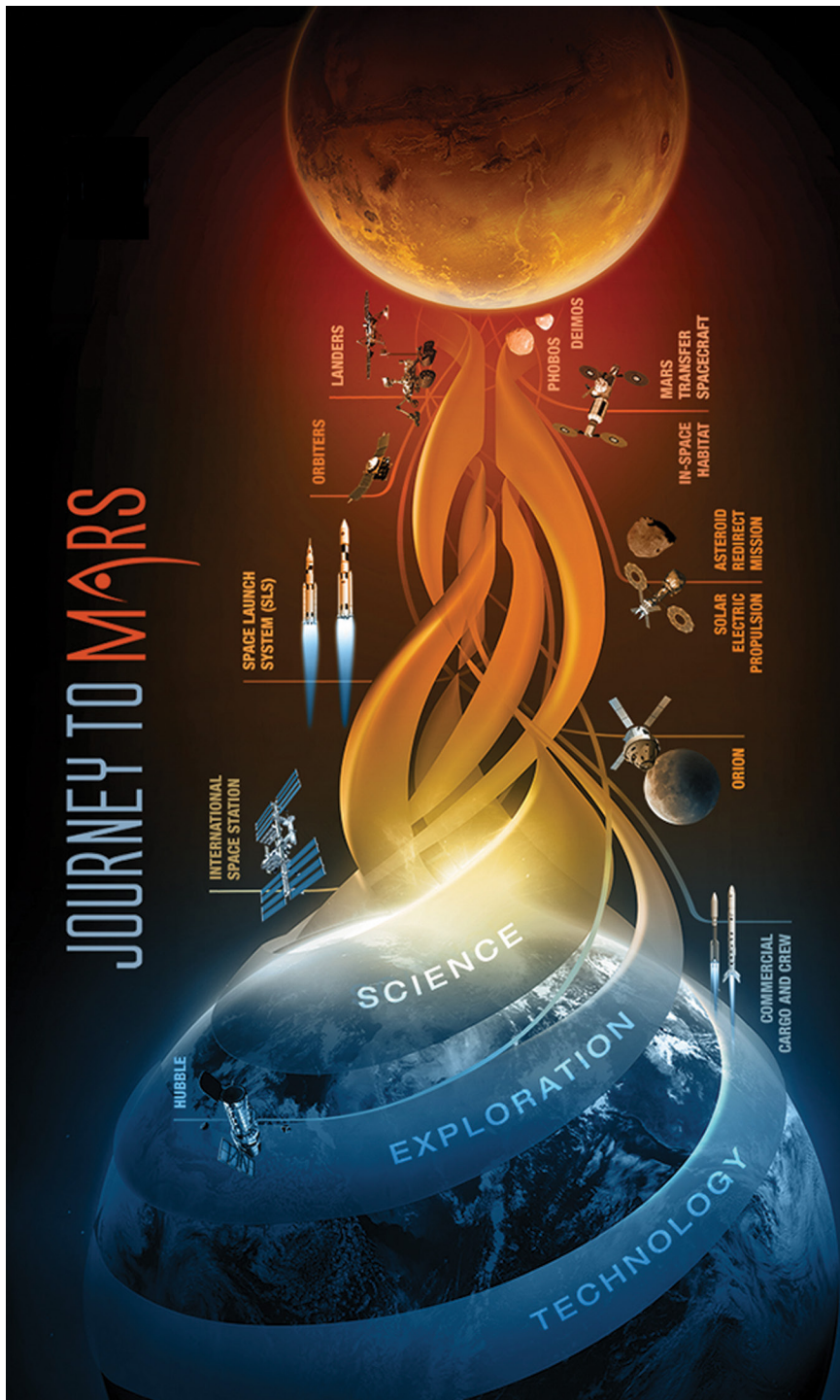
National Aeronautics and
Space Administration



Surviving and Thriving on Mars

Explorer Activities

Ages 5-12



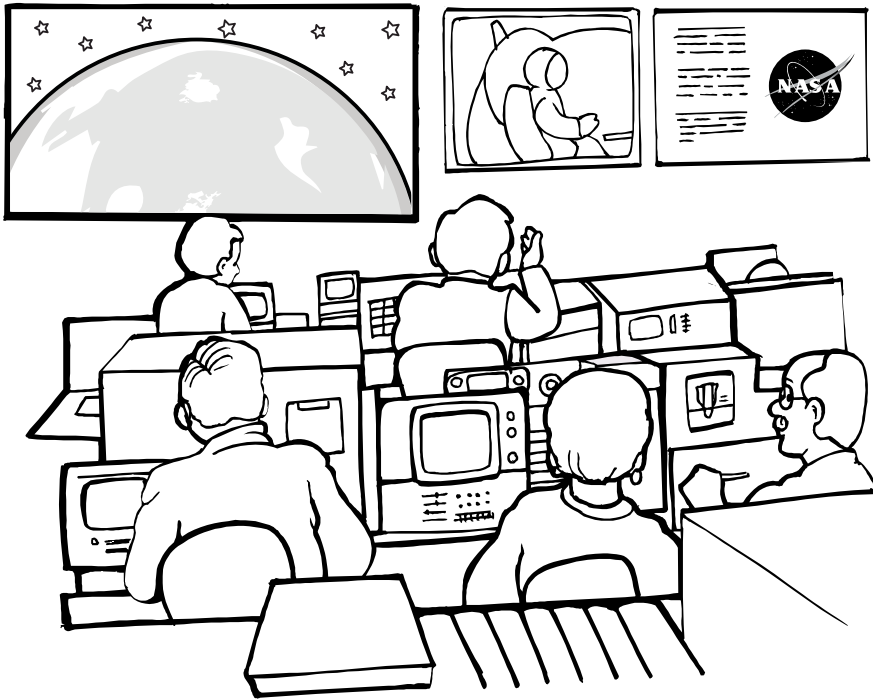
Canyon Junction on Mars

Mars canyons meet to form a depression 4,000 meters (13,000 feet) deep.

Image Credit: NASA/JPL-Caltech/University of Arizona

MISSION CONTROL FOR MARS

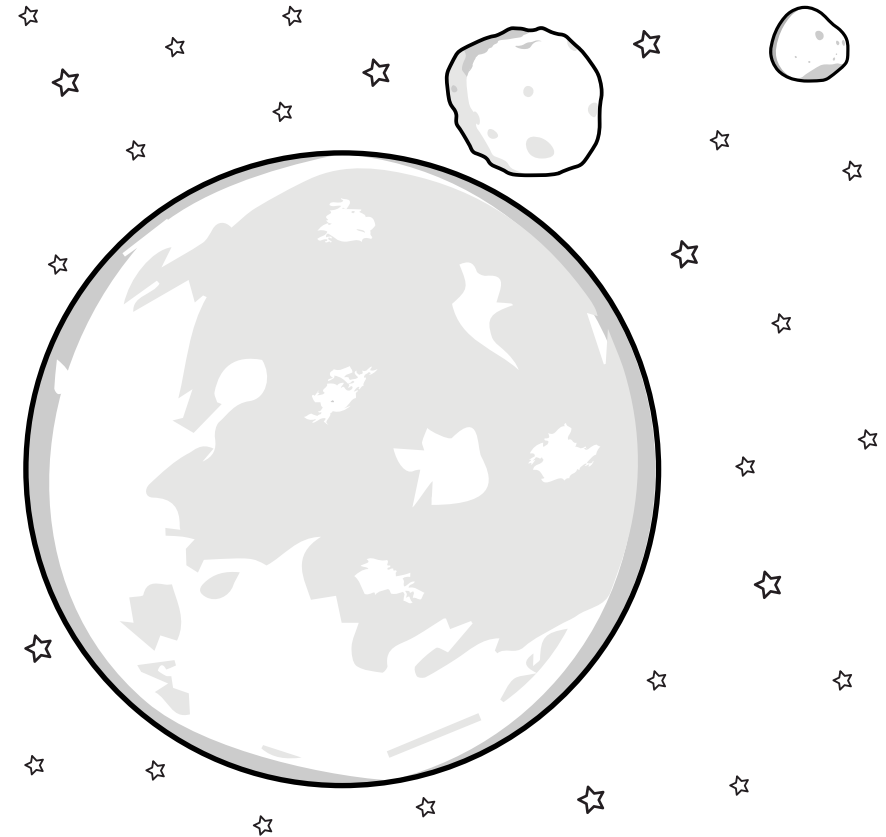
Color the operations center



The operation center and the people there will be an important part of the Mars team.

MARS FUN FACTS

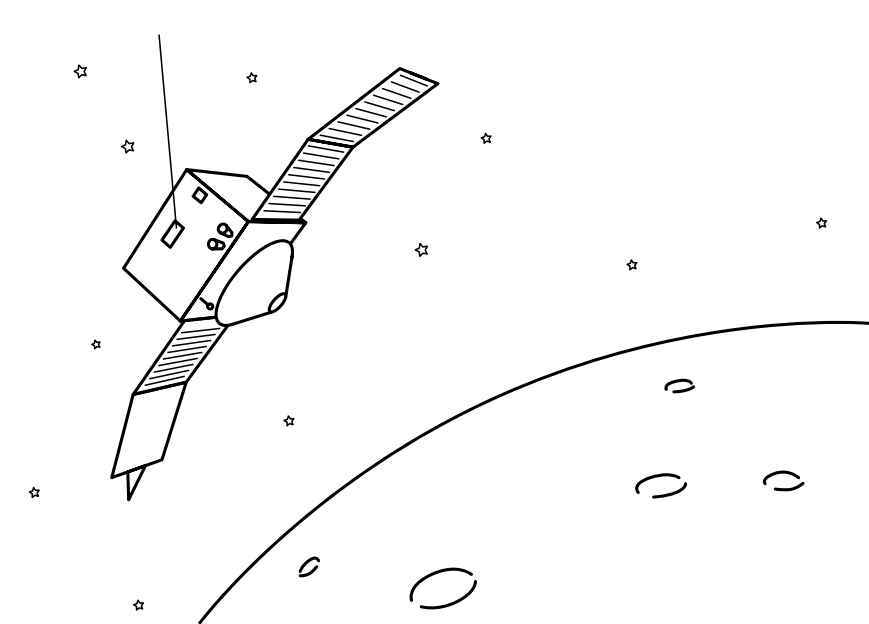
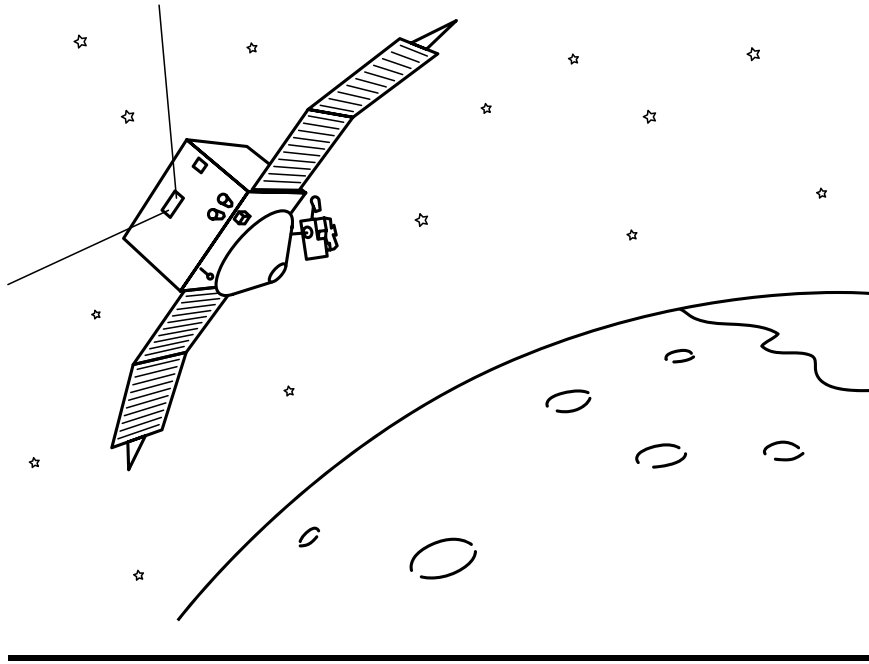
Color Mars and Mars' two Moons



- Mars is 142 million miles from the Sun.
- Mars speed in orbiting the Sun is 14.5 miles per second.
- Mars diameter is 4,220 miles and Mars tilt of axis is 25 degrees.
- The length of year for Mars is 687 Earth Days.
- The length of day for Mars is 24 hours 37 minutes.
- Mars gravity is 0.375 that of Earth.
- Mars temperature is average: -81 degrees F.
- Mars atmosphere is mostly carbon dioxide, some water and vapor.
- Mars has two moons Phobos and Deimos.

MAVEN AT MARS

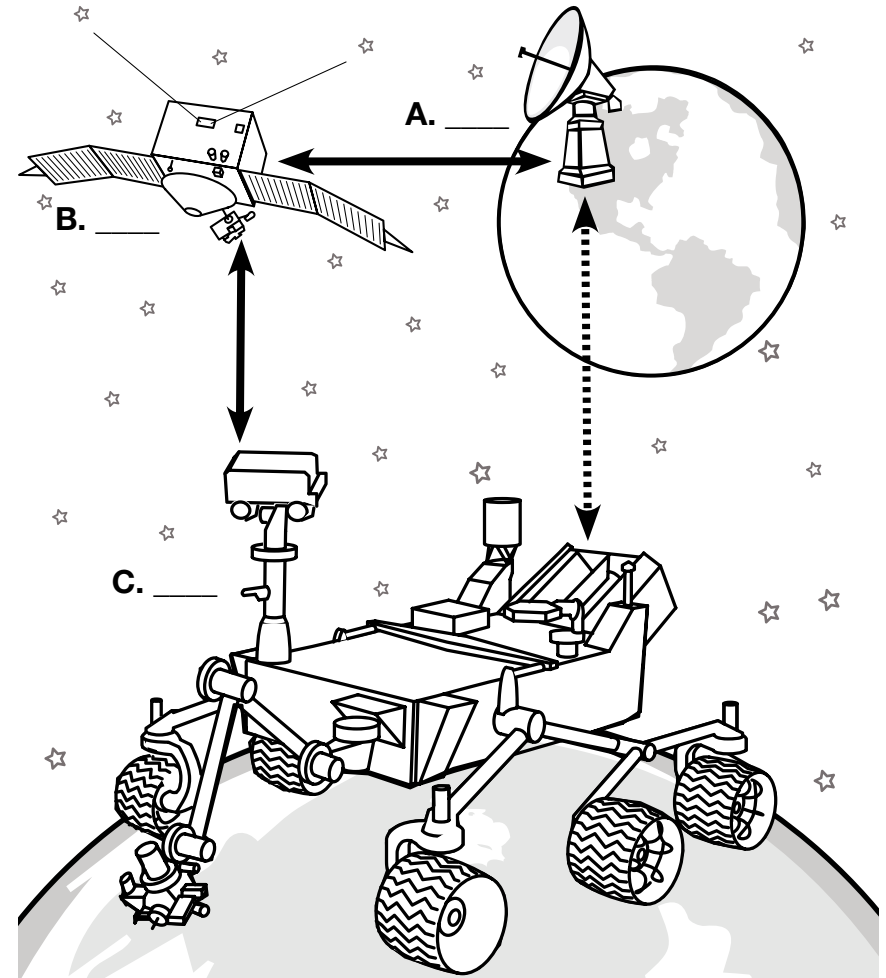
Find and circle 8 things that are different



COMMUNICATING WITH MARS

Match the number with the correct communication device

1. Orbiter 2. Rover 3. Deep Space Network

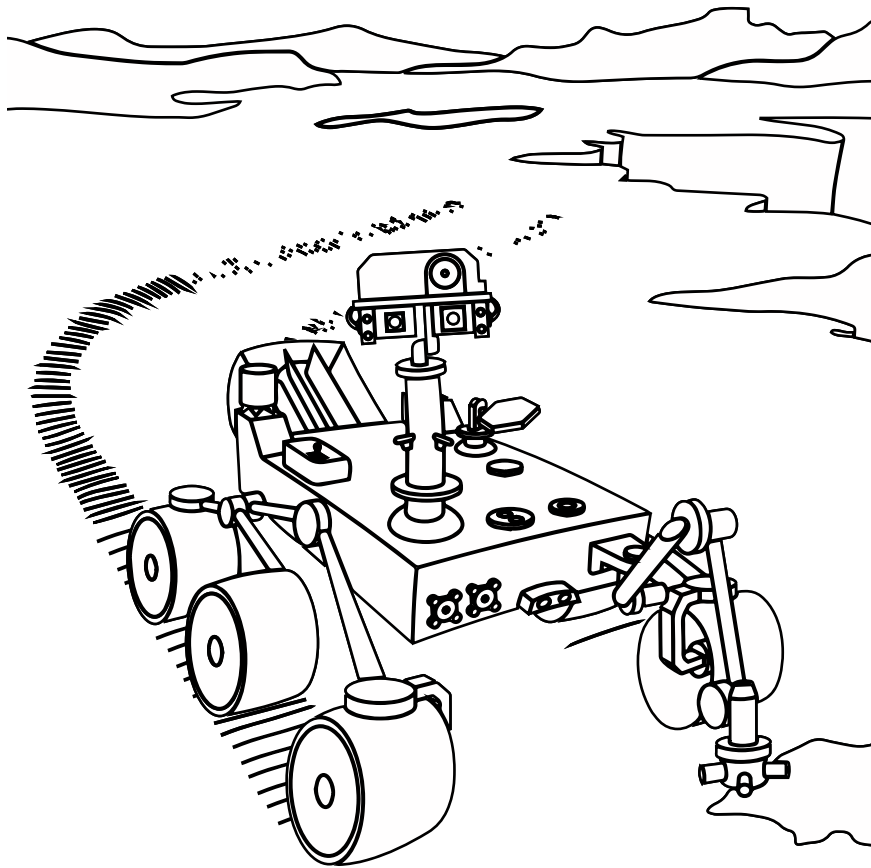
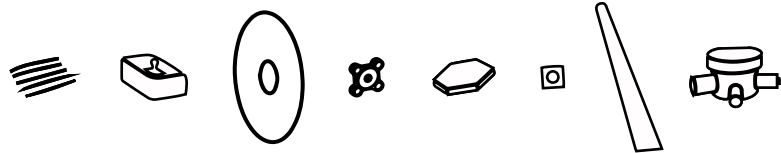


The benefits of using the orbiting spacecraft are that the orbiters are closer to the rover than the Deep Space Network (DSN) Antennas on Earth and the orbiters have Earth in their field of view for much longer time periods than the rover on the ground.

A. 3 B. 1 C. 2

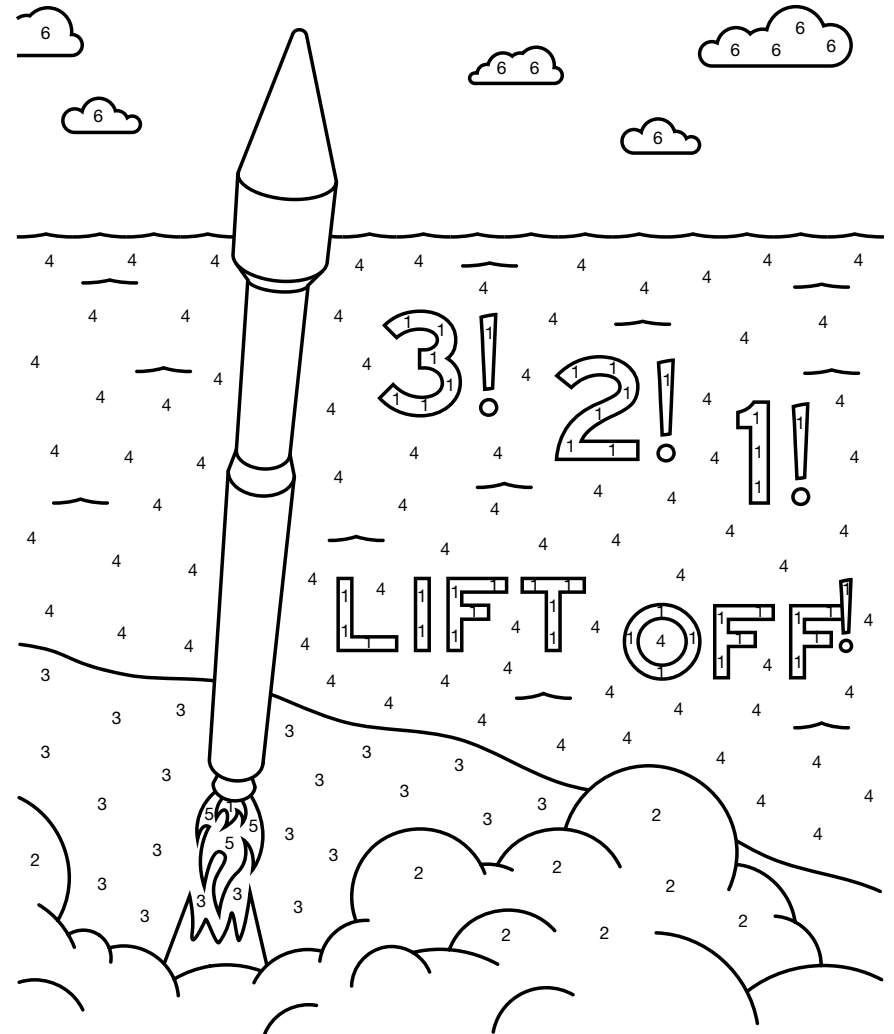
FOLLOW YOUR CURIOSITY

Find and circle these shapes



ON TO MARS

Color - by - number rocket



1 - Orange 2 - Grey 3 - Green 4 - Blue 5 - Yellow 6 - Light Blue

SATELLITES SENT TO MARS

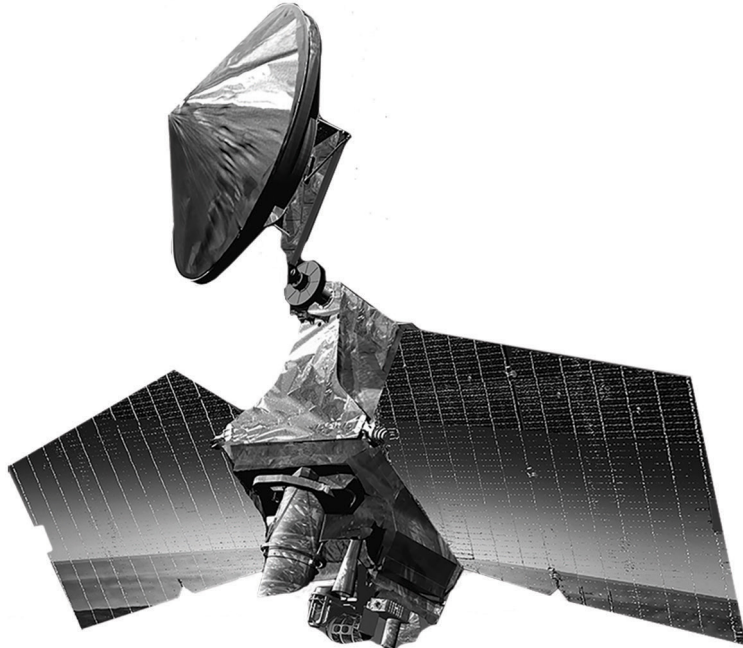
Unscramble the letters to find the words

NREMARI

GKINVI

AENMV

SAMR SAECRONASNCEI RBOIRTE



Mariner, Viking, Maven, Mars Reconnaissance Orbiter

SURVIVING ON MARS

Circle "mars" each time you find it. How many were there?

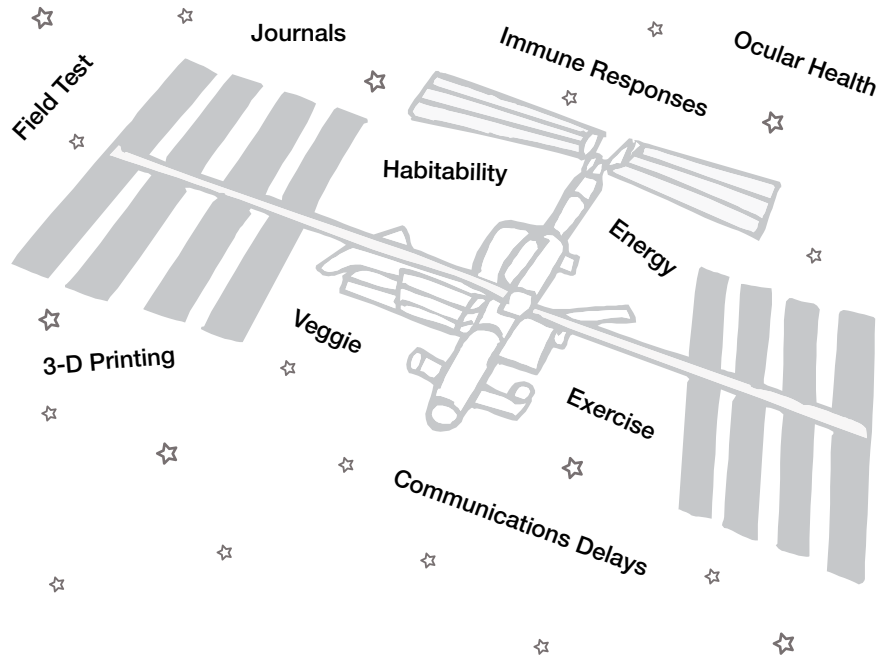
f	s	r	y	o	m	z	y	m	r
d	s	r	a	m	a	t	a	x	r
z	r	i	a	k	x	r	r	s	m
m	u	o	d	m	s	b	r	u	k
m	a	r	s	d	s	a	n	a	b
v	i	r	i	z	m	r	r	m	q
y	s	z	s	m	q	m	a	x	h
z	r	r	m	o	a	r	t	m	b
z	a	s	n	a	x	r	t	d	r
m	m	d	z	i	r	g	s	a	m
p	w	f	m	a	r	s	m	c	y



Answer: 12

TOP 10 WAYS ISS IS HELPING GET US TO MARS

Alphabetize these ISS related words

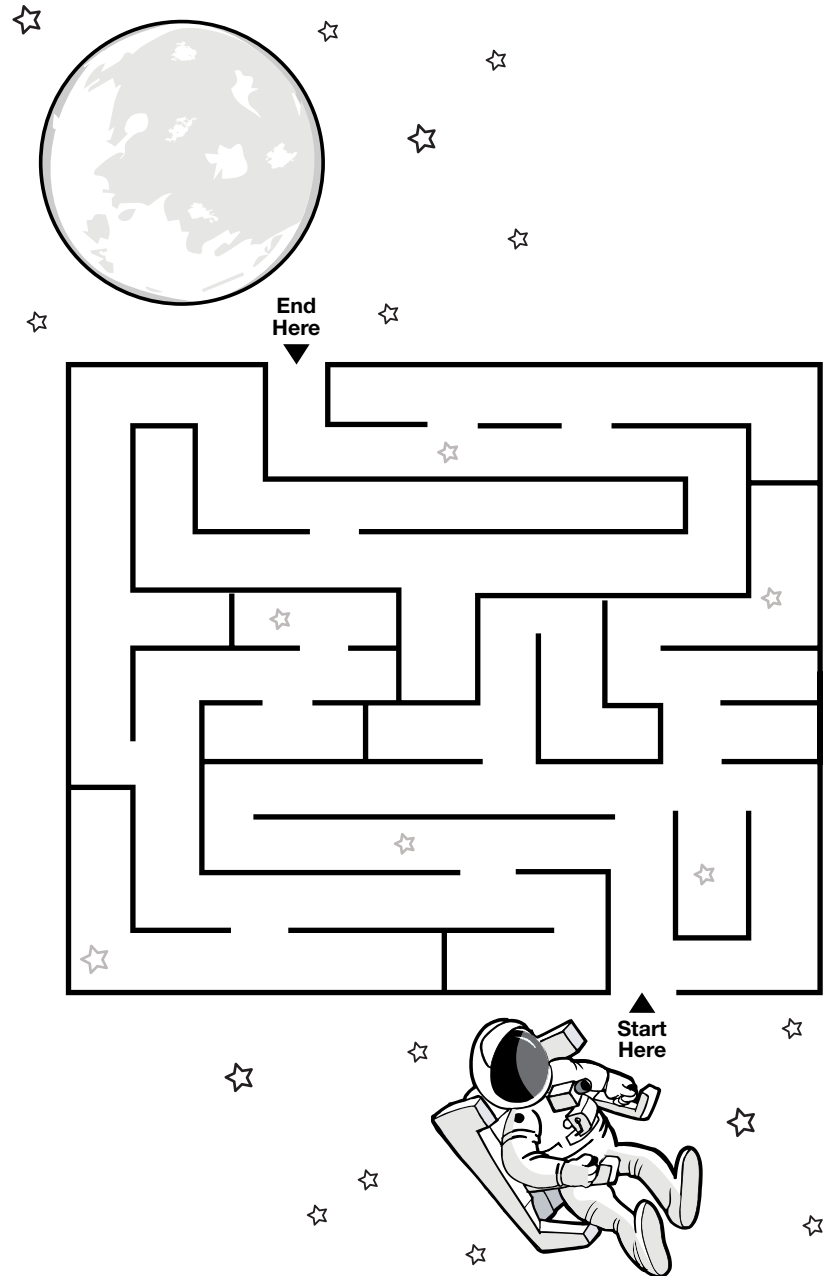


1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

3-D Printing, Communication Delays, Energy, Exercise, Field Test, Habitability, Immune Responses, Journals, Ocular Health, Veggie

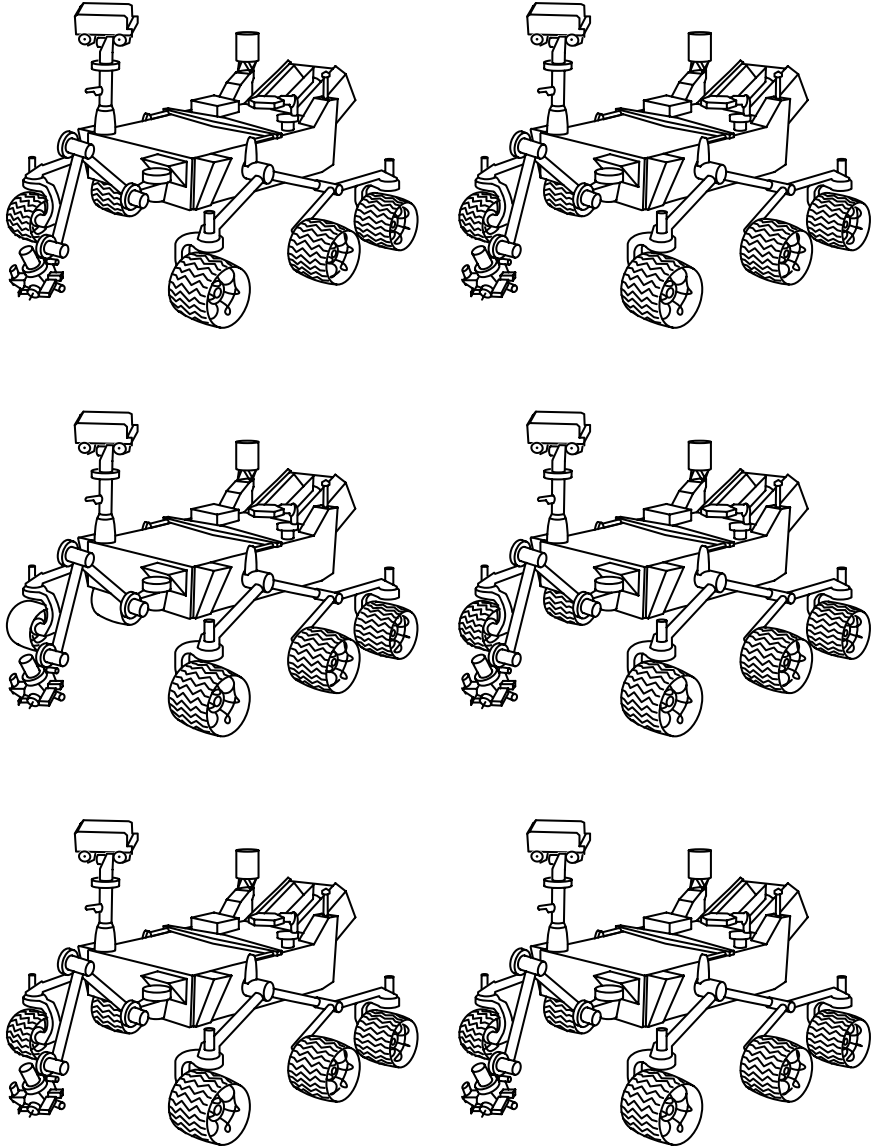
TRAVEL TO MARS

Get the Astronaut to Mars



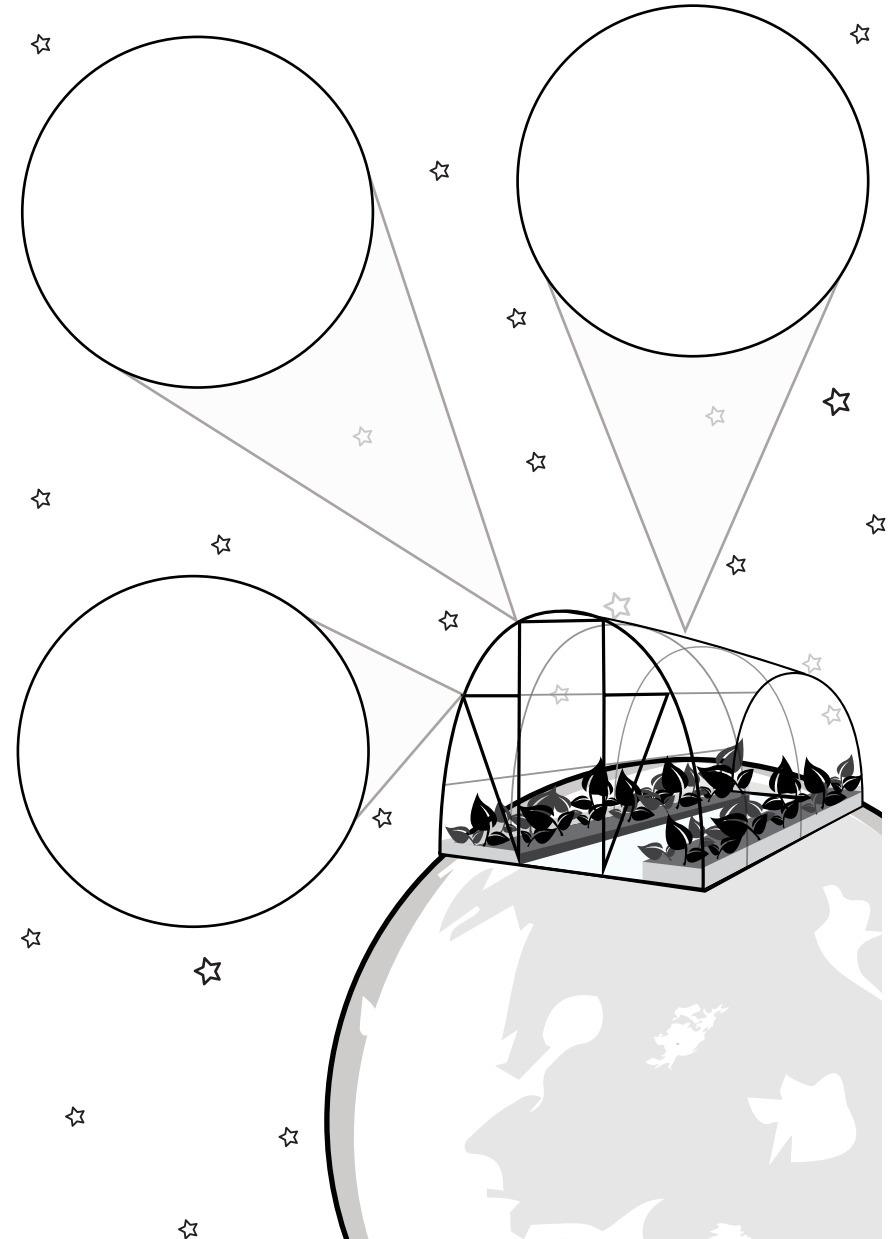
CURIOSITY

Circle the rover that is different from the rest



SURVIVING AND THRIVING

Draw three crops to plant in the greenhouse habitat on Mars



THE FIRST HUMAN ON MARS WILL NEED...

Unscramble the letters to find the words

IRA

AOCTIOMUNICNM

LETERHS

ETAWR

ODFO



Air, Communication, Shelter, Water, Food

FIND A WORD

Search for Mars words

j f j s m t p r z e c x r s s r e v o r y g x j v e l
 i q i x h x h y e r e e e l e u o d n w k o n k u c g
 m q p r z e s r x n d i j x i t g l q r c r z i w b g
 w l q r s n l f i n r p j a a i i w m z p y b x k a g
 n v p x x t z t a v o u s k y k g l t z j p n e s i q
 w v y t h j h l e x i b o q p r r g l n e p j l h o v
 k b a f h i x u t r n n e j i z n m p e r o f p i y n
 b s g n s i z x m g c r g y o i s e a s t e r o g c a
 f o v f n v h e w a a u p z d s q p l q g a e e t q k
 l a c e v c r r o s n l r l s q e g r s e v s p t k t
 j r o f l r p k z f d s e i f k u e a j v n y b y d s
 s h j o h g e b o l a i b o o l h y e a l x b i x l b
 p r t o l r b t w b h f q x z s e a r t h y k e w i e
 b l e d w x b e a s t h e a h w i s a s a n b t a w k
 m z h d w k e f n w x d f d h b p t a k q m k g m d c
 n a y e n u d o b c i j q b x i e b y o r m t m s u m
 k p r h b a i y o x f a z y r q c v j p e x a d q m z
 w p f s d t l m o x f q v i k h z l e p n n z v j m h
 s p d q a x k i t a k g t n c g s g x o i k v j e g m
 p p j i o v d p o u y g r m a x l g r r r j x j d n v
 g l d r o n s r e d n a l g n i k i v t a p x r p r p
 c a i d o b y g n m g n i v i v r u s u m z e u s i k
 r o j b w a t e r v a p o r l g n q b n t a t i b a h
 n d r p i k g i p q o w w o c n h f i i f f q w l f t
 k a k v t a h k n k c b n w m a t b s t a j y e h p e
 c r o a p p l u m u r q j b h s t p c y i n s o s m b
 h m g k i g t y w o e x p w g w k o x v r w i d t o x

air

carbon dioxide

curiosity

earth

first humans

food

habitat

landers

mariner

mars

maven

nasa

opportunity

orion

people

phoenix lander

radiation shielding

rovers

satellites

shelter

sojourner

spirit

surviving

thriving

viking

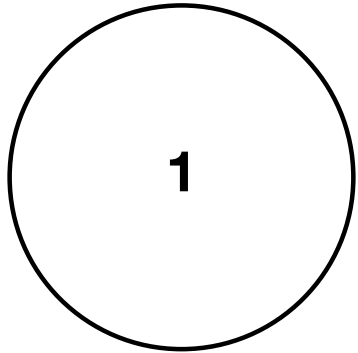
viking landers

water

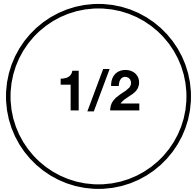
water vapor

MATCH THE SIZES

Draw a line between each body and its equatorial diameter



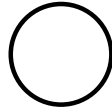
7926 miles
12756 km



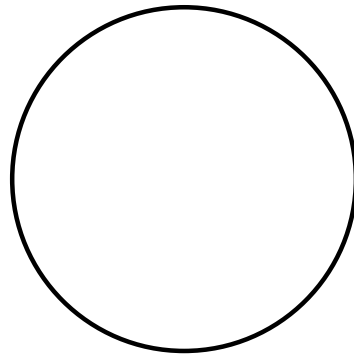
4220 miles
6792 km



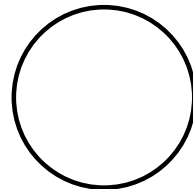
2159 miles
3475 km



Earth's Moon



Earth



Mars

SOON WE WILL SEND...

Circle one image that will visit Mars

