DR. TANYA HARRISON

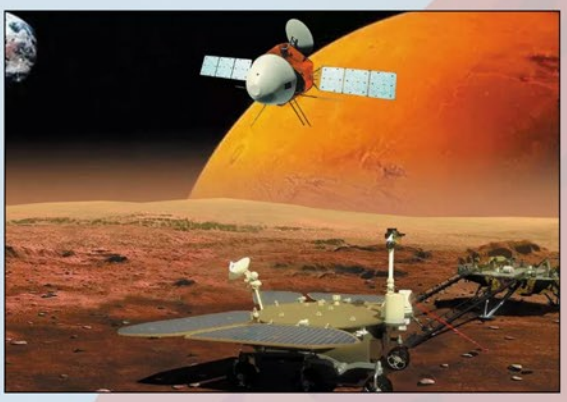
Mars Activity Packet

@TANYAOFMARS

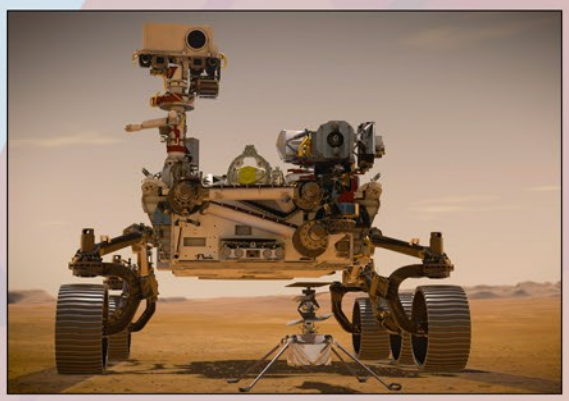
Month of Mars!

February 2021 is an exciting month for the Red Planet: Not only does it mark the New Year on Mars, but three different missions will arrive there!

The United Arab Emirates' first-ever mission beyond Earth, named Hope, arrives on February 9th to study the atmosphere of Mars. Yes, there is an atmosphere on Mars! It is very thin though, and not breathable by humans. You need a spacesuit to walk around there.



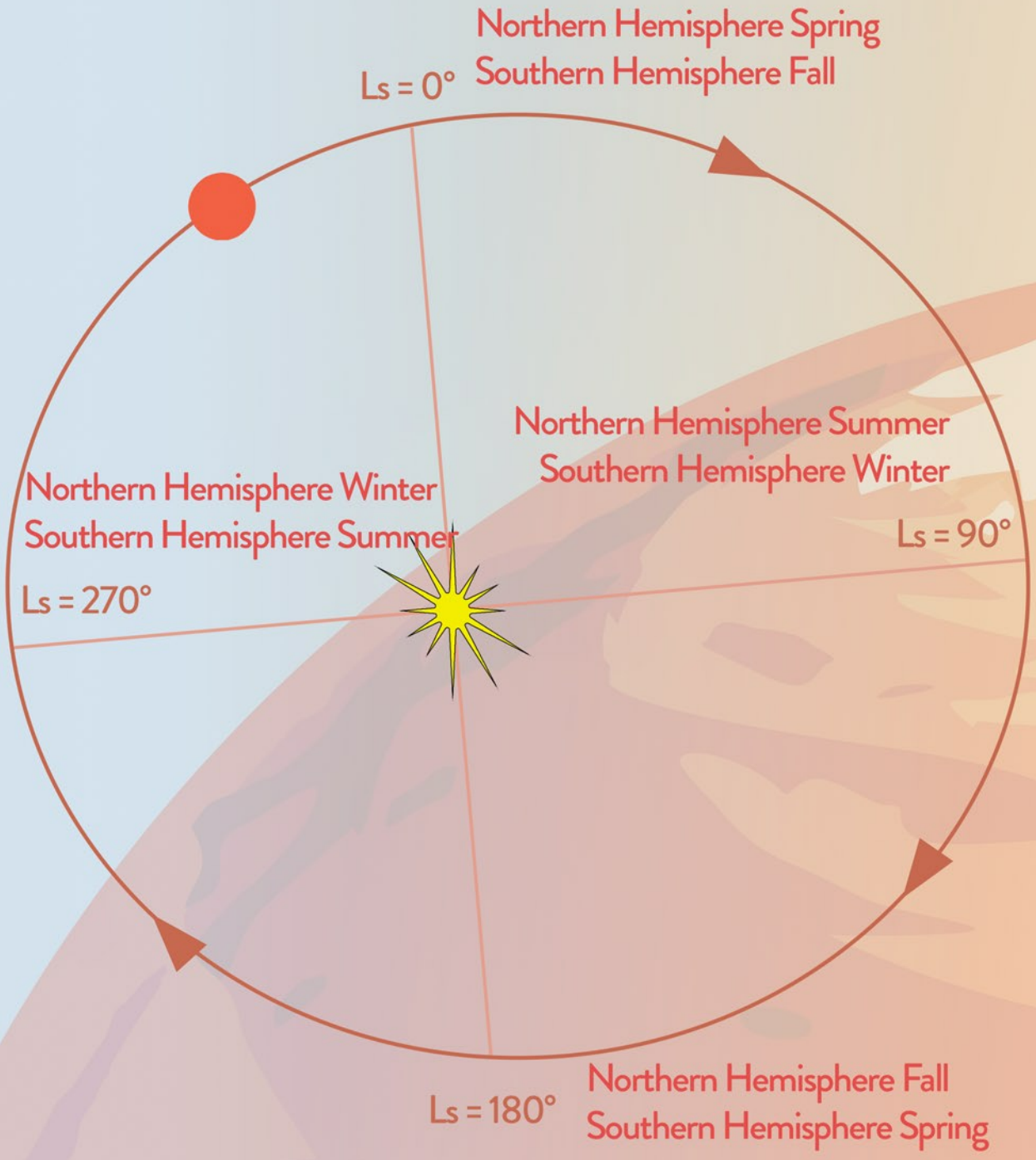
China's first mission to Mars will arrive on February 10th. Named Tianwen-1, which means *quest for heavenly truth* in English, this mission is a trio of an orbiter, lander, and rover to study the geology of Mars.



On February 18th, NASA's next Mars rover Perseverance ("Percy" for short) arrives with a helicopter buddy onboard named Ingenuity! This dynamic duo will look for signs of ancient life in a place called Jezero Crater, which used to be filled with a lake.

Image credits: Dubai Media Office, Nature Astronomy, and NASA/JPL-Caltech

Time on Mars



Mars orbits the sun in a 360° ellipse—basically a sort of squished circle. Time is measured on Mars based on where it is in its orbit around the sun in these 360°, called "solar longitude" or Ls for short. The Martian New Year happens when Mars reaches Ls = 0°. Since Mars is farther from the sun than Earth, its year is longer. One year on Mars is about 687 Earth days long!

Martian Word Search

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

Find These Words:

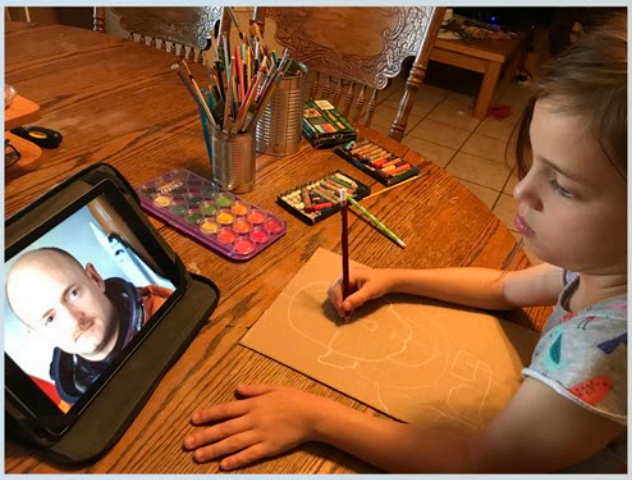
Perseverance
Ingenuity
Jezero
Crater
Pathfinder
Sojourner
Spirit
Opportunity
Curiosity
Rover
Water
Ice
Viking
Satellite
Dust
Volcano
Insight
Phoenix

Name Your Rover

If NASA put you in charge of its next Mars rover, what would you name it and why?

Space Helmet Selfie

Grab a paper plate, some paper, and your medium of choice (crayons, paint, pencils, markers, whatever you like!) and draw yourself your Martian space helmet!



Step 1. Create your masterpiece on a piece of paper. You can draw yourself, or someone else! (Our astro-artist here chose to draw NASA Astronaut Mark Kelly.)

Step 2 (optional). Paint the background of your portrait black with stars to look extra spacey, or a shade of pink or red to look like you're standing on Mars!

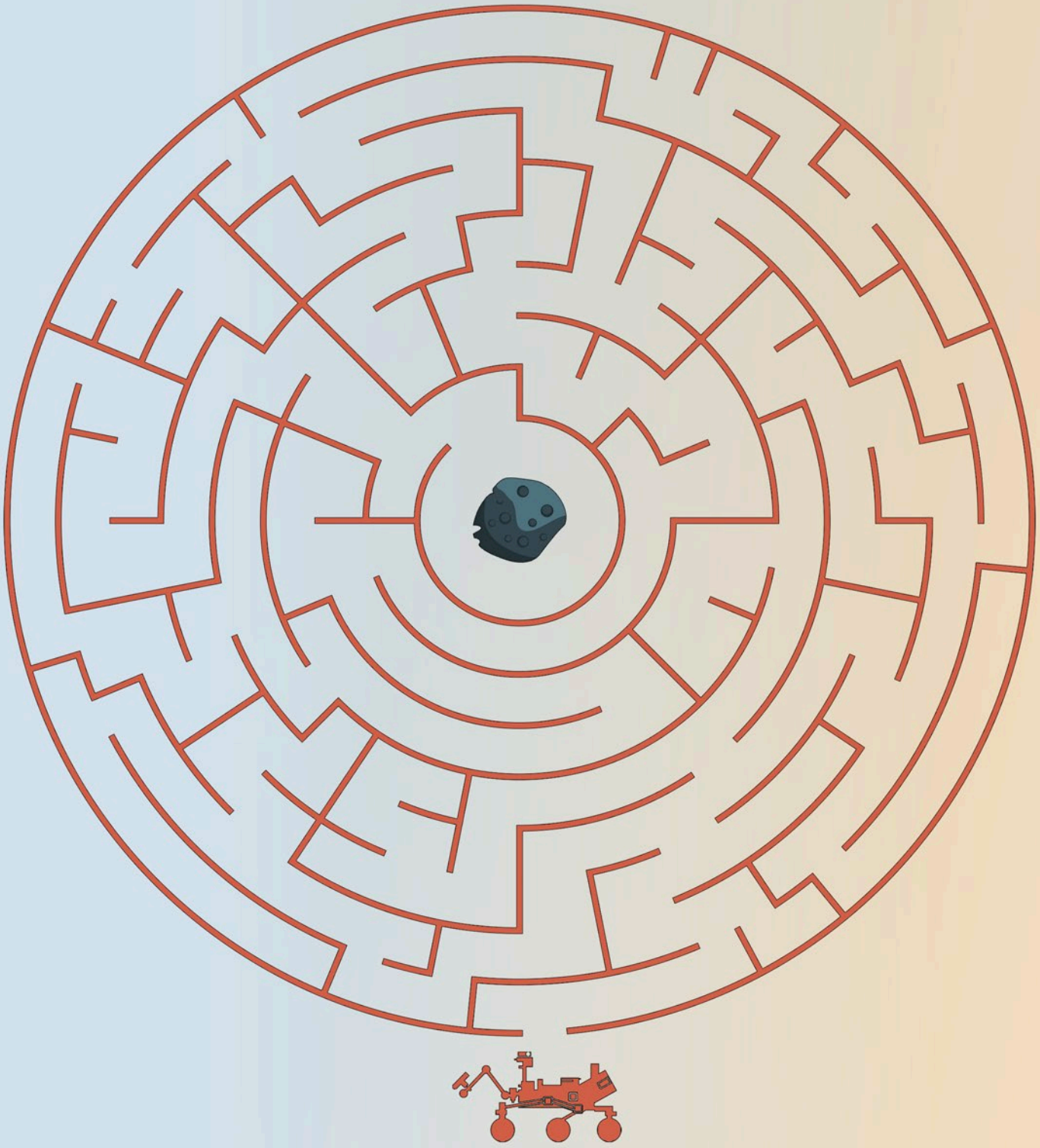
Step 3. Using scissors, cut out a circle in your paper plate. Ask an adult for help with the scissors if you need to! Then, glue or tape a paper plate upside down over the face of your portait.

And you're ready for liftoff!

Artwork copyright 2020 by Madi Ryan, age 9. Used with permission of the artist.

Mars Maze

Help Percy find its way to the rock at the centre of the maze so the rover can analyze it to look for signs of ancient life!



Maze generated by www.mazegenerator.net,
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Ask a Martian

What are five questions that you have about Mars?

(Parents/Guardians: Post questions on Twitter or Instagram with the hashtag #askamartian for answers!)

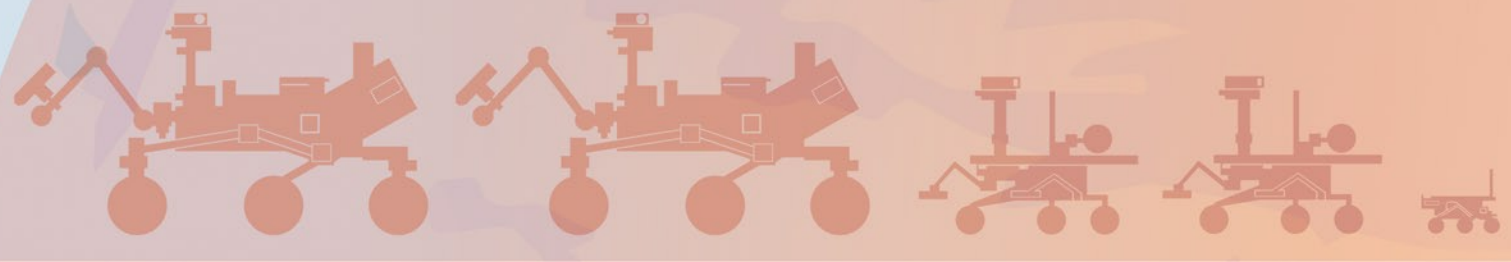
1. _____

2. _____

3. _____

4. _____

5. _____



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