

GSSEM PERSEVERES!

2021 Mars Rover Patch Program

NASA has sent a spacecraft carrying a new rover, named Perseverance, to Mars. Perseverance will land in February and will roam around Mars, collecting samples and sending information back to scientific teams on Earth.



Complete these 3 activities:

- Read **NASA's Perseverance landing packet** to learn the basics of the mission. This packet also includes fun downloads, such as virtual patches and mission posters!
- Research the purpose of the mission. What do NASA scientists hope to learn?
- Watch the Perseverance landing, either live or recorded. A livestream can be found **here**, and will begin at 12:30pm EST on February 18th.

Choose 3 additional activities to earn your Perseverance patch:

- NASA has strict requirements for naming their equipment and missions. All names must be one word, and capture the spirit of the mission. For example, the first missions to the Moon were named Apollo, after the Greek God of music, light, and sun. This particular space program was the first of its kind, and the imagery of a Greek god riding his chariot across the sky was symbolic to NASA. The new mission to the Moon scheduled for 2024 is Artemis, Apollo's sister in Greek mythology, because it will carry the first female astronauts to set foot on the Moon!

The previous Mars rovers were named:

- Sojourner
- Spirit
- Opportunity
- Curiosity
- and now Perseverance!

- If you were in charge of choosing one word to name a mission or spacecraft, what would you pick? What would your mission be?
- Build your own moving **Mars Rover** out of household objects.
- Perseverance, like the rovers before it, will be collecting samples of material on Mars's surface. NASA scientists will then receive information about the samples and record observations. Learn how to describe rocks like a NASA scientist in a much tastier way; with **candy bars**! Learn more about how Perseverance will collect information about the rocks it finds **here**.
- Watch at least 3 NASA **Mars in a Minute videos**. What did you learn?
- Meet the Martians!** Read at least two full bios of female NASA scientists that are working on the Perseverance program. Do any of their jobs sound like something you would want to do when you're older?
- Check out a 3D version of Perseverance **here**. For more fun spacecraft exploration, download the Spacecraft AR app, print the target sheet, and see real NASA spacecrafts in your home! Available for FREE on **Android** or **iOS**.
- NASA hopes to send astronauts to Mars one day to study the environment in person. Would you like to go to Mars? What do you think would be the biggest problem you would face once you got there? Brainstorm a few ideas that would solve your problem, and create a drawing, writing, or creating a prototype (model) of your solution! Bonus: After creating your solution, research on the NASA website to see if they are already developing similar solutions.

Patches are \$2.50 each and can be ordered from a **GSSEM council shop** (via curbside pickup) or online at **gssem.org/shop**.