The first Earth Day in the world was celebrated on April 22, 1970, where 20 million people gathered in the streets to protest against the industrial revolution.

Earth Day

Exploring the universe

An Extraordinary Anecdote Of A Rover Narrating Its Extraterrestrial Journey

Yashasvi Jain, AIS Pushp Vihar, VIII B

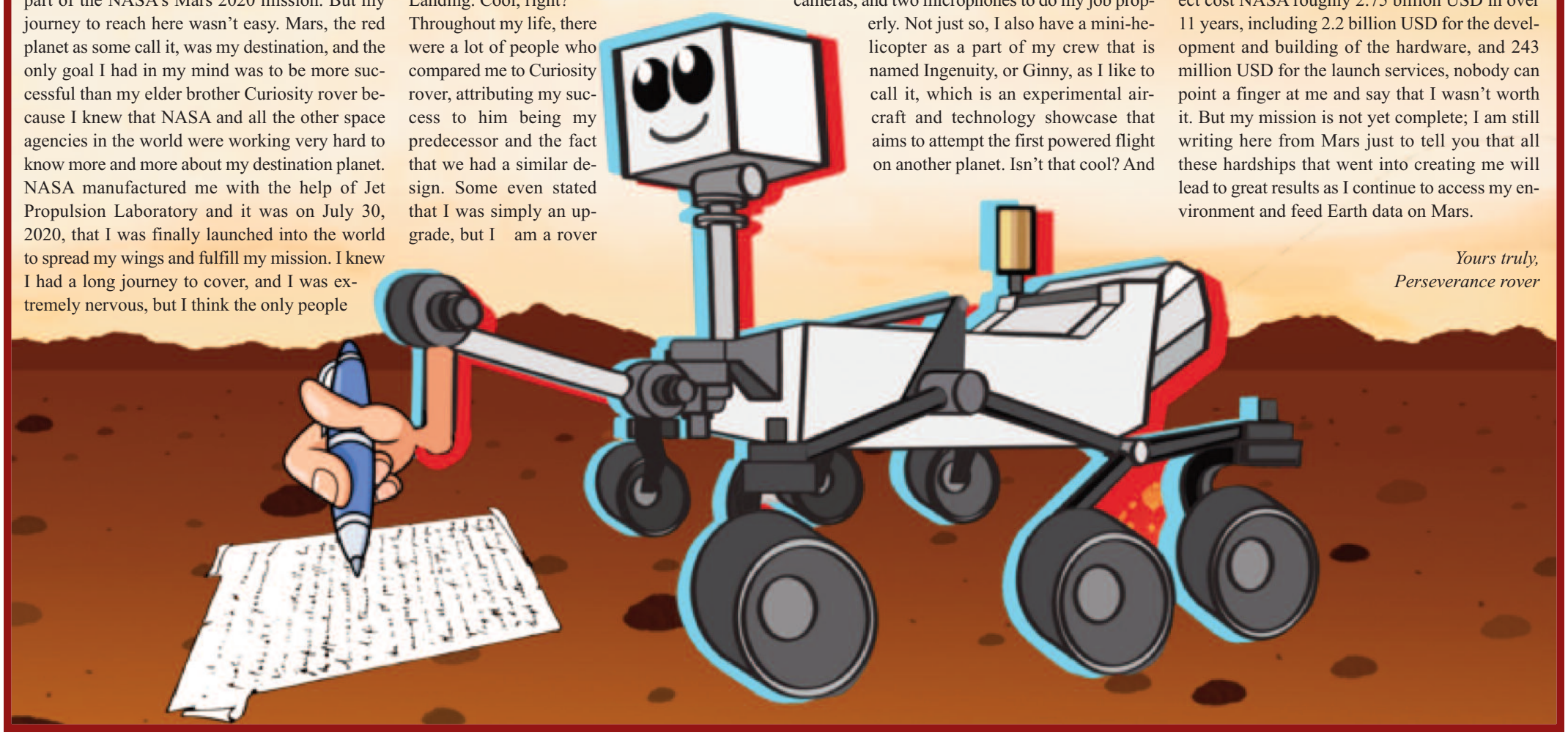
Hey Earthlings!

When it comes to extraterrestrial explorations, the advancements our world has achieved are truly out of this world (pun intended), and it is only because of these advancements that I, Perseverance rover, am able to explore the crater Jezero on Mars as a part of the NASA's Mars 2020 mission. But my journey to reach here wasn't easy. Mars, the red planet as some call it, was my destination, and the only goal I had in my mind was to be more successful than my elder brother Curiosity rover because I knew that NASA and all the other space agencies in the world were working very hard to know more and more about my destination planet. NASA manufactured me with the help of Jet Propulsion Laboratory and it was on July 30, 2020, that I was finally launched into the world to spread my wings and fulfill my mission. I knew I had a long journey to cover, and I was extremely nervous, but I think the only people more nervous than me were the scientists and engineers who worked so hard on bringing me to life, and their hard work finally reaped beautiful fruits on February 18, 2021, when the news of my successful landing on Mars was sent over after nearly seven months. As of April 8, 2021, I have spent 48 sols on Mars, i.e., 49 Earth days since my landing here, and it was only after my arrival that my landing site was named Octavia E Butler Landing. Cool, right?

Throughout my life, there were a lot of people who compared me to Curiosity rover, attributing my success to him being my predecessor and the fact that we had a similar design. Some even stated that I was simply an upgrade, but I am a rover of my own and have my own achievements. Even though we might have a similar body plan, landing system, cruise stage and power system, my design was improved in various ways. I have more robust aluminium wheels which are thicker and can handle greater damage. My arms are also longer and stronger, and have an elaborate rock-coring and sampling mechanism. I even carry seven primary payload instruments, nineteen cameras, and two microphones to do my job properly. Not just so, I also have a mini-helicopter as a part of my crew that is named Ingenuity, or Ginny, as I like to call it, which is an experimental aircraft and technology showcase that aims to attempt the first powered flight on another planet. Isn't that cool? And it has helped us so much! My goal since the very start has been to identify ancient Martian environments capable of supporting life, seeking out evidence of former microbial life existing in those environments, collecting rock and soil samples that are on the surface of Mars, and testing oxygen production from that atmosphere so that the future crewed missions can prepare better.

Even though planning and making my entire project cost NASA roughly 2.75 billion USD in over 11 years, including 2.2 billion USD for the development and building of the hardware, and 243 million USD for the launch services, nobody can point a finger at me and say that I wasn't worth it. But my mission is not yet complete; I am still writing here from Mars just to tell you that all these hardships that went into creating me will lead to great results as I continue to access my environment and feed Earth data on Mars.

Yours truly,
Perseverance rover



It's broccoli-cious!

Fruits and vegetables make up the largest chunk of our nutrition. However, their role is not just limited to a wholesome diet. Their significance permeates across economy, environment, health, and social impact, proving how they are, in fact, essential commodities to attain a sustainable world. Keeping the same in mind, the United Nations has designated 2021 as the International Year of Fruits and Vegetables to make us cognisant of the diverse roles that they undertake. Shaking hands with this goal, GT brings you a brand-new series, wherein every part will explore the various facets of one fruit or vegetable, highlighting why it is important to preserve these gifts of nature.

Avishi Agarwal
AIS VKC Lko, VIII

Hey! My name is: Broccoli
I am also known as: Brassica oleracea var. italica

About me

- My name is derived from an Italian word broccoli which means "the flowering top of a cabbage".
- I have been around for more than 2000 years and I am native to the Mediterranean area and Asia Minor.
- I have been a very important and prized vegetables for the Italians since the Roman Empire, even called the Italian asparagus.
- I am mostly hand harvested due to the rarity of machines that enhance my cultivation procedure. But new ideas are being deliberated upon.
- John and Mary Evans produced my heaviest form, approximately 15.87 kg, in the year 1993 in USA.

What I offer

I am called the 'crown jewel of nutrition' because I carry the following nutrients:

- Calories: 31
- Protein: 2.5 grams
- Carbohydrates: 6 grams
- Dietary fibre: 2.4 grams
- Water: 89%
- Fat: 0.4 grams
- Vitamins (A, B1, B6, etc.)
- Minerals (calcium, iron, phosphorus, zinc, etc.)

I can help you with

- Improved diabetic control
- Strengthened immune response
- Improved dental and oral health
- Prevention of birth defects

Where can you find me

I require cold weather for my cultivation, hence my production takes place all throughout the winter season in India, especially in areas with less rainfall. In the rural areas, my cultivation is a huge financial help because many prefer me in their diet throughout the world. Across the borders, China is known to be my biggest producer (39.56%), followed by India (33.78%) and then the USA (4.64%), when we look at the total world production. Although you can find me everywhere, my main abodes in India are Odisha, Gujarat, West Bengal, Bihar, Madhya Pradesh, Haryana and Jharkhand.

My different avatars

- Broccoli raab
- Belstar
- Purple sprouting
- Romanesco
- Sun king
- Di Cicco
- Waltham 29

Why I fear climate change

As intimated earlier, I thrive in cold climate. Since I am a cool-season crop, along with other green leafy vegetables, climate change is really spelling a darkness on my otherwise bright future. The heat stress, a result of global warming, is really hazardous to my production. Due to this, farmers are apprehensive of my cultivation and will be soon contemplating changes in my sowing routines in order to keep my species up and running. I just hope that climate change does not completely wipe off my existence in the times to come.

Illustration: Avishi Agarwal, AIS VKC Lko, VIII