NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**AN OVERVIEW OF ARTIFICIAL SATELLITES (10 marks)**

1. What was the first artificial satellite?

a) Voyageur I b) Sputnik I c) Space X

Which country launched it?

a) Russia b) China c) the United States of America

When was it launched? What was its impact?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. ASTRONOMICAL SATELLITES study the universe. Guess the satellite from the clues listed:

One of the largest and most versatile telescopes designed, this satellite was launched in 1990 and is still recording some of the most detailed [visible light](https://en.wikipedia.org/wiki/Visible_spectrum) images ever, allowing a deep view into space and time. Many of its observations have led to breakthroughs in [astrophysics](https://en.wikipedia.org/wiki/Astrophysics), and its images have helped to determine the rate of expansion of the universe.

a) Rosetta b) Space X c) Hubble

List one other interesting fact about this satellite:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. WEATHER OR CLIMATE SATELLITES help to make better weather predictions and to observe the impact of climate change on earth. Locate a satellite image of a major hurricane or typhoon eg. Hurricane Katrina, Hurricane Harvey, Typhoon Yolanda or Haiyan, and copy it into the box below. Cite your source by providing the link.

|  |  |
| --- | --- |
|  | Which satellite captured the image?  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Who owns the satellite? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  List two more interesting facts about this satellite:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Link to your image: |

4. COMMUNICATION SATELLITES are used for television, telephone, radio, internet, and military applications. There are over 2,000 communications satellites in Earth’s orbit, used by both private and government organizations. Many are part of a NETWORK of satellites…Look at the key information and answer based on what you learn!

|  |  |  |
| --- | --- | --- |
|  | SES Satellites | Iridium Communications |
| What They Do Best | Direct to consumer video carrying over 7500 TV channels (including HD)  Broadband (internet) connectivity for ships at sea, cloud computing, commercial air and shipping, holiday cruises, energy, mining | Worldwide voice & data communications covering the entire world including poles, oceans & airways |

Q1. Why would Iridium be important for you if you are a business person?

5. GPS SATELLITES – Read the first paragraph in this link: <https://www.space.com/19794-navstar.html>

1) NAVStar is what type of satellite? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) What does the abbreviation, GPS, stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) Who uses GPS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. INTERNATIONAL SATELLITE SYSTEMS : What does the “ISS” stand for? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

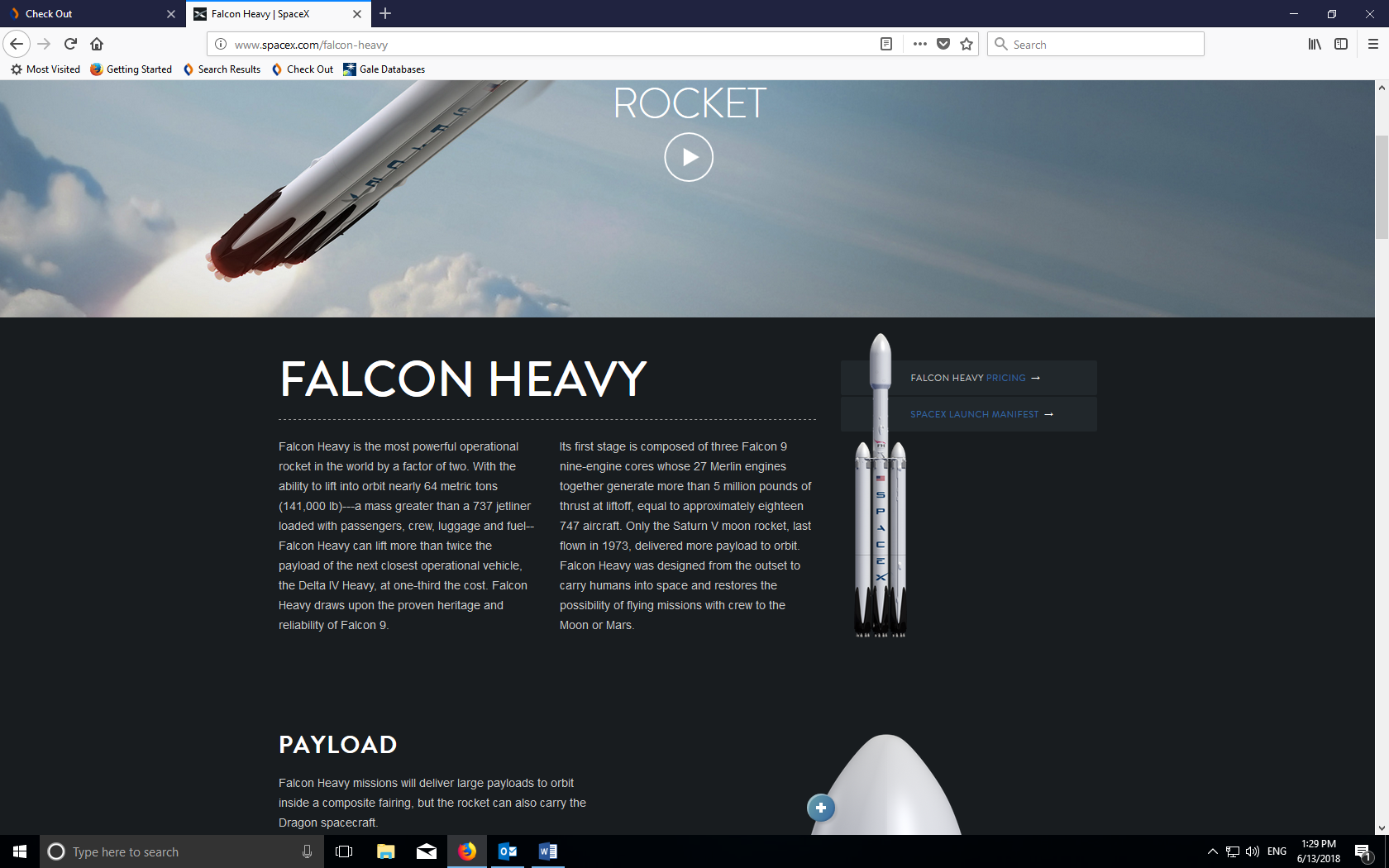
Put this sentence into simpler language: *The* ***International Space Station*** *(****ISS****) is a* [*space station*](https://en.wikipedia.org/wiki/Space_station)*, or a habitable* [*artificial satellite*](https://en.wikipedia.org/wiki/Satellite)*, in* [*low Earth orbit*](https://en.wikipedia.org/wiki/Low_Earth_orbit)*.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What is the purpose of the ISS*? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

*\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

7. SpaceX is a private company owned by the same man that makes Tesla cars. It is the first company to help out with work in space – building rockets to send things ‘up there’. Go to their website <http://www.spacex.com/falcon-heavy>

Give a reason why you would want to use this rocket if your company was paying to send things into space?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_