

Travel

LEARNING OBJECTIVES

This lesson will help you to:—

- ❖ Study about different fuels used in vehicles.
- ❖ Study about the consumption of fuel by different vehicles.
- ❖ Learn and study about various adventurous trips on rough terrains.
- ❖ observe and study about sky
- ❖ Study about man-made spacecrafts and their use.
- ❖ Learn and study about monumental heritage of India.

Real-Life Example

- ❖ When we buy any vehicle, the first thing we ask the salesperson is about its mileage.
- ❖ Diesel cars are being preferred these days because they are more fuel efficient, economical and eco-friendly.

QUICK CONCEPT REVIEW

Fuels used in vehicles

Today's vehicles run on a variety of fuels, some of which you probably aren't aware of. While it's true that the vast majority of vehicles run on petrol, the technology to burn other fuels to meet our transportation needs does exist, with specific advantages and disadvantages for each.

PETROL

- ❖ Petrol is the most common fuel used in cars today.
- ❖ This specialized fossil fuel is designed for four- stroke engines like the ones found in common cars.
- ❖ It allows for quick starting, fast acceleration, easy combustion and quiet operation.
- ❖ The hydrocarbons contained in petrol and its production of carbon dioxide when burned contributes to pollution, smog and global warming.
- ❖ Although it is the most readily available fuel, it is considered to be a temporary source of fuel because of its cost, environmental effects and limited resources.

DIESEL

- ❖ Diesel fuel is widely used in transport vehicles such as tractor-trailer trucks, buses, boats and trains.

- ❖ This fossil fuel is also non-renewable, like petrol.
- ❖ Although it contributes less carbon dioxide to the environment, diesel creates more organic compounds and nitrous oxide that causes smog.
- ❖ Diesel vehicles tend to last longer than petrol vehicles, and they have 30 percent better fuel efficiency than the average petrol vehicle.

COMPRESSED NATURAL GAS

- ❖ Petrol and diesel engines can be converted to run on compressed natural gas, or CNG.
- ❖ CNG is a clear, odourless and non-corrosive gas that can be used in liquid or gas form to run a combustion engine.
- ❖ Vehicles fitted with a CNG fuel system can be expected to produce 80 percent less ozone-forming emission than petrol burning cars.

Other fuels such as liquefied petroleum—propane and ethanol are also being used in some technologically advanced vehicles being developed in developed countries. These fuels are eco-friendly and less expensive in comparison to petrol and diesel. These however still require much technological advancements to be used as a cheap alternate to its counterparts.

Different vehicles run different distances in a liter of fuel. The number of miles travelled by a motor vehicle on a given quantity of fuel is called mileage.

Example: Hondo City has a mileage of 18 km/l.

ROUGH AND TOUGH

- ❖ Mountains have drawn several travelers towards them. Majestic peaks, beautiful valleys, breathtaking Views and other natural wonders attract many tourists towards them.
- ❖ Apart from the beauty, mountains are also a favorite among hikers, mountain bikers and climbers.

Amazing Facts

- ❖ The biggest producer of oil in the world is Saudi Arabia followed by Russia.
- ❖ Oil (petroleum) was formed more than 300 million years ago.

- ❖ Laika was a Soviet space dog who became one of the first animals in space, and the first animals to orbit the earth.
- ❖ Sir Edmund Hilary and Tenzing Norgay were the first to conquer Everest, on May 19 1953.
- ❖ Over 2000 people have reached the top of Everest.

Historical Preview

- ❖ **The term 'petroleum' was first used in the treatise De Nature Fossilium, published in 1546 by the German mineralogist Georg Bauer, also known as Georgius Agricola.**
- ❖ These adventurous expeditions on rough terrains of mountains require tough training and careful approach.
- ❖ Several sports are also played at such heights such as ice-skiing, bicycle riding, mountain climbing, high rope courses, etc. To train people there, several schools and academies are present. These institutions teach about security, precautions that are needed to be taken, problems that could arise during the expedition, tricks and techniques, etc.



Bachendri Pal

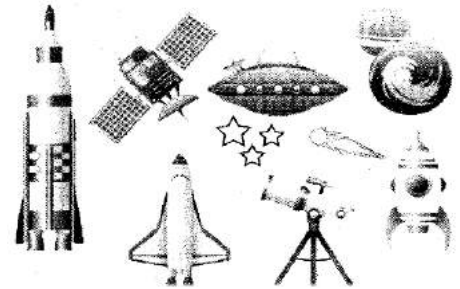
- ❖ Over years, many people across the world have climbed mountains with high peaks. Bachendri Pal is one such Indian mountaineer who is the first women mountaineer to climb the Mount Everest. After reaching this high peak (29,028 ft) that is situated in Nepal, she put the Indian Flag atop Mount Everest.
- ❖ People go there to have a fun time, to indulge in some adventures and to embrace the beauty of the mountains.

SKY AND SPACE-CRAFTS

- ❖ Sky is so far away from us, that we cannot see the minute details of objects present in the sky.
- ❖ During the day, sky appears to be blue whereas during the night we can see the dark sky with moon, small twinkling stars,

and sometimes some colorful spots that are assumed to be planets.

- ❖ During the day, we cannot see these things in the cloud because of bright sunlight.
- ❖ To study the mysteries behind the outer space, several astronauts have gone in the space to study about life and different things present.



- ❖ Astronauts travel to the space in special vehicles called spacecrafts. Rigorous training is given to the astronauts before sending them there. These spaceships are equipped with all the amenities. These are the only man-made objects that are present in the sky.
- ❖ These spaceships move in their orbits in the space.
- ❖ Sometimes astronauts are not sent and only the automatic spacecrafts are sent to monitor any heavenly body in the space.



Rakesh Sharma

- ❖ Rakesh Sharma was the first Indian to fly into the space. He spent 8 days in space. When asked by the then prime minister of India, Indira Gandhi about how India looked from outer space, he replied "Saar Johan se achchha, Hindustan hamara".



Kalpana Chawla

- ❖ Kalpana Chawla was the first Indian American astronaut and first Indian woman in space. In 2003, Chawla was one of the seven crew members killed in the Space Shuttle Columbia disaster.



Sunita Williams

- ❖ Another Indian American Astronaut, Sunita Williams is touching heights and holds the records for the longest single space flight by a woman (195 days), total spacewalk by a woman (seven), and most spacewalk time for a woman (50 hours, 40 minutes).
- ❖ When seen from an aerial view, India seems to occupy the greater part of the Indian Subcontinent bordering the Arabian Sea in west and the Bay of Bengal in east.



Misconcept/Concept

Misconcept: Monuments today do not give any information of the past since most of these monuments are renovated and restored recently.

Concept: Restoration of monuments has not taken away and authenticity, beauty and heritage of these monuments. These monuments still give a lot of information about the era in which they were built and are even used today by the historians to gain a lot of information.

MONUMENTAL HERITAGE OF INDIA

- ❖ India has a rich heritage. The monuments in India represent unique craftsmanship of the era in which they were built.
- ❖ The various Indian monuments that are a world heritage site, include Taj Mahal, Red Fort, Ajanta and Ellora Caves, Victoria Memorial, Qutub Minor, Humayun's Tomb, Jantar Mantar, Elephanta Caves

and the numerous temples that depict different styles and architecture.

- ❖ These monuments are a great source of knowledge as studying them tells us about the materials from which they are made, minute beautiful and intricate craftsmanship that depicts the mindset of people in that era.
- ❖ In India, the reigns of Mughals and Britishers greatly influence the architecture. Shah Jahan was one eminent Mughal under which art flourished. He made many classic monuments. He built the Taj Mahal in the memory of his wife Mumtaz Mahal. It is made with white marble stones and has several precious stones encrusted in it. It is also one of the 7 wonders of the world.