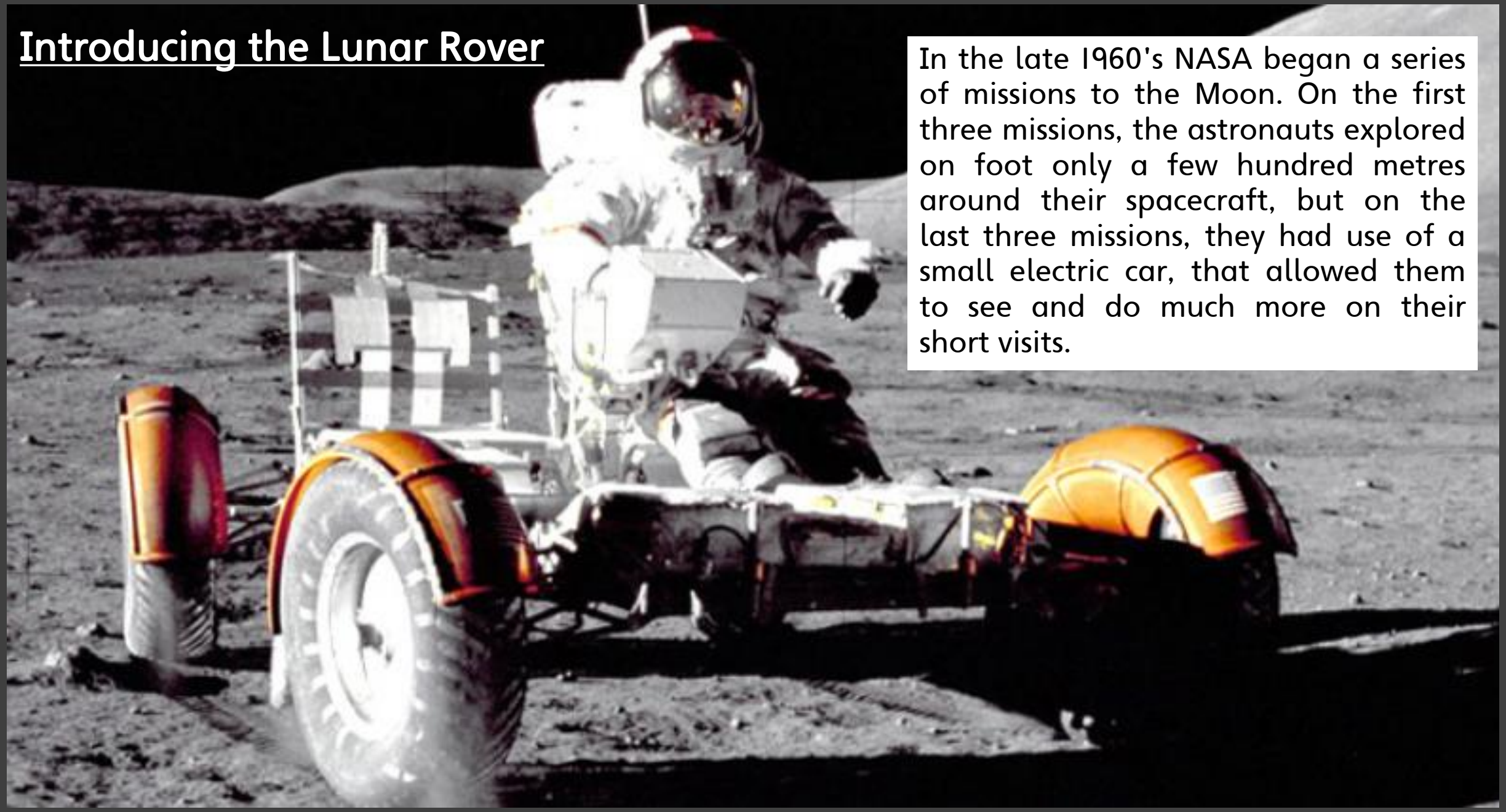
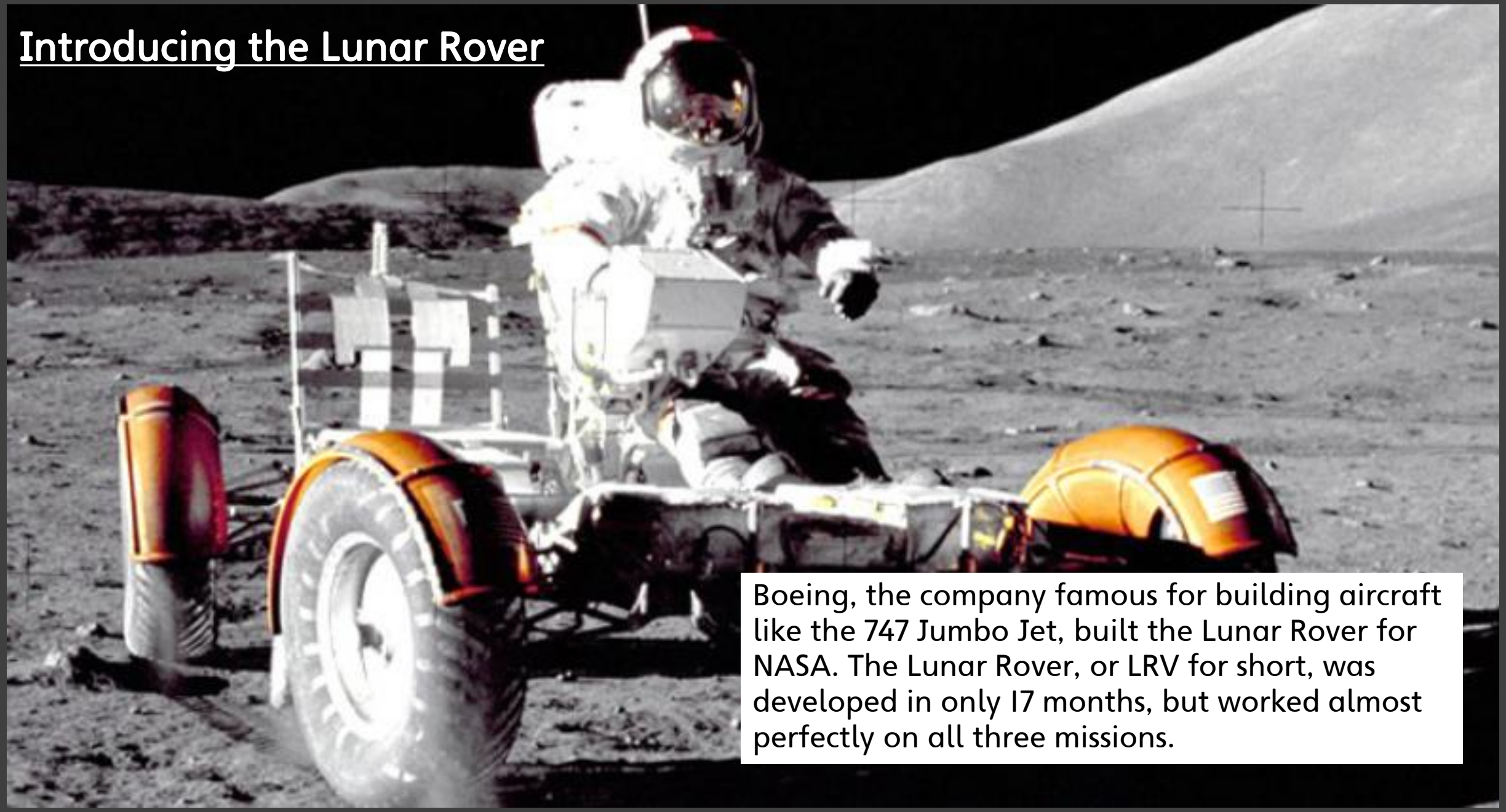
DT
Tuesday

Introducing the Lunar Rover



In the late 1960's NASA began a series of missions to the Moon. On the first three missions, the astronauts explored on foot only a few hundred metres around their spacecraft, but on the last three missions, they had use of a small electric car, that allowed them to see and do much more on their short visits.

Introducing the Lunar Rover



Boeing, the company famous for building aircraft like the 747 Jumbo Jet, built the Lunar Rover for NASA. The Lunar Rover, or LRV for short, was developed in only 17 months, but worked almost perfectly on all three missions.

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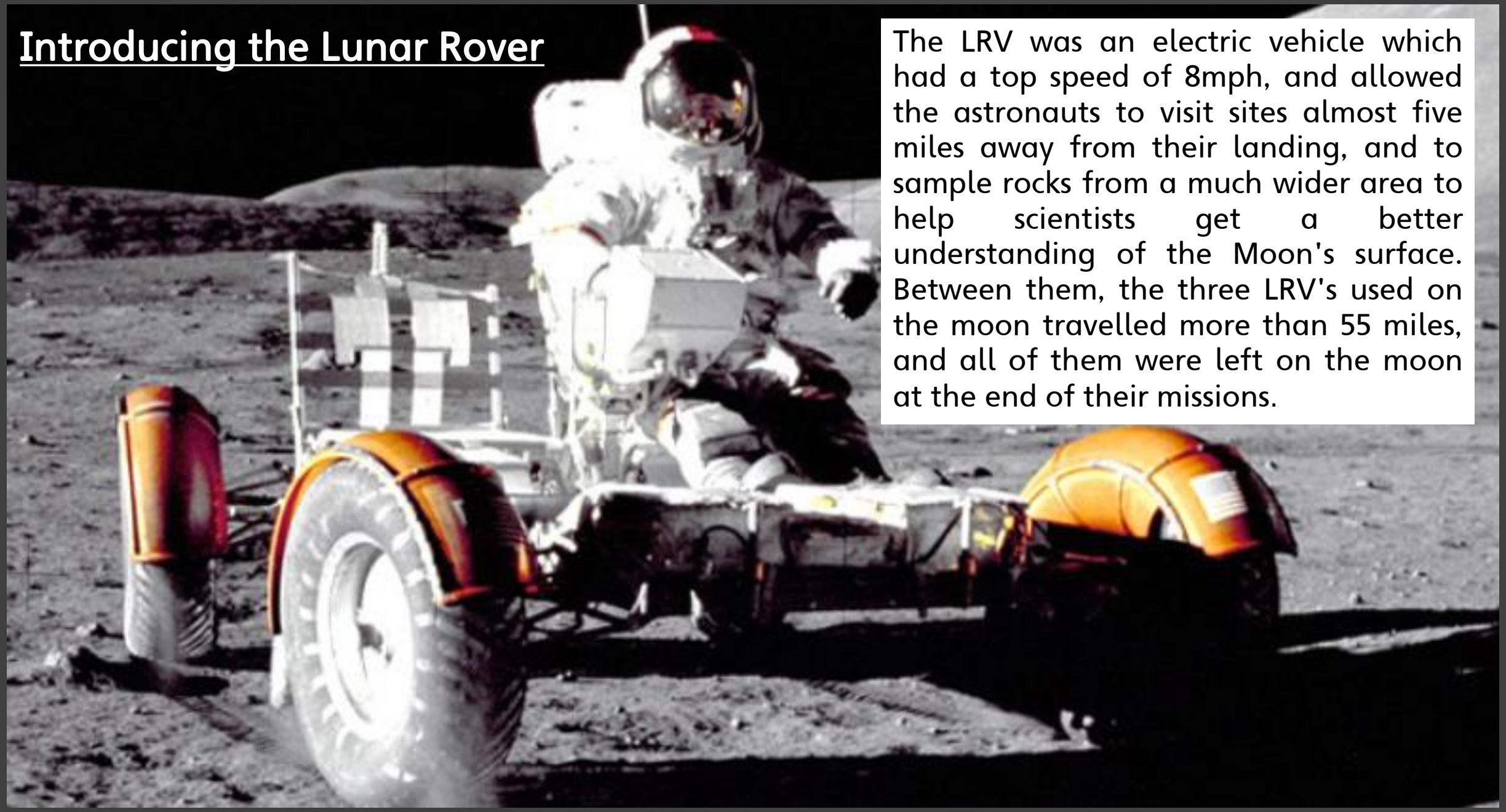
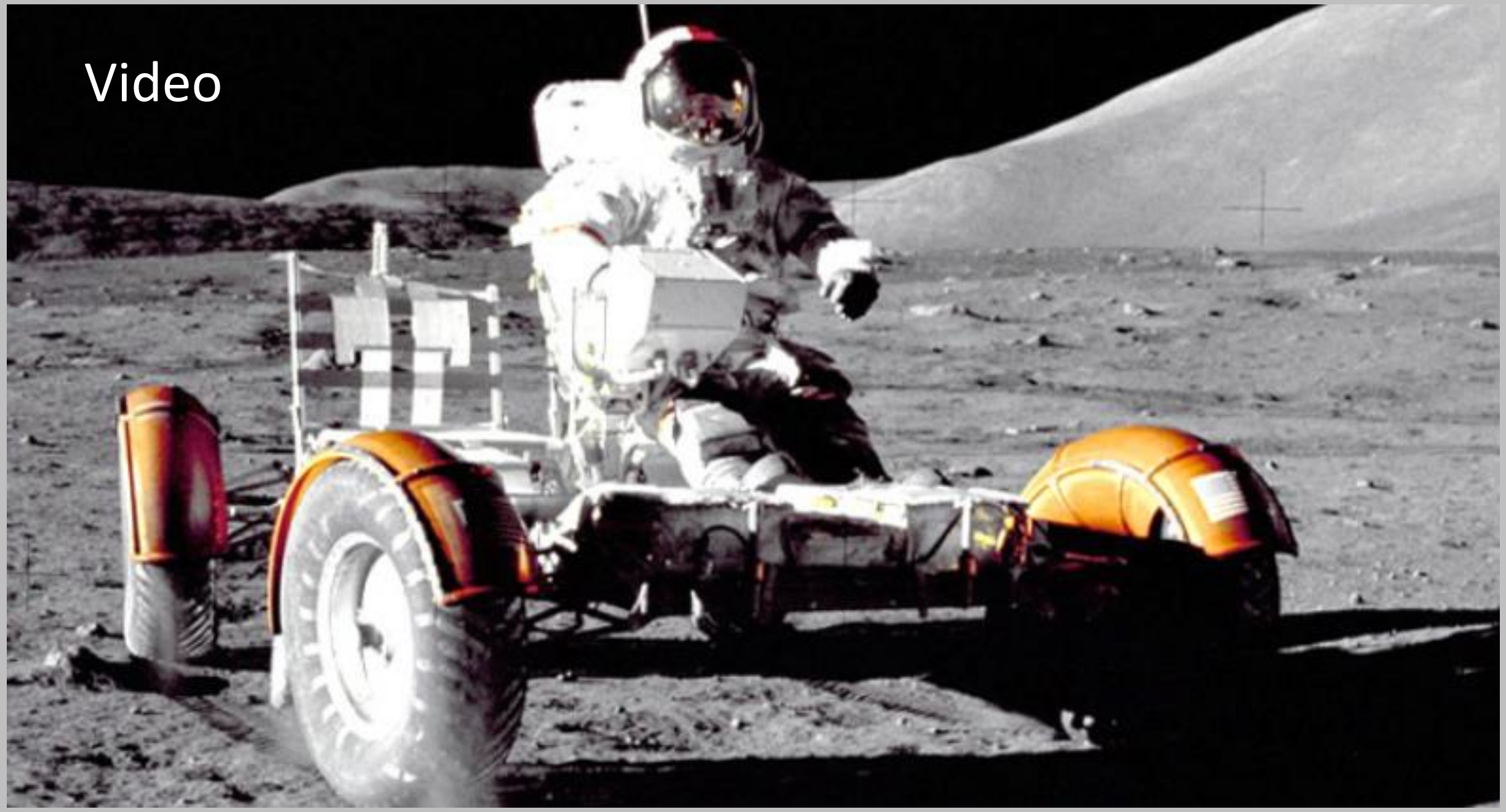


The LRV was an electric vehicle which had a top speed of 8mph, and allowed the astronauts to visit sites almost five miles away from their landing, and to sample rocks from a much wider area to help scientists get a better understanding of the Moon's surface. Between them, the three LRV's used on the moon travelled more than 55 miles, and all of them were left on the moon at the end of their missions.

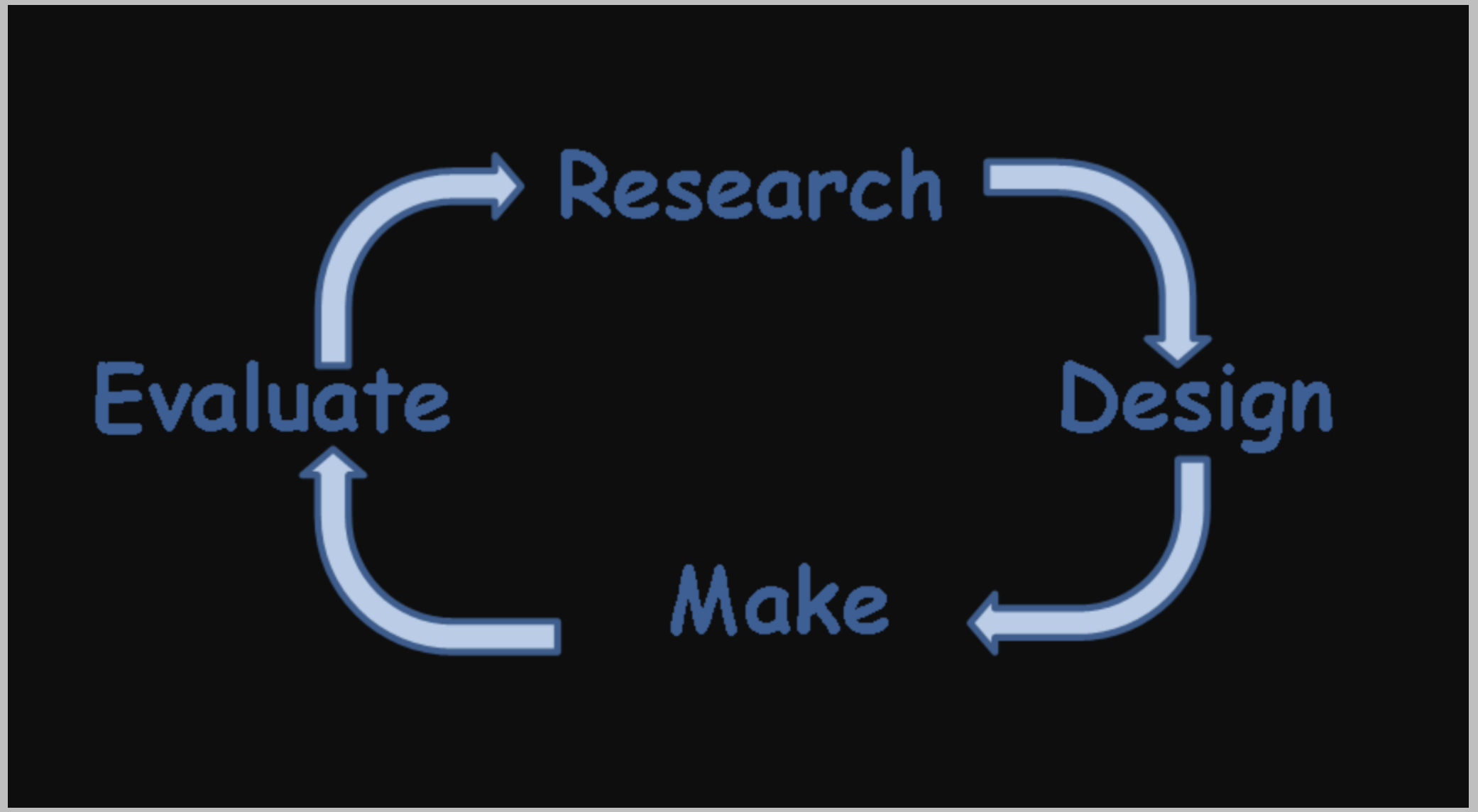
Video



Your Challenge:

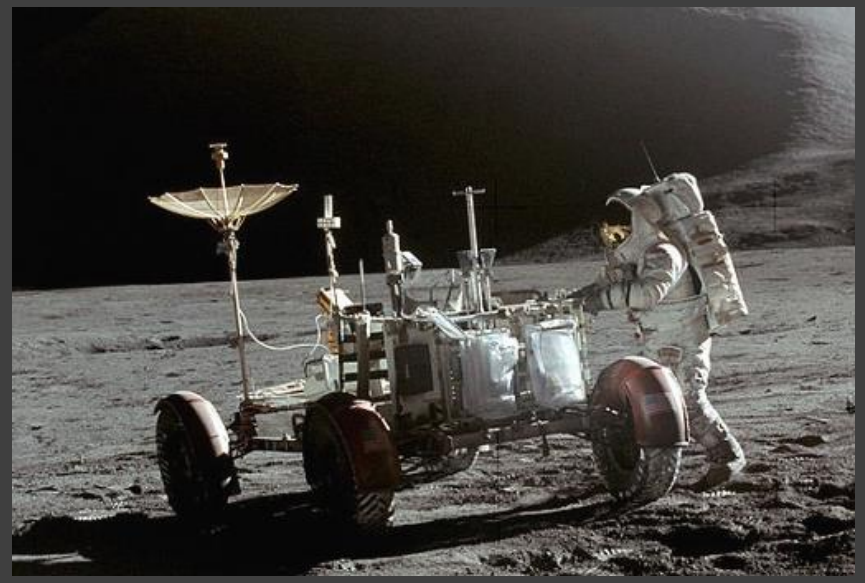
Design and make a new LRV (moon buggy)

The Design Process

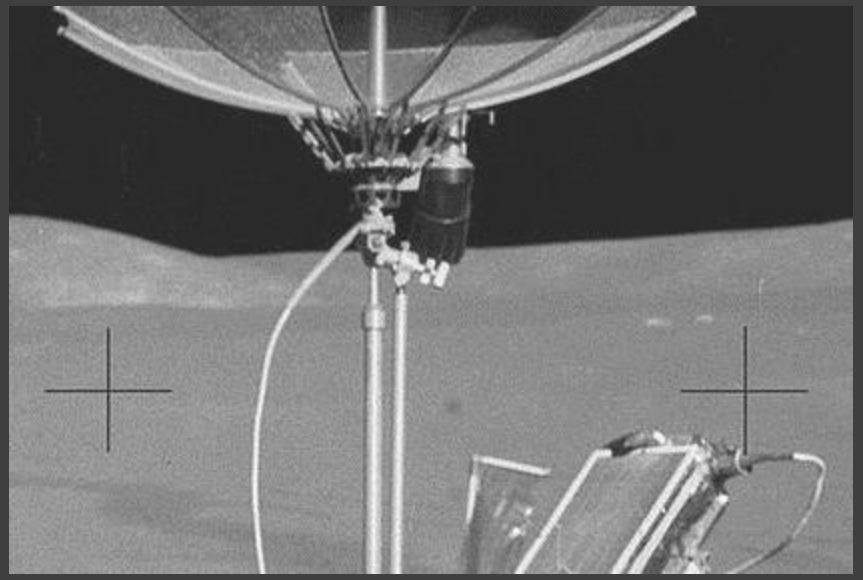


Research

What are the key features of a moon buggy?



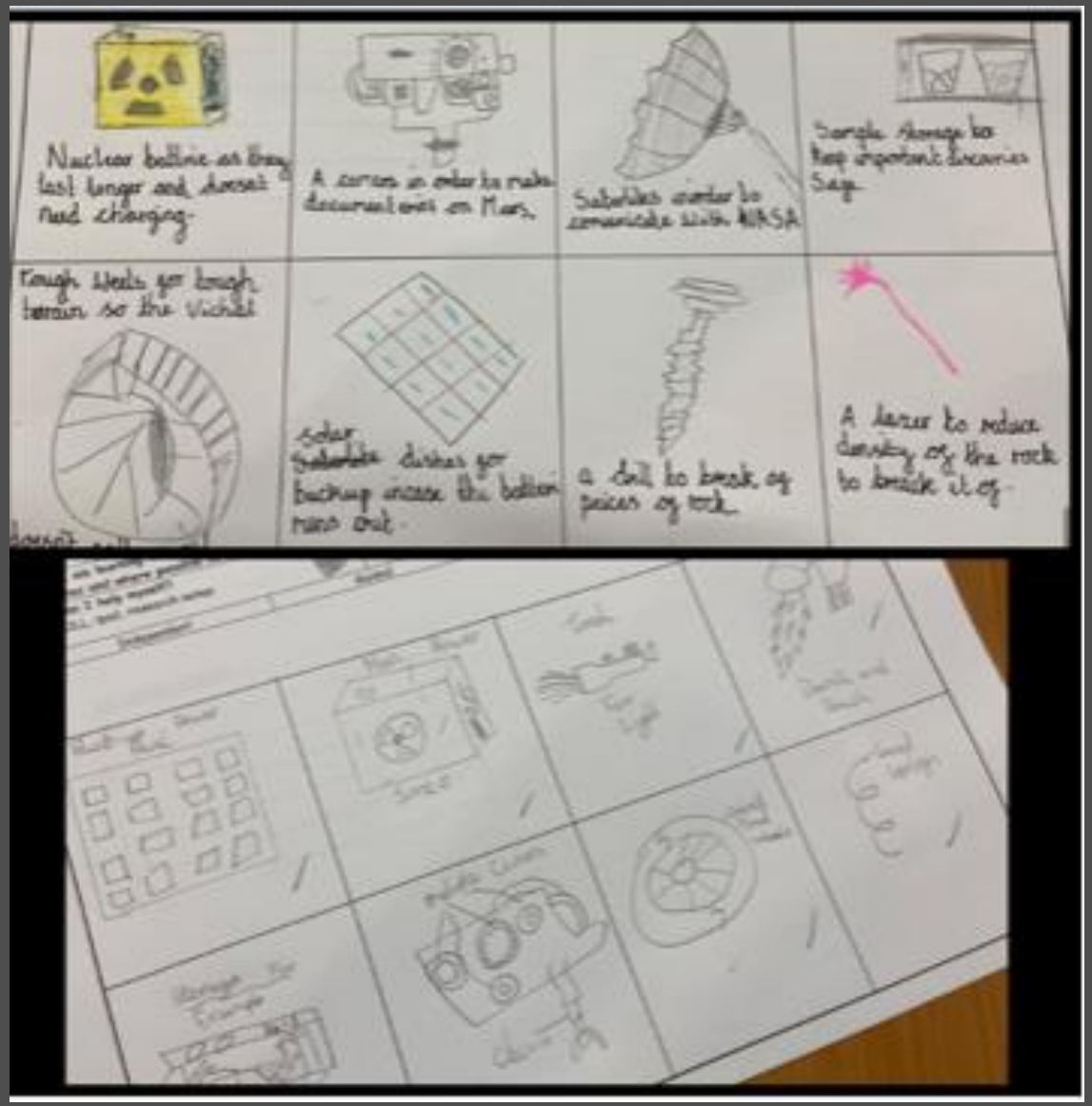
Make a list of features you can see on the moon buggy e.g. seat, antenna, flag




PITCH
GYRO TORQUING
LEFT
RIGHT
OFF
SYSTEM RESET
OFF
POWER
AUX
BUS A
BUS B
POWER / TEMPERATURE MONITOR
MOTOR TEMP FORWARD
DRIVE POWER
DRIVE ENABLE

Can you think of any extra features that may be useful?

- Drill bit?
- Battery charger?
- Ladder?
- Solar panels?



Identify eight key features you would like to include on your buggy. Complete detailed drawings and label/describe each feature.

DT
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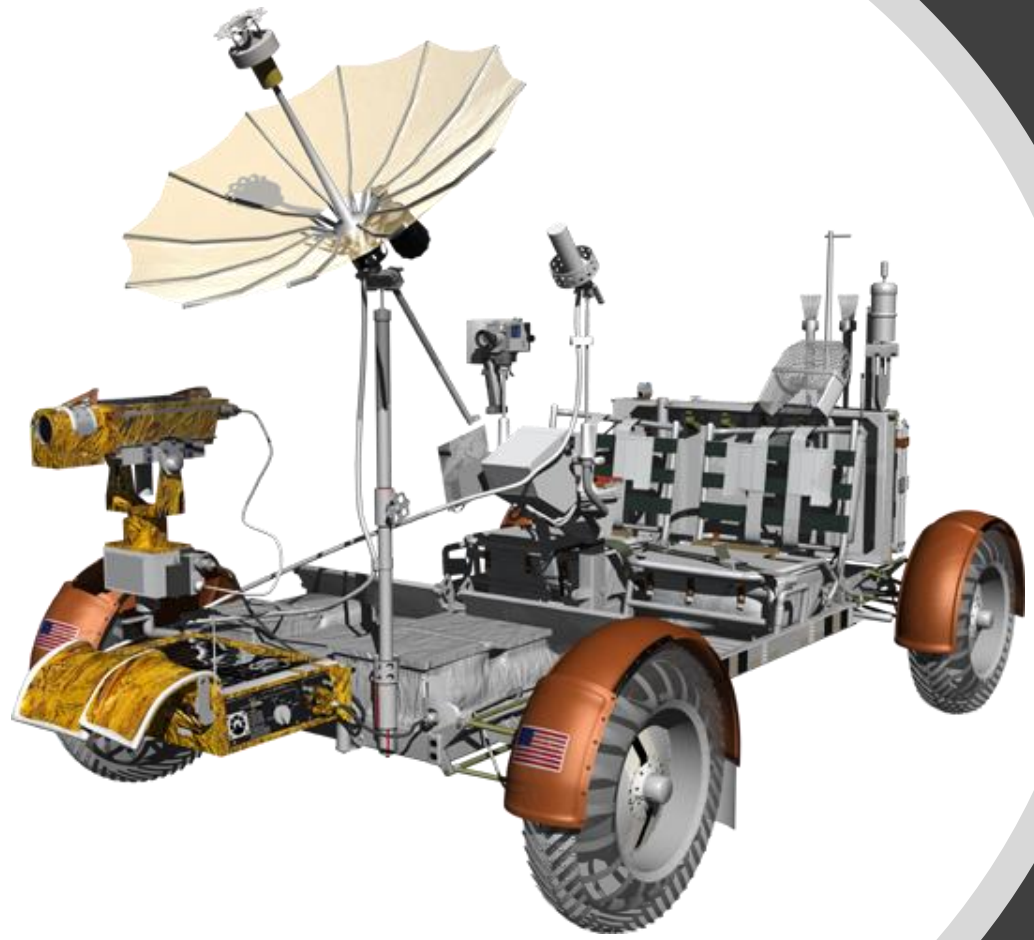
Design

What will your buggy look like?

How will you construct it?

Chassis

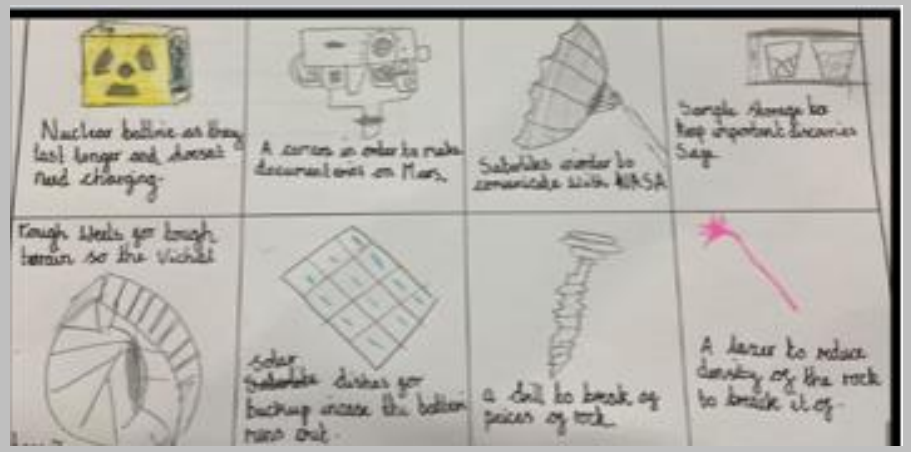
The base frame and working parts (axles, tyres etc.) of a wheeled vehicle.

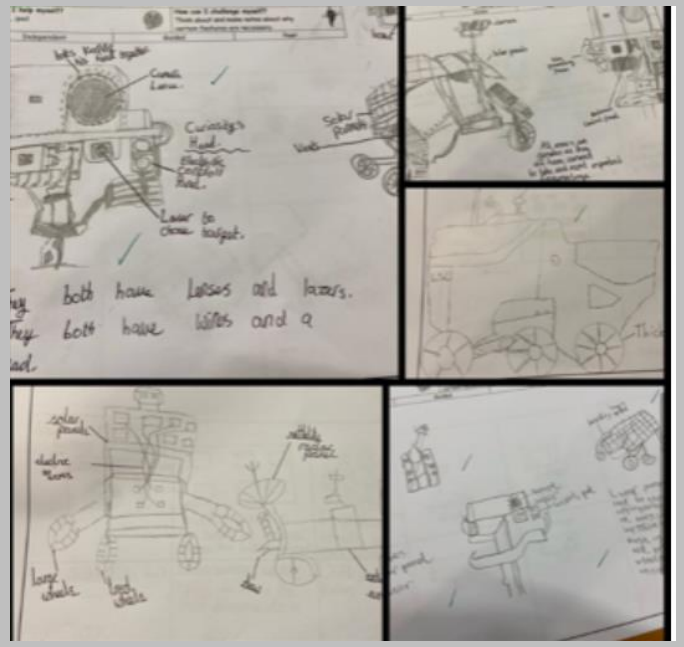


Body

The top of your buggy, which sits on top of the chassis.

Final Design





Use your features drawings from Tuesday and the pictures of the LRVs from the previous slides.

Now draw your final moon buggy design. Think about:

- Your body shape
- where each of your key features will go
- what colour everything will be
- what you will make each feature out of

<u>Make sure you label and add notes to your drawing.</u>