

LKS2 – Assembly Plan 1

How do rockets blast into space?

What makes a rocket launch possible?

Preparation:

- Video of a rocket launch (e.g. Artemis, SpaceX, or NASA clips for children)
- Toy/model rocket or simple bottle rocket
- Diagrams of a basic rocket showing stages
- Optional: balloon for a simple thrust demonstration
- Upbeat space-themed music (e.g. Interstellar theme, “Also sprach Zarathustra” intro)

1	Welcome and Introduction (3 minutes): Begin with the excitement of lift-off! “5... 4... 3... 2... 1... BLAST OFF!” Ask: “Have you ever seen a real rocket launch? Today, we’re asking: How do rockets blast into space?”
2	Example 1 – The Power of Thrust (5 minutes): Explain that rockets launch using a force called thrust. Use a balloon demo: blow it up and let it go — it zips away! Say: “A real rocket works like this, but with fire and fuel instead of air!”
3	Example 2 – Rocket Design (5 minutes): Show a diagram of a rocket’s parts: • Fuel tank • Engine • Command module • Nose cone Explain how each part has a job. Ask: “Why do you think rockets are shaped like this?” (To cut through the air!)
4	Example 3 – Leaving Earth’s Gravity (5 minutes): Explain: Earth’s gravity is strong, so rockets need a lot of power to escape. Show a video of a launch and ask: “Can you imagine how much force it takes to lift something that weighs more than 10 elephants?”

5	Interactive Moment (6 minutes): Invite children to help act out a rocket launch: • Count down • Shake the floor as the rocket lifts • Pretend to float in space • Plant a flag on a distant planet Children seated can act as “Mission Control” and cheer.
6	Optional Inspiring Video (4 minutes): Play a 1-minute video of a real rocket launch, with dramatic music. Let children feel the scale and power of the launch.
7	Conclusion (3 minutes): Summarise: • Rockets need thrust to break away from Earth • Their design matters • Science and engineering help us explore space Say: “Maybe you’ll help launch the next rocket to Mars!”

Reflection

Ask children to sit silently and imagine being an astronaut in a rocket.

Say: “What would you be feeling just before launch? Brave? Excited? Ready for anything?”

Music

- Also sprach Zarathustra (2001: A Space Odyssey theme)
- Interstellar Main Theme (instrumental)

Cross-Curricular Links:

- Science: Forces and motion (thrust, gravity)
- DT: Design your own rocket using 3D shapes
- Maths: Measure rocket height and launch distance
- English: Write a rocket launch commentary or space adventure story