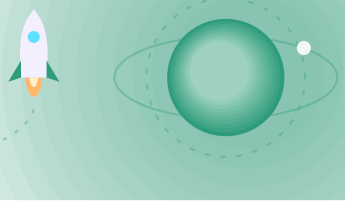
LESSON E-02 · ELEMENTARY LESSONS (K–5)

Gravity on Other Worlds

ELEMENTARY (K–5)



Name _____ Date _____ Class / Period _____

Every world pulls!

Gravity is the pull that keeps your feet on the ground. Every world pulls, but not every world pulls equally hard. Let's find out what that means for a rocket.

Mission goal: find out where a rocket climbs higher, Earth or the Moon.

Standards practiced: 5-PS2-1 · Words to know: gravity, worlds, weight

1 LOOK

OBSERVE BEFORE YOU TOUCH A CONTROL

Earth or the Moon?

- Earth's pull is _____. The Moon's pull is _____. A bigger number means a stronger pull.
- We will fly the rocket from Earth and think about both worlds.

Write the numbers shown in the sim in the blanks above, then record what you notice:

2 PREDICT

COMMIT TO A HYPOTHESIS FIRST

Prediction 1. We use the same rocket and the same push. Where does it fly higher?

Hint: Gravity is the pull of a world. A weaker pull is easier to fly against.

□ Terra (Earth)

□ Luna (Moon)

Because...

3 EXPERIMENT

CHANGE ONE VARIABLE AT A TIME

Step 1. Press **[Space]** to light the engine. Press **[Z]** for full throttle. Climb past 30 kilometres and watch how high you get. Then press **[X]** to cut the engine.

Trial	What I changed	What I measured / saw	Matched my prediction?
1			Yes · No · Partly
2			Yes · No · Partly
3			Yes · No · Partly

4 EXPLAIN

CLAIM · EVIDENCE · REASONING

Claim — What did you find out? (answer the mission goal in one sentence)

Evidence — Which numbers or observations from the sim support your claim?

Reasoning — Which science idea connects your evidence to your claim?

Self-check: □ I made a prediction before experimenting □ I used numbers from the sim □ I explained *why*, not just *what*