LESSON E-03 · ELEMENTARY LESSONS (K–5)

Air Resistance & Parachutes

ELEMENTARY (K–5)

Name _____ Date _____ Class / Period _____

Falling through the air

When something falls, the air pushes back on it. A parachute is a big sheet that catches lots of air, so the air pushes back much harder.

Mission goal: land the rocket softly.

Standards practiced: 3-PS2-1 · Words to know: air-resistance, parachute, landing

1 LOOK

OBSERVE BEFORE YOU TOUCH A CONTROL

Parachute or no parachute?

- We start 3 kilometres above the ground and we are falling.
- Look at the Staging box on the left. One of its buttons says PARACHUTE.

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. Which landing is softer?

Hint: A soft landing means the rocket touches the ground slowly. A hard landing means it hits fast.

□ With the parachute

□ Without the parachute

Because...

3 EXPERIMENT

CHANGE ONE VARIABLE AT A TIME

Step 1. Press **[Space]** to step through the stages until the parachute opens. Keep falling until you land.

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*