Blurt it

Step 1

Name _____ Date _____

1. Cover your notes and put your phone face down.
2. Set a timer for 5 minutes.
3. Write down everything you remember about forces and motion: facts, key words, equations, practicals, and mistakes to avoid. Diagrams count too.

Stuck? Start with one of these: acceleration · terminal velocity · stopping distance

When the timer ends, turn over and check what you remembered.

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Check it, fix it, space it

Steps 2, 3 and 4

Check it

Tick each idea you wrote down, even in your own words.

- [ ] Distance and speed are scalars; displacement and velocity are vectors
- [ ] Distance = speed × time
- [ ] The gradient of a distance-time graph is the speed
- [ ] Acceleration = change in velocity ÷ time; the gradient of a velocity-time graph is the acceleration
- [ ] Objects falling freely near Earth accelerate at about 9.8 m/s²; falling through a fluid they reach terminal velocity
- [ ] Newton's First Law: with no resultant force, an object stays still or keeps the same velocity
- [ ] Newton's Second Law: force = mass × acceleration
- [ ] Newton's Third Law: when two objects interact, the forces on each other are equal and opposite
- [ ] Stopping distance = thinking distance + braking distance
- [ ] Tiredness, drugs, alcohol and distractions affect reaction time; wet or icy roads and poor brakes or tyres increase braking distance
- [ ] Braking turns kinetic energy into heat in the brakes; large decelerations are dangerous

Higher only

- [ ] Moving in a circle at a constant speed means the velocity is always changing
- [ ] Find the speed at one moment from the gradient of a tangent on a distance-time graph
- [ ] The area under a velocity-time graph is the distance travelled
- [ ] Inertia is the tendency to keep doing what you are doing; inertial mass = force ÷ acceleration
- [ ] Momentum = mass × velocity
- [ ] In a closed system, total momentum before = total momentum after

Key words to use: distance · displacement · speed · velocity · acceleration · deceleration · terminal velocity · resultant force · Newton's First/Second/Third Law · inertia · stopping distance

I remembered _____ out of 11. **Higher only: _____ out of 6.**

Fix it

Pick 3 ideas you missed. Look them up, then write each one correctly.

1

2

3

Space it

Blurt again on a fresh sheet. Gaps help you remember for longer.

Tomorrow

Date _____
Score _____ / 11
Higher only _____ / 6

In 3 days

Date _____
Score _____ / 11
Higher only _____ / 6

In a week

Date _____
Score _____ / 11
Higher only _____ / 6

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