

Physics Worksheet – Terminal Velocity

Reading Passage:

When something falls, like a ball or a leaf, gravity pulls it down. At first, the object falls faster and faster. But the air pushes upward. This push is called air resistance. As the object falls faster, the air pushes harder. After some time, the air pushes up as strong as gravity pulls down. When the two forces are equal, the object stops speeding up. It still falls, but at the same speed. This speed is called terminal velocity. A feather reaches terminal velocity quickly because air pushes on it a lot. A rock reaches terminal velocity later because it is heavier. Skydivers also reach terminal velocity. When they open their parachute, air resistance becomes very strong, so they slow down.

A. Understanding Questions:

1. What force pulls objects down?
2. What force pushes upward on falling objects?
3. What happens when air resistance and gravity become equal?
4. What is terminal velocity?
5. Why does a feather reach terminal velocity faster than a rock?

B. Thinking Questions:

6. Why does a parachute make a skydiver slow down?
7. Which will reach terminal velocity first: a leaf or a stone? Why?

C. Word Match:

Match the word to the meaning:

Gravity – Air resistance – Terminal velocity

8. The force that pulls things down
9. The air pushing upward
10. The speed where an object stops getting faster

Answer Key:

- A1. Gravity
- A2. Air resistance
- A3. The object stops speeding up
- A4. The constant speed a falling object reaches
- A5. Because air pushes on a feather more easily
- B6. Because the parachute increases air resistance
- B7. A leaf, because air resistance affects it more
- C8. Gravity
- C9. Air resistance
- C10. Terminal velocity

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