

# 7K Forces and their effects

## Journey To School

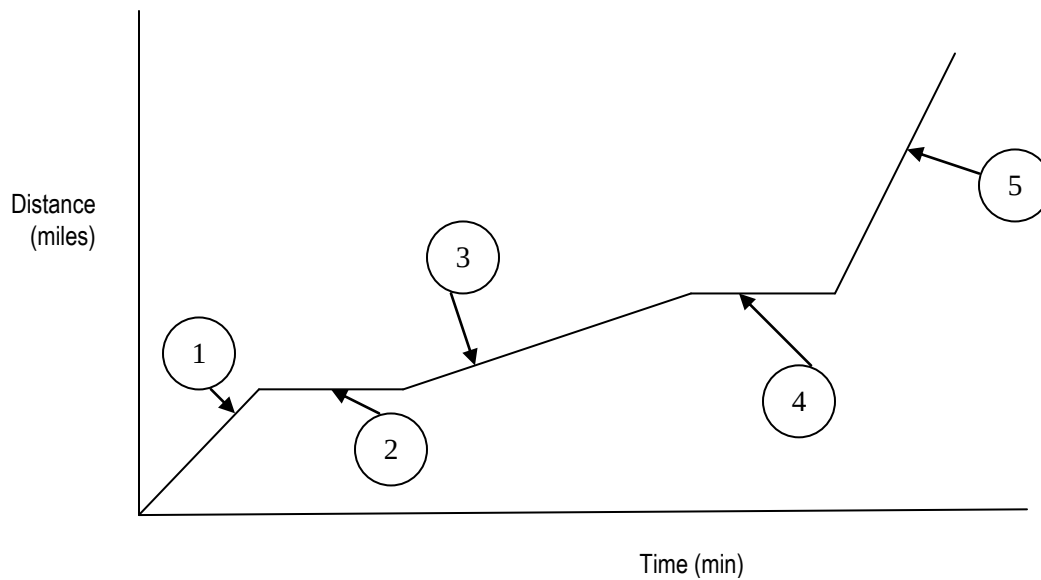
**Task 1:** Write an introductory section to explain what you know about forces:

- What is a force?
- How is force measured?
- How can a force change the speed and/or direction of an object?

This should be written in 3 separate paragraphs.

### Task 2: The pram

This distance-time graph shows the journey of a girl named Jenny, from her home to school:



a) Match points 1-4 with the following descriptions of parts of the journey:

Jenny and her friend walk to the bus stop. They are talking so do not walk as fast as Jenny when she was on her own.

The bus takes them to the school gates.

Jenny walks half a mile to her friend's house.

They stand at the bus stop.

Jenny waits for her friend to get ready.

b) For each part of the journey above identify the forces acting on Jenny and her friend, describe how the sizes of these forces change and describe how the speed at which Jenny and her friend is changing.

**Key words:**

Accelerate, balanced, decelerate, drag, friction, pull, push, reaction, steady speed, unbalanced, weight

Follow the instructions in the level ladder to help you to achieve your target:

| To get level | You need to:                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3            | <ul style="list-style-type: none"><li>• Identify forces as a push or pull</li><li>• Know that forces can change the speed and direction of an object</li></ul>                                                                                                                                                                                                                                          |
| 4            | <ul style="list-style-type: none"><li>• Correctly identify different forces using the correct terminology</li><li>• Know how forces can affect motion</li><li>• Know that <b>friction</b> <i>opposes</i> movement</li><li>• Know that <b>weight</b> <i>pulls</i> downwards</li><li>• Know that <b>upthrust</b> <i>pushes</i> upwards</li><li>• Recognise where there are differences in speed</li></ul> |
| 5            | <ul style="list-style-type: none"><li>• Identify the <b>direction</b> forces act in</li><li>• Recognise where forces are <b>balanced</b> and <b>unbalanced</b></li><li>• Describe what <b>speed</b> means</li></ul>                                                                                                                                                                                     |
| 6            | <ul style="list-style-type: none"><li>• Explain why forces are balanced or unbalanced</li></ul>                                                                                                                                                                                                                                                                                                         |
| 7            | <ul style="list-style-type: none"><li>• Explain in detail why forces are balanced or unbalanced</li><li>• Explain why, for every action, there must be an equal and opposite reaction</li><li>• Explain why friction increases as speed increases using the Key Idea of Particles.</li></ul>                                                                                                            |