 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Investigate variables that affect the speed of a toy car rolling down a slope.



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| --- | --- | --- | --- | --- |
| Know | |  | Apply  2  1 | |
| Ideas | |  |  |  |
| K1 | If the overall, resultant force on an object is unbalanced, its motion changes and it slows down, speeds up or changes direction. |  | A1 | Illustrate a journey with changing speed on a distance-time graph, and label changes in motion. |
|  | |  | A2 | Describe how the speed of an object varies when measured by observers who are not moving, or moving relative to the object. |
| Skill | |
| K2 | Use the formula:  speed = distance (m) / time (s)  or distance-time graphs, to calculate speed. |  |  |  |
|  | |  |  |  |
| Facts | |
| K3 | A straight line on a distance-time graph shows constant speed, a curving line shows acceleration. |  | A3 |  |
| K4 | The higher the speed of an object, the shorter the time taken for a journey. |  |  |  |
|  | |  |  |  |
| Key words | |
| K5 | **Speed:** How much distance is covered in how much time. |  |  |  |
| K6 | **Average speed:** The overall distance travelled divided by overall time for a journey. |  | A4 |  |
| K7 | **Relative motion:** Different observers judge speeds differently if they are in motion too, so an object's speed is relative to the observer's speed. |  |  |  |
|  |
| K8 | **Acceleration:** How quickly speed increases or decreases. |  |  |  |
| 3 | Extend |  |  |  |
| E1 | Suggest how the motion of two objects moving at different speeds in the same direction would appear to the other. |  |  |  |
| E2 | Predict changes in an object's speed when the forces on it change. |  |  |  |
| E3 |  |  |  |  |
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|  |  |  |  |  |
| E4 |  |  |  |  |
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