|  |  |
| --- | --- |
| Australian Curriculum Year 4 Science Sample assessment | Task-specific standards — matrix  The force of friction | Name |
| © The State of Queensland (Queensland Studies Authority) and its licensors 2013. All web links correct at time of publication. | |

**Purpose of assessment:** To conduct fair tests about friction.

|  | | | A | B | C | D | E |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Understanding dimension | Science Understanding | **Section 2: Applying your science knowledge**  Application of knowledge about forces and friction to an everyday scenario. | Application of science knowledge to provide a reasoned explanation of why friction is an advantage or a disadvantage in the chosen situation. | Application of science knowledge to provide an informed explanation of why friction is an advantage or a disadvantage in the chosen situation. | Application of science knowledge to provide an explanation of why friction is an advantage or a disadvantage in the chosen situation. | Application of science knowledge to provide a partial explanation of why friction is an advantage or a disadvantage in the chosen situation. | Statement of isolated science facts about friction. |
| Skills dimension | Questioning and predicting | **Section 1: Prediction**  Prediction about the effect of friction. | Reasoned prediction about the distance travelled by the toy car. | Informed prediction about the distance travelled by the toy car. | Plausible prediction about the distance travelled by the toy car. | Prediction about the distance travelled by the toy car. | Restatement of the investigation question. |
| Planning and conducting | **Section 1: Results**  Collection and recording of data in the results table and use of this data to draw a column graph. | Accurate collection and recording of reliable data in the table and use of this data to accurately draw a column graph to compare the distance travelled over different surfaces | Collection and recording of relevant data in the table and use of this data to draw a column graph to compare the distance travelled over different surfaces. | Collection and recording of data in the table and use of this data to draw a column graph to compare the distance travelled over different surfaces. | Collection and partial recording of data in the table and use of this data to draw a column graph to compare the distance travelled over different surfaces. | Listing of observations about friction and distance travelled. |
| Processing and analysing data and information | **Section 1: Discussion**  Use of the data in the results table and column graph to explain findings. | Use of the data in the results table and patterns in the column graph to explain with justification why the toy car travelled different distances over different surfaces. | Use of the data in the results table and patterns in the column graph to explain why the toy car travelled different distances over different surfaces. | Use of the data in the results table and patterns in the column graph to describe the distances travelled by the toy car over different surfaces. | Use of given data to identify obvious patterns about the distance travelled by the toy car over different surfaces. | Completion of the results tables. |
| Skills dimension | Evaluating | **Section 1 : Keeping the investigation fair**  Identification of factors that need to be considered to make the investigation fair. | No opportunity in this assessment for students to demonstrate an A or B standard. | | Identification of factors that make the investigation fair. | Identification of obvious factors that make the investigation fair. | Listing of given factors that make the investigation fair. | |
| Communicating | **Sections 1 and 2**  Communication of ideas and findings in a variety of ways (short responses, tables, column graph). | Clear and purposeful communication of ideas and findings about the force of friction. | Clear communication of ideas and findings about the force of friction. | Communication of ideas and findings about the force of friction. | Narrow communication of ideas and findings about the force of friction. | Use of given representations to communicate ideas and findings about the force of friction. |