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| Australian Curriculum Year 4 Science Sample assessment | Task-specific standards — continua  The force of friction | Name |
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**Purpose of assessment**: To conduct a fair test to establish how friction affects the distance travelled by a toy car.

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| Understanding and Skills | | | |  |
| Science Understanding | Science Inquiry Skills | | |  |
| **Section 2: Applying your science knowledge**  Application of knowledge about forces and friction to an everyday scenario. | **Section 1: Prediction and discussion**  Prediction about friction  and the effect of friction.  Use of data in the results table and column graph to explain findings. | **Section 1: Keeping the investigation fair and results**  Identification of factors that need to be considered to make the investigation fair.  Collection and recording of data in the results table and use of this data  to draw a column graph. | **Sections 1 and 2**  Communication of ideas and findings in a variety of ways (short responses, tables, column graph). |  |
| Application of science knowledge to provide a reasoned explanation of why friction is an advantage or a disadvantage in the chosen situation. | Reasoned prediction about the distance travelled by the toy car. Use of 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. | Accurate collection and recording of reliable data in the table and use of this data to accurately draw a column graph to compare friction of different surfaces and the distance travelled over different surfaces. | Clear and purposeful communication of ideas and findings about the force of friction. | A |
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| Application of science knowledge to provide an explanation of why friction is an advantage or a disadvantage in the chosen situation. | Plausible prediction about the distance travelled by the toy car. Use of data in the results table and patterns in the column graph to describe the distances travelled by the toy car over different surfaces. | Identification of factors that make the investigation fair. Collection and recording of data in the table and use of this data to draw a column graph to compare friction of different surfaces and the distance travelled over different surfaces. | Communication of ideas and findings about the force of friction. | C |
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| Statement of isolated science facts about friction. | Restatement of the investigation question and completion of the results table. | Listing of given factors that make the investigation fair. Listing of observations about friction and distance travelled. | Use of given representations to communicate ideas and findings about the force of friction. | E |
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