



Assessment task	
<b>Year level</b>	6
<b>Learning area</b>	Science
<b>Sub-strand</b>	<input type="checkbox"/> Biological Sciences <input type="checkbox"/> Chemical Sciences <input type="checkbox"/> Physical Sciences <input type="checkbox"/> Earth and Space Sciences
<b>Title of task</b>	
Task guidelines	
<b>Description of task</b>	
<b>Type of assessment</b>	Summative and/or formative
<b>Purpose of assessment</b>	This template may be used to assess science understanding and science inquiry skills
<b>Guidance provided by teachers</b>	<p>Question to be investigated</p> <input type="checkbox"/> Provided by the teacher, e.g. How does load carried affect the force of friction? <input type="checkbox"/> Open for students to develop, e.g. How does a 'student selected factor' affect the force of friction? <p>Equipment</p> <input type="checkbox"/> Provided <input type="checkbox"/> A selection provided to choose from <input type="checkbox"/> Open <p>Any other comments that may inform the reviewer</p>
Content description	
<b>Content from the Western Australian Curriculum</b>	<p><b>Science understanding</b></p> <p>Biological sciences</p> <input type="checkbox"/> The growth and survival of living things are affected by physical conditions of their environment <p>Chemical sciences</p> <input type="checkbox"/> Changes to materials can be reversible or irreversible <p>Earth and space sciences</p> <input type="checkbox"/> Sudden geological changes and extreme weather events can affect Earth's surface <p>Physical sciences</p> <input type="checkbox"/> Electrical energy can be transferred and transformed in electrical circuits and can be generated from a range of sources

	<p><b>Science inquiry skills</b></p> <p>Questioning and predicting</p> <ul style="list-style-type: none"> <li>• With guidance, pose clarifying questions and make predictions about scientific investigations</li> </ul> <p>Planning and conducting</p> <ul style="list-style-type: none"> <li>• Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks</li> <li>• Decide variables to be changed and measured in fair tests, and observe measure and record data with accuracy using digital technologies as appropriate</li> </ul> <p>Processing and analysing data and information</p> <ul style="list-style-type: none"> <li>• Construct and use a range of representations, including tables and graphs, to represent and describe observations, patterns or relationships in data using digital technologies as appropriate</li> <li>• Compare data with predictions and use as evidence in developing explanations</li> </ul> <p>Evaluating</p> <ul style="list-style-type: none"> <li>• Reflect on and suggest improvements to scientific investigations</li> </ul> <p>Communicating</p> <ul style="list-style-type: none"> <li>• Communicate ideas, explanations and processes using scientific representations in a variety of ways, including multi-modal texts</li> </ul>
<b>Task preparation</b>	
<b>Prior learning</b>	
<b>Conditions under which the task was conducted</b>	<p>Specify relevant information that may inform the reviewer:</p> <ol style="list-style-type: none"> <li>1. Time allowed</li> <li>2. Conditions under which the task was conducted</li> </ol>
<b>Resources</b>	Investigation template, provided

**Instructions for teacher**

1. This template may be used to teach or assess science understanding and inquiry skills.
2. Teachers are required to write a description of the conditions under which the task was conducted. In the description indicate, any parts of the task that were completed as part of whole-class or group discussions.
3. Teachers may provide clarification if students are unfamiliar with the template or template wording.
4. Consider investigations that allow students to demonstrate the full range of science inquiry skills.

Student name: \_\_\_\_\_

Group members: \_\_\_\_\_

Task title: \_\_\_\_\_

**QUESTIONING AND PREDICTING**

State the variables for this investigation.

What I will change (Independent variable)	What I will measure (Dependent variable)	What I will keep the same (Controlled variables)

Write the question to be investigated.


Write a prediction and explain why you think this will happen.





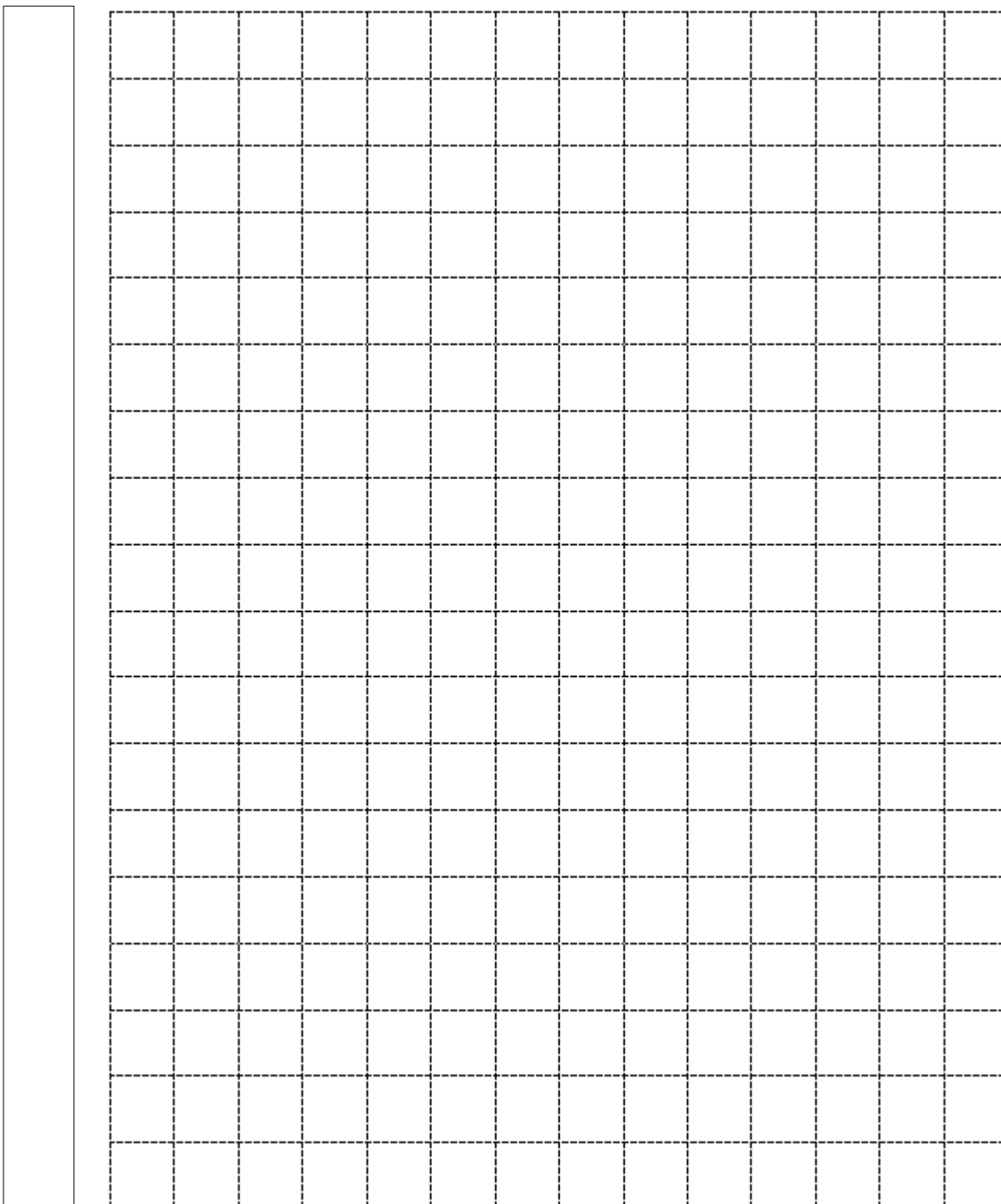

Describe your observations and record your results in a table.

Table title: \_\_\_\_\_

**PROCESSING DATA**

Graph the results of the investigation. Label each of the axes and include appropriate units of measurement.

Graph title: \_\_\_\_\_



\_\_\_\_\_

**ANALYSING DATA**

Describe the relationships or patterns in the results.


Explain the relationships or patterns in the results using science ideas.


**EVALUATING**

Describe how the investigation could be improved.




<b>Marking key</b>	
<b>Description</b>	<b>Marks</b>
<b>Questioning and predicting</b>	
Correctly identifies the variable to be changed (independent variable).	1
Correctly identifies the variable to be measured (dependent variable).	1
Correctly identifies at least two controlled variables.	1–2
<b>Subtotal</b>	<b>4</b>
<b>Questioning and predicting</b>	
Writes a question that can be investigated and is reasonable.	1
<b>Subtotal</b>	<b>1</b>
<b>Questioning and predicting</b>	
Writes a prediction that describes a relationship between the dependent variable and the independent variable; and matches the question posed above.	1–2
Provides a reasonable explanation for choosing this prediction.	1
<b>Subtotal</b>	<b>3</b>
<b>Planning and conducting</b>	
Selects the appropriate equipment required to conduct the investigation.	1–2
<b>Subtotal</b>	<b>2</b>
<b>Planning and conducting</b>	
Identifies safety risks associated with the investigation.	1–2
Suggests ways to minimise the risks.	1–2
<b>Subtotal</b>	<b>4</b>
<b>Planning and conducting</b>	
Provides a method with a logical sequence of steps.	1–2
Provides a method which contains sufficient detail to allow replication. Detail includes: <ul style="list-style-type: none"> <li>• how the independent variable is changed</li> <li>• how the dependent variable is measured</li> <li>• how other variables are controlled</li> <li>• plans for repeat trials/replicates.</li> </ul>	1–4
<b>Subtotal</b>	<b>6</b>
<b>Planning and conducting</b>	
Draws a clear diagram that includes: <ul style="list-style-type: none"> <li>• equipment shown correctly set up</li> <li>• correct labels.</li> </ul>	1–2
<b>Subtotal</b>	<b>2</b>
<b>Planning and conducting</b>	
Draws a table that includes: <ul style="list-style-type: none"> <li>• descriptive title containing dependent and independent variables</li> <li>• information relevant to the investigation</li> <li>• appropriate column headings with units of measurement (if applicable)</li> </ul>	1–3
<b>Subtotal</b>	<b>3</b>

<b>Processing data</b>	
Graphs results collected from the investigation (if applicable): <ul style="list-style-type: none"> <li>• provides appropriate graph title</li> <li>• labels axes correctly</li> <li>• includes appropriate units of measurement</li> <li>• plots results correctly</li> <li>• draws the appropriate type of graph.</li> </ul>	1–5
<b>Subtotal</b>	<b>5</b>
<b>Analysing data</b>	
Describes the relationships or patterns in the results.	1–2
Refers to specific results when describing the relationship.	1
Compares the results to their prediction.	1
<b>Subtotal</b>	<b>4</b>
<b>Evaluating</b>	
Identifies difficulties experienced when conducting the investigation. May include reference to, but not limited to: quality of the data, correct use of equipment, choice of equipment.	1–2
Makes suggestions to overcome the difficulties described.	1–2
<b>Subtotal</b>	<b>4</b>
<b>Total</b>	<b>40</b>