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| **Assessment task** |
| Year level  | 7 |
| Learning area | Science |
| Sub-strand | ˂˂Teacher to select˃˃* Biological Sciences
* Chemical Sciences
* Physical Sciences
* Earth and Space Sciences
 |
| Title of task | ˂˂Teacher to specify˃˃ |
| Task details |
| Description of task  | Students are required to plan an investigation, specify independent, dependent and controlled variables, and write a question or problem that can be investigated. Students are required to apply scientific understanding when making a prediction, communicate ways in which they may collect and represent data, and science knowledge.  |
| Type of assessment | Summative  |
| Purpose of assessment | This task may be used at the end of a unit of work to assess science understanding and inquiry skills |
| Assessment strategy | Short answers  |
| Evidence to be collected | Completed task  |
| Suggested time | 2 x 50 minutes |
| **Content description** |
| Content from the Western Australian Curriculum | **Science understanding** ˂˂Insert here˃˃**Science as a Human Endeavour**People use science understanding and skills in their occupations and these have influenced the development of practices in areas of human activity**Science inquiry skills**Identify questions and problems that can be investigated scientifically and make predictions based on scientific knowledgeCollaboratively and individually plan and conduct a range of [investigation](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/investigation) types, including fieldwork and experiments, ensuring safety and ethical guidelines are followed Measure and control variables, select equipment appropriate to the task and collect [data](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/data) with accuracyConstruct and use a range of representations, including graphs, keys and models to represent and [analyse](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/analyse) patterns or relationships in [data](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/data) using [digital technologies](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/digital-technologies) as appropriateCommunicate ideas, findings and [evidence](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/evidence) based solutions to problems using [scientific language](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/scientific-language), and representations, using [digital technologies](https://k10outline.scsa.wa.edu.au/home/teaching/curriculum-browser/science-v8/overview/glossary/digital-technologies) as appropriate |

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| **Task preparation** |
| Prior learning  | Students are familiar with the year level inquiry skills and have instigated and developed their own investigations on numerous occasions. The relevant science understanding has been explicitly taught to students in meaningful and relevant contexts. |
| **Assessment task** |
| Assessment conditions | Written task, completed individually at the end of the unit of work |
| Resources | Investigation template, provided |

**Instruction for teacher**

1. The investigation planner is suitable for each of the science sub-strands.
2. The investigation is an in class summative piece, completed independently by students.
3. Teachers may provide clarification if students are unfamiliar with the template or template wording.
4. Teachers must consider the marking key if individual student guidance and support is required. This must be reflected in the marking to ensure comparability and fairness.
5. The planned investigations are not required to be executed.
6. It is anticipated that students have engaged in practical investigations in the chosen sub-strand. It is encouraged that students develop variations to those investigations completed in the classroom. Introducing and testing new variables encourages students to apply science understanding and demonstrate science literacy.
7. The Authority’s website and link below may further support teachers in their work.

<https://k10outline.scsa.wa.edu.au/home/assessment/assessment-activities/year7>

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| **Student Booklet - Science** |
| **Investigation title** |  |
| Student name |  |
| School |  |
| Year level | 7 |
| Date |  |

**Investigation template**

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

Question 1

Write a question or problem which can be investigated

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Question 2

State the variables for this experiment

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| Independent Variable What will I change? | Dependent Variable What will I measure? | Controlled Variables What will I keep the same? |
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Question 3

List the equipment required for the investigation

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Question 4

Make a prediction and explain why you think this will happen

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Question 5

Draw a labelled diagram of the equipment set-up

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Question 6

Write down a method to conduct the investigation

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Question 7

Design a table for recording the investigation results. Label all relevant columns

Question 8

People use science to make decisions in the world. How could the results from the investigation be used to make decisions?

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| **Marking key** |
| **Description** | Marks |
| Question 1  |
| Writes a question or problem that clearly and correctly relates the dependent variable and the independent variable, and that is feasible and accurate in application. | 3 |
| Writes a question or problem that demonstrates some relationship between variables. | 2 |
| With guidance, writes an investigable question that may demonstrate a relationship between variables. | 1 |
| **Subtotal** | **3** |
| Question 2 |
| Identifies correctly, the independent variable, the dependent variable and the controlled variables. | 3 |
| Identifies most of the variables correctly.  | 2 |
| Lists some variables that are relevant to the investigation. | 1 |
| **Subtotal** | **3** |
| Question 3 |
| Lists correctly, all of the equipment required to conduct the investigation. | 3 |
| Lists most of the equipment required to conduct the investigation. | 2 |
| Lists some equipment required to conduct the investigation. | 1 |
| **Subtotal** | **3** |
| Question 4 |
| Writes a reasonable prediction with a correct relationships between the dependent variable and the independent variable.Applies science understanding to explain the prediction. | 3-4 |
| Writes a prediction that includes the dependent and independent variable.Applies some science understanding to explain the prediction. | 0-2 |
| **Subtotal** | **4** |
| Question 5 |
| Draws a diagram that is clearly labelled and correct. | 3 |
| Draws a diagram that lacks some detail. | 2 |
| Draws a simple diagram. | 1 |
| **Subtotal** | **3** |
| Question 6 |
| Describes method in clear, logical steps.Identifies how variables will be controlled, changed and measured. | 5-6 |
| Describes method in logical steps.Identifies variables to be controlled, changed and measured. | 2-4 |
| Describes how investigation is to be conducted. | 0-2 |
| Subtotal | **6** |
| **Description** | Marks |
| Question 7 |
| Designs a table to record relevant information with relevant headings and units of measurement.  | 3 |
| Designs a table to record relevant information with relevant headings. | 2 |
| Uses a simple table to collect data (data may be irrelevant to the prediction).  | 1 |
| Subtotal | **3** |
| Question 8 |
| Relates investigation results to a specific problem and explains its implications. | 3 |
| Relates investigation to a specific situation in society. | 2 |
| Generally relates investigation to a situation in society. | 1 |
| Subtotal | **3** |
| Total | **28** |