Ecosystems beyond Earth • Testing plant growth

**Year 7**

# Investigation planner

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| --- | --- |
| Name: | Date: |
| Other members of your team: | |

### Materials required

* 8-12 long skewers
* Masking or sticky tape
* Coloured cellophane (red, blue, and green)
* Well-lit area
* Water
* Seedlings (lettuce plants or duckweed plants)
* Soil or water for the plants to grow in
* Small containers to hold the seedlings (egg cartons work well)
* Dish to contain water under the plants

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| --- | --- |
| **Independent variable:** | **Dependent variable:** |
| **Controlled variables (keep the same):** | **How they will be controlled:** |
| **Hypothesis:**  If…  Then…  Because… | |
|  | |
| **Describe how you will set up your investigation**  Write, draw, or upload a photo of your drawing. | **What equipment and chemicals will you use?**    Use dot points and include the amounts and the concentration needed. |
| **Risk assessment:**  What I will do to avoid accidents or injuries with equipment or chemicals. | |

**Results—Use a data table. How many rows and columns will you need? What are their headings?**

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| Comparing results: How do your results compare to others in your class? Are there any patterns or trends? |
| Why do you think that happened? |

**Discussion**

1. Describe any unexpected results that you might have observed. For example, did one plant grow differently from the other plants? Provide a possible explanation for this result.
2. How could you check that your result was reliable? Identify one possible error and suggest a way to avoid this if the experiment is repeated.
3. Describe in 1-2 sentences how the colour of light affects the growth of the plants you tested. This is your claim.
4. Provide evidence from your experiment that supports your claim in question 3. Use reasoning to explain how the evidence supports your claim.
5. Explain how these results could be used to grow plants on the International Space Station.