

Learning Outcomes:

Nature of Science	Students should be able to organise and communicate their research and investigative findings in a variety of ways fit for purpose and audience, using relevant scientific terminology and representations
Biological World	Students should be able to outline evolution by natural selection and how it explains the diversity of living things

Task

You are an intern for a group of scientists at NUI Galway university. The scientists are planning future projects in the field of artificial selection. They have asked you to research the latest information about existing methods of artificial selection, the technologies used in these methods, and how these technologies affect society. You will synthesise the information into a project for the scientists. The scientists plan to use the information as inspiration for future project ideas.

List the characteristics of appropriate resources for scientific research.

- Review your list and discuss it with other researchers. Develop a master list of characteristics of reliable sources for scientific research.
- Research the different methods of artificial selection and how technology has changed the way humans influence the inheritance of desired traits in organisms.
- Choose one method of artificial selection for your research.
- Develop a research plan based on your chosen method and the list of characteristics of reliable sources. Also, recall what is required for your project—a description of the latest information about your chosen method, the technologies used in your chosen method, and how the technologies affect society.
- Carry out your research. Be sure to use multiple sources. When you gather information from a source, be sure to record information about the source.
- Develop a plan to present your findings. Think about how you might address the following questions.

θ How can you determine if a source is credible and accurate?

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θ How can you determine if a source is biased?

θ How can you avoid plagiarism when synthesizing information from multiple sources?

θ What information would be most useful to university scientists thinking about their next project?

θ How can you clearly communicate the results of your research?

- Create your project. Be sure your project presents information in a clear, logical, and engaging manner.
- Finalise your plan for sharing your project. Remember to think about your audience. Think about any visual aids you might use to help better explain or emphasize a point.
- Share the project you have prepared for the scientists.