

Australian Curriculum: Digital Technologies Years 3–4 assessment task
Student task booklet – Living and non-living things
Assessment focus: data and creating digital solutions

Student name _____

Part A

You are going to collect data about living and non-living things in the playground.

1. Tick the things you observe. You could take photos if you have access to a tablet device or camera. You can use these later in an infographic.

- | | |
|---|--------------------------------------|
| <input type="checkbox"/> dirt | <input type="checkbox"/> stick |
| <input type="checkbox"/> grass | <input type="checkbox"/> rock |
| <input type="checkbox"/> tree | <input type="checkbox"/> ball |
| <input type="checkbox"/> ant | <input type="checkbox"/> fence |
| <input type="checkbox"/> spider | <input type="checkbox"/> flower |
| <input type="checkbox"/> lizard | <input type="checkbox"/> shrub |
| <input type="checkbox"/> bird | <input type="checkbox"/> stone |
| <input type="checkbox"/> playground equipment | <input type="checkbox"/> table |
| <input type="checkbox"/> concrete | <input type="checkbox"/> seat |
| <input type="checkbox"/> caterpillar | <input type="checkbox"/> shade cloth |
| <input type="checkbox"/> butterfly/moth | <input type="checkbox"/> fly |
| <input type="checkbox"/> dragonfly | <input type="checkbox"/> wall |

2. List other things you observe that are not on the list above.

3. Next to the items listed in questions 1 and 2, record how many of each thing you can see. If there are more than 5 of something, choose a quicker way of representing the number.

For example:

- a) tally marks
- b) 100 ants = 1 large ant image
- c) your own idea.

Part B

4. Next to the items listed in questions 1 and 2, record L, N or P.
(L = living, N = non-living, P = a product of something that is or was living)

5. Organise your data in this table.

Living	Non-living	Product of living

6. Present your data to show whether it is living, non-living or a product of a living thing. You could do this on a computer or tablet device or on paper. Think about who the audience is for this presentation (the user).

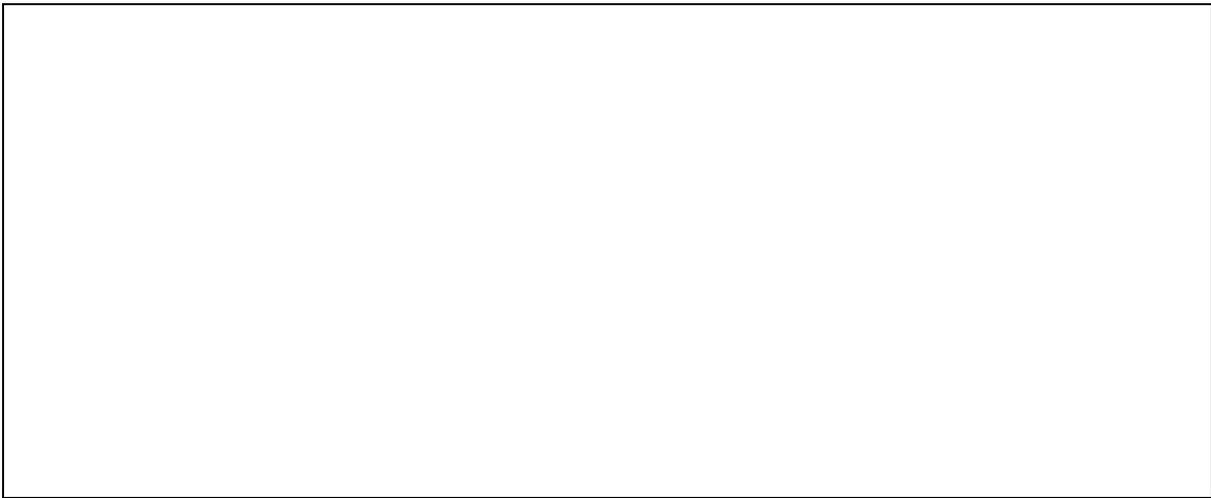
Part C

You are going to make a 'Living, non-living or product of living thing' classification quiz game on a computer or tablet device. You will plan your quiz game with your teacher as a class and list what a good classification quiz game program would need. Here are two examples made with Scratch:

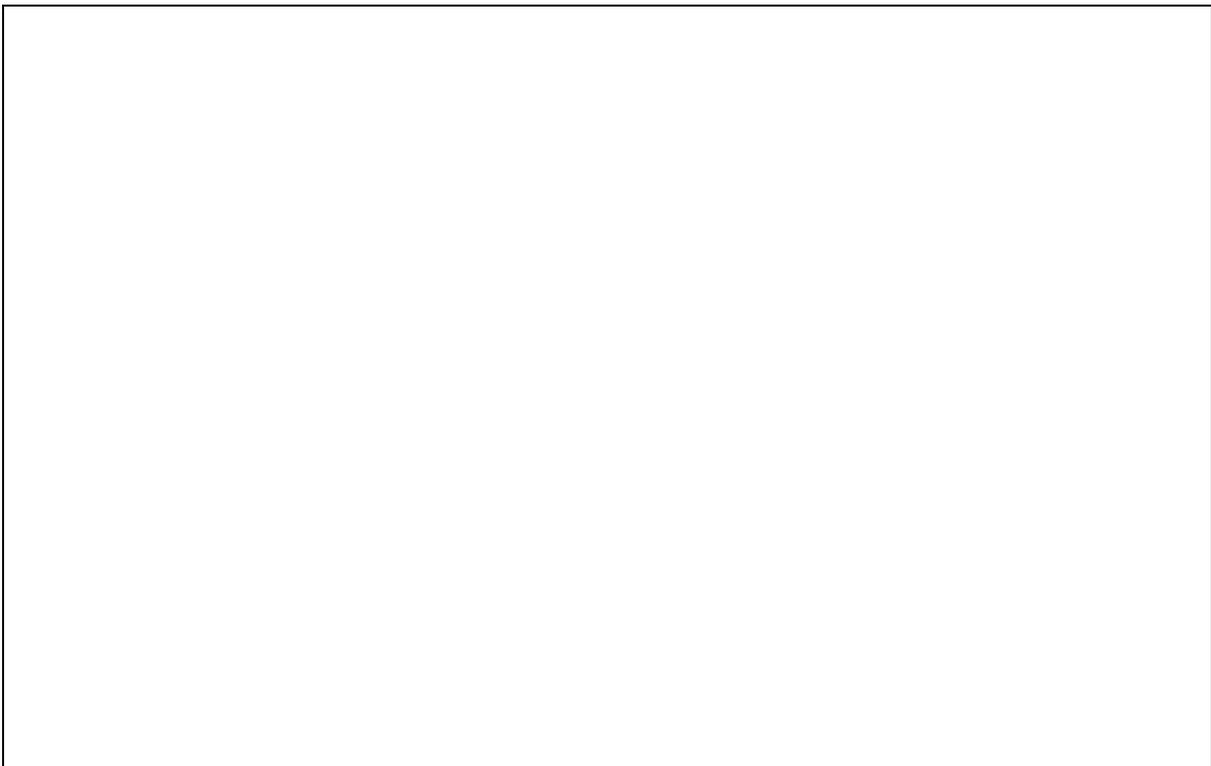
Simple: scratch.mit.edu/projects/288604818/

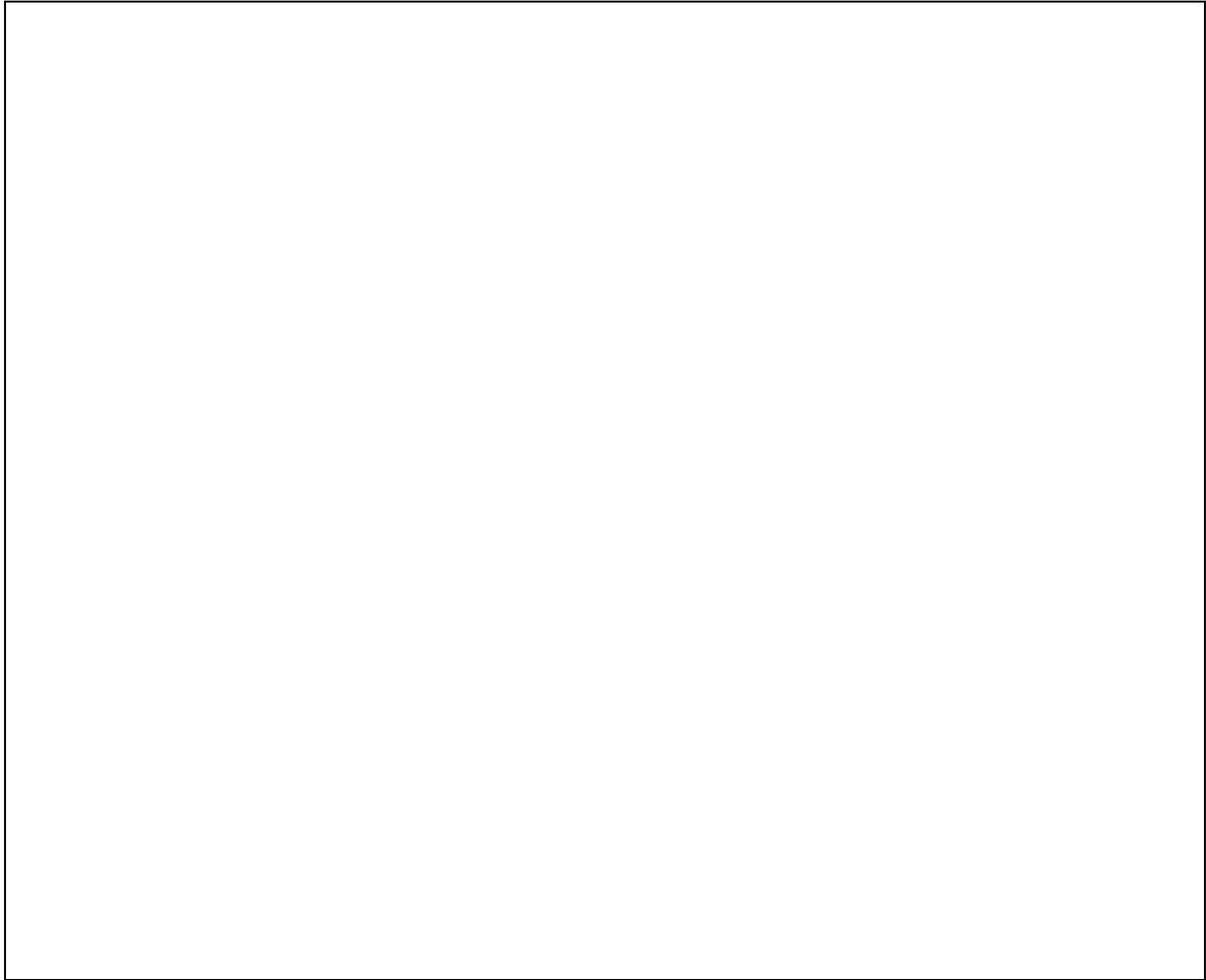
Advanced: scratch.mit.edu/projects/288596012/

7. With your partner or group, draw some pictures of things and write questions for the user to answer to determine whether something is living, non-living or the product of a living thing.



8. Write the steps you will need to follow to ask questions (input) and present answers (output). You will need to show 2 responses for right and wrong answers (branching).





9. You will make your classification quiz game on a computer or tablet device with your partner or group. Your teacher might give you links to a tutorial to help you learn how to make the program.
10. Your teacher will give you the list of criteria that your class decided was important. Use the list to check to see if the classification quiz game met the criteria. Colour in the smiley face to show if your game did what it was supposed to and worked properly.



Marking guide (for the teacher)

Digital Technologies	Above standard <i>Students:</i>	At standard <i>Students:</i>	Below standard <i>Students:</i>
process and represent data for different purposes.			
Data representation	use a variety of tools to classify data sets justify why different data representations suit different contexts	classify data sets explain how the data sets can be represented in different ways for different purposes	classify data sets with support demonstrate limited understanding of how the data sets can be represented differently
follow and describe simple algorithms involving branching and iteration			
Algorithms	describe the algorithms needed for a classification quiz game program which automatically progresses through quiz questions	describe the algorithms needed for a classification quiz game program	describe some steps in a sequence needed for a classification quiz game program
implement them as visual programs create simple digital solutions and use provided design criteria to check if solutions meet user needs. Students securely access and use digital systems and their peripherals for a range of purposes.			
Digital systems and Producing and implementing	Securely access and use digital systems to effectively implement algorithms as a visual program by creating a classification quiz game program that involves decision-making, user input and variables	Securely access and use digital systems to implement algorithms as a visual program by creating a classification quiz game program using algorithms and check to ensure game meets provided design criteria	Securely access and use digital systems to commence implementation of algorithm sequence with a visual program by creating a simplified classification quiz game program using a visual programming language
use the core features of common digital tools to plan, create, locate and share content, and to collaborate, following agreed behaviours.			
Collaborating and managing	use and manage digital tools collaboratively and independently to create their classification quiz game, supporting their peers where appropriate	use and manage digital tools to collaboratively create their classification quiz game	use and manage digital tools collaboratively with support
Mathematics	Above standard <i>Students:</i>	At standard <i>Students:</i>	Below standard <i>Students:</i>
Year 3 conduct guided statistical investigations involving categorical and discrete numerical data, and interpret their results in terms of the context. record, represent and compare data they have collected.			
Statistics	Collect, manipulate and interpret different data independently and explain reasons for choice of information to aid	Collect, manipulate and interpret different data and create information to aid construction of a digital solution	Collect and manipulate different data when creating information and a digital solution with support

	construction of a digital solution		
<p>Year 4 create many-to-one data displays, assess the suitability of displays for representing data and discuss the shape of distributions and variation in data. use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context.</p>			
Statistics	Collect, manipulate, interpret and justify choice of representation of different data and information independently to aid construction of a digital solution	Collect, manipulate, interpret and justify choice of representation of different data and information to aid construction of a digital solution	Collect, manipulate and interpret different data when creating information and a digital solution with support

Teacher comments: _____
