PLAN AND CONDUCT INVESTIGATIONS USING THE STATISTICAL INQUIRY CYCLE.
UNDERSTANDING BIODIVERSITY HAS A LOCAL, REGIONAL, NATIONAL AND GLOBAL CONTEXT.

ESSENTIAL QUESTION:
IF THE EARTH LAUGHS IN FLOWERS CAN IT TALK IN BEES?

WHAT ARE WE LEARNING?
- Detecting patterns, variations, relationships and trends in multivariate category data.
- Exploring various aspects of an issue and make decisions about possible actions.
- Making a plan to increase the biodiversity of your school garden.

TRY THIS WITH
- Year 3-8
- Students who have a school garden.
- Students who enjoy creating solutions.

FIND

Record	Report
Trace	Summarise
Classify	Observe

Play the Classify It Game and find the class champion.

Watch Bee Movie and Flight of the Bumblebee.

Assess your school garden's Green Score.

Create a Class Project Noah Mission and enrol your students as participants.

Conduct an Insect Census using the DOC guidelines.

Create a Potato Trap or a Pitfall Trap to track insects.

Use Project Noah to document your findings and collate them against the mission.

Share your findings with your school community.

Understand that the goal is to strengthen the biodiversity of your garden.

Even if your school garden is already established you can aim to increase biodiversity.

Reflect on the companion planting decisions you have already made.

Brainstorm ways to increase the number of feedback loops in your school garden.

Ask local experts to help you create a master list of invertebrates you would hope to see.

APPLY

Choose	Discover
Solve	Organise
Appraise	Arrange

Combine the effects of many small projects to increase the biodiversity of your garden.

To increase plant biodiversity:

Consider adding hanging elements, or vertical gardens to increase the number of plants.

Add new companion planting species such as marigolds, nasturtiums.

Think about adding fungi and lichens to crevices on the edge of your garden.

Identify connector plants (like clematis) that connect different habitats in your garden.

To increase bird life:

Understand that some New Zealand plants increase the bird life.

Investigate recommended foods for birds.

Design and bake a bird cake that can attract birds to your veggie garden.

To increase soil microbes:

Extend the concept of your composting further and build a worm farm.

Encourage school students to feed it scraps that you know the worms will digest.

Collect and mulch leaf litter or grass clippings from around the school grounds.

PRODUCE

Substitute	Interpet
Debate	Test
Infer	Compare

To increase vertebrates:

Set traps to catch unwanted vertebrates such as mice and rats.

Identify native berry and nectar plants that lizards, skinks and geckos will use for food.

Provide things for vertebrates to hide under.

A reminder that all New Zealand Lizards are protected and cannot be kept in captivity.

To increase invertebrates:

Identify flowers that might attract good insects and see if you can get cuttings from locals.

Build a luxury 5 star Weta Motel and make sure you site it correctly in your garden.

Consider establishing a beehive and consider how you might use the hive data.

Build and tend the beehive and contribute to the school economy by selling the honey.

After one term conduct your Insect Census again in line with DOC guidelines.

Update your Project Noah Mission findings and see if your biodiversity has increased.

Publicise your findings for your local school community.

Share via your Life Gardening App with your partner class.

SUCCESS CRITERIA

Students can check they have successfully completed the task by:
- Conducting a baseline Insect Survey using either the potato or the pitfall trap method.
- Designing and making a bird cake that includes ingredients birds will love.
- Creating a habitat that increases your invertebrate population - bees, lizards or weta.

PRINCIPLES	VALUES	KEY COMPETENCIES	LEARNING AREAS	WORD BANK	KEY CONCEPTS
Community Engagement	Ecological Sustainability	Participating and contributing	Science	Feedback Loop	Biodiversity
Future Focus	Community and participation	Relating to others	Technology	Resilience	Sustainability
				Habitat	Invertebrates
				Baseline Survey	Classification