TURTLES IN SCHOOLS

TERM 3 WORKBOOK
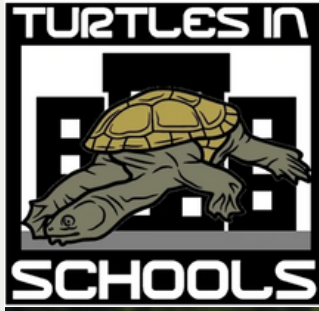
TURTLES IN SCHOOLS

Photo credit: Bellingen Riverwatch

1 Million Turtles

COMMUNITY CONSERVATION PROGRAM

Photo credit: Dr James Van Dyke

TURTLES IN SCHOOLS

Produced by the
1 Million Turtles Community
Conservation Program
and funded by
The Foundation for National
Parks and Wildlife.

In the pages that follow, you will find a comprehensive set of lesson plans. Our initiative is not just about imparting knowledge but fostering a deep connection between students and their natural environment and instilling a sense of responsibility and awareness of freshwater turtles and their conservation.

As we embark on this educational venture, we extend our gratitude to educators, students, and all those who champion the cause of conservation. The Turtles in Schools Program is not just a curriculum; it is a movement to inspire the next generation of environmental custodians.

Thank you,

1 Million Turtles Community Conservation Program

LESSON 6

DATA COMPARISON AND INTERPRETATION

- Learning Intentions
- Background
- Activities
- Curriculum Mapping
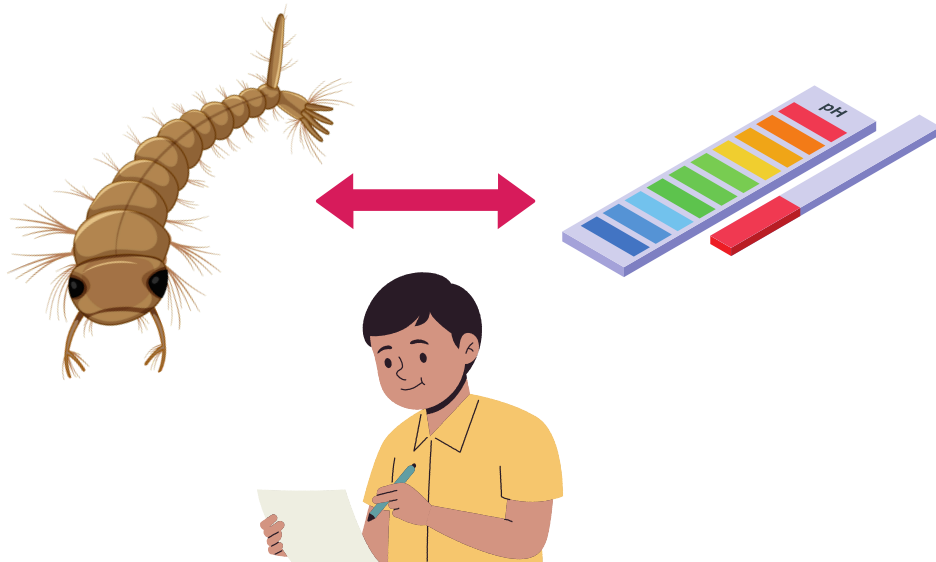
Photo credit: Marilyn Connell

Learning Intentions

(1) Compare the data collected from water quality testing and the water bugs survey.

(2) Graph dependent and independent variables in a line graph and discuss the relationship between the two and interpret findings in relation to wetland health.

(3) Interpret the results of eDNA sampling (conducted in Lesson 2).

Compare
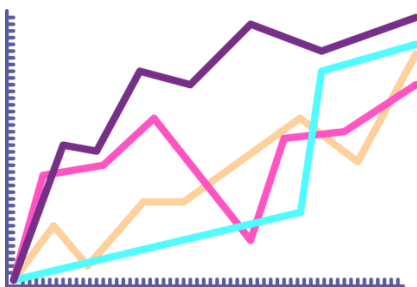
Graph

**Interpret**

Background Information Variables

A variable is something that can change or vary in an experiment or investigation. It's like a piece of the puzzle that can be different from one situation to another. Scientists use variables to understand how things work and to solve problems.

There are two main types of variables: independent variables and dependent variables.

Independent variable: *a variable that is unchanged by other variables being measured.*

Dependent variable: *the variable that changes as a result of the independent variable.*
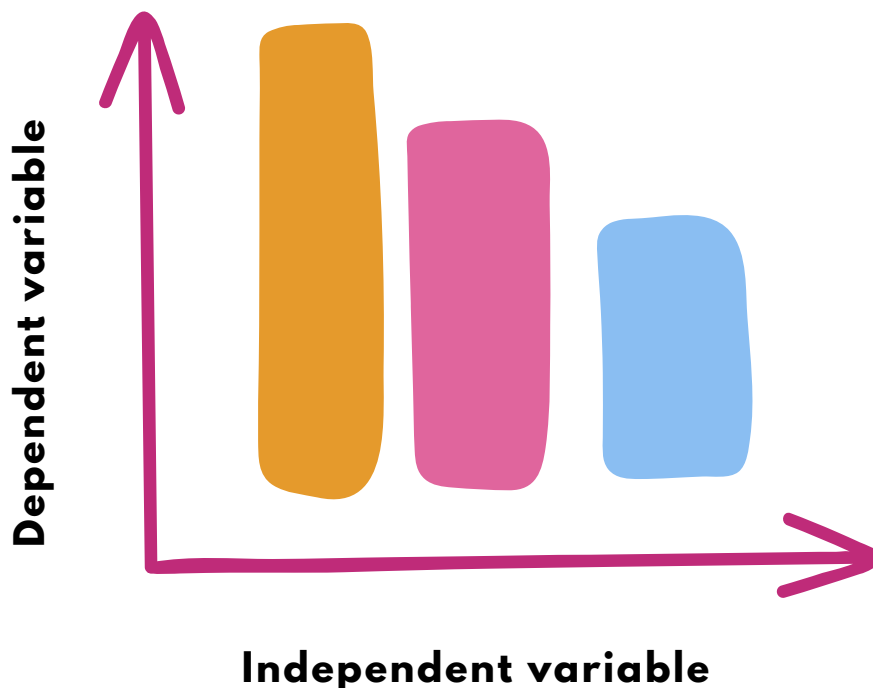
Classroom Activities

ACTIVITY 1

(1A) Identify independent and dependent variables in both the water bug survey and water quality testing.

(1B) Collate the water bug abundance data and water quality data from the different sites sampled by you and your class.

(1C) Using the class dataset, graph how the abundance of water bugs is impacted by water quality parameters. You may choose to graph only one water quality parameter and water bug, or create multiple graphs for each.

(1C) Discuss how changes in water bug populations may correlate with changes in water quality parameters.

ACTIVITY 2

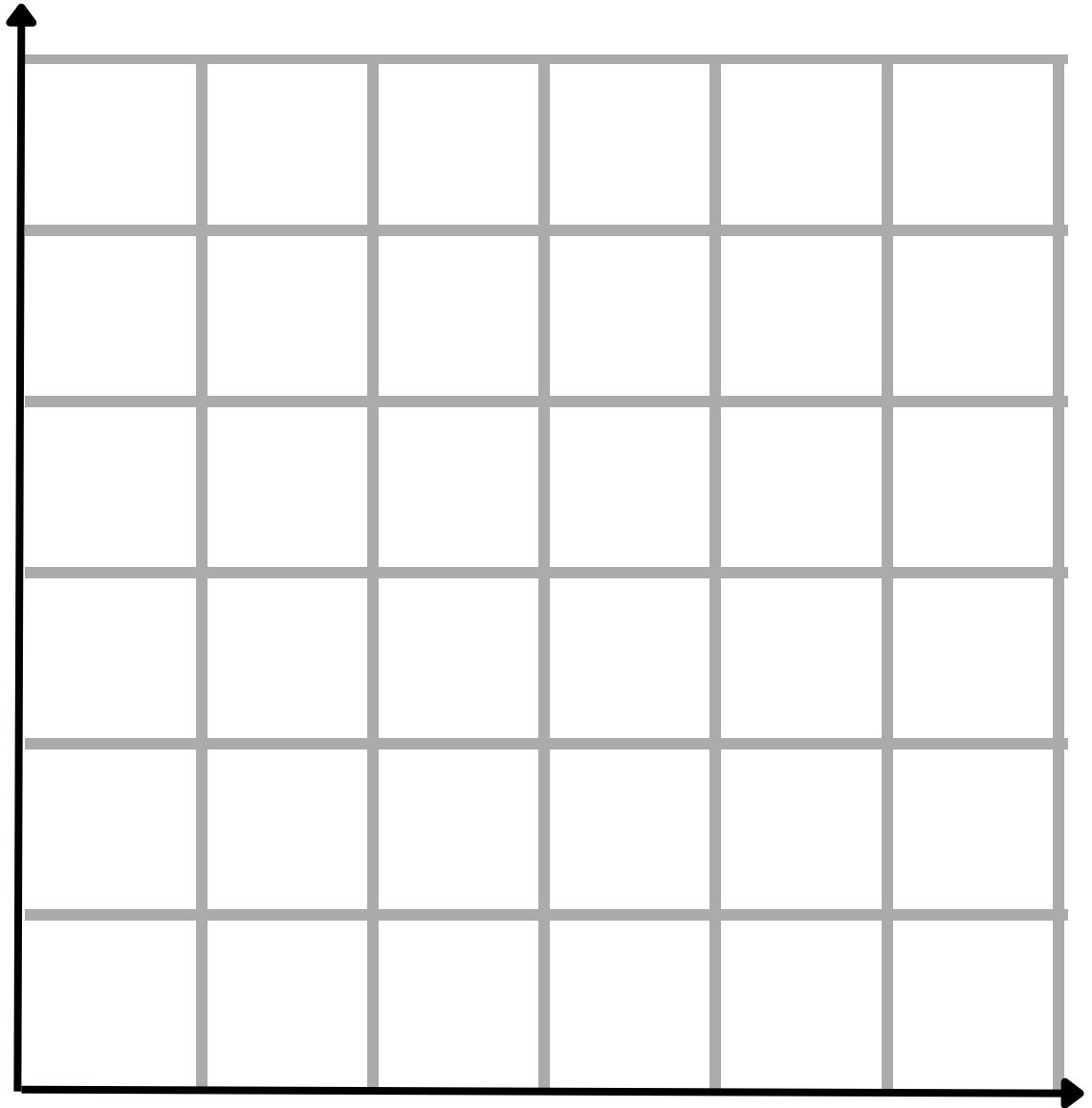(2A) Interpret the results of your eDNA testing.

(2B) Compare your findings with your prior worksheet "What species are in your wetland?" to see if any of the species you identified appeared in your sample.

(2C) Compare your findings with existing literature concerning species distributions. Identify species within their inherent distribution and those that occur outside their expected range.

Class Dataset

Fill in the table below with the data from your class. An example has been given in red.

Group Number	Water Quality Parameter	Water Quality Parameter Value	Water bug	Abundance
1	**Turbidity**	**1 metre**	**Mayfly nymph**	**3**

Graph Your Data

Draw a line graph of the data.

Interpret your findings

Explain the relationship between your water quality data and macroinvertebrate data.

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Classroom Activities

(3A) As a class, discuss your results.
Q: What do the sensitivity scores tell us about the health of the wetland?

Q: What do the water quality results tell us about the health of our local wetland?

Q: How might the results impact the freshwater turtles at the wetland?

(3B) Suggest ways to improve the health of the wetland.