Ministry of Education and Youth

Primary Exit Profile (PEP 5)

June 2022

Performance Task - Science

Time: 1 hour 30 minutes

Write your name and the name of your school below:

_____

Name of Student

_____

Name of School

_____

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General Instructions:

This task has three parts: Part 1, Part 2, and Part 3.

Read the information in each part carefully. Use the information provided to answer ALL questions in each part.

Instructions to Begin:

Carefully read the introduction to the task then move on to answer each question.

Introduction to Task

Pond Project

A group of grade 5 students was asked to be a part of their school's Pond Project. The students were asked to **observe the school's pond for four months (January to April)** and collect data on the living things they saw.

The students were asked to complete the following tasks:

- name the organisms they saw in the pond, and make notes on what each organism ate

- create two food chains to show what each organism ate

- investigate how organisms in and around the pond could be affected by each other and their environment

- record and explain changes in the population sizes of two organisms over the four months
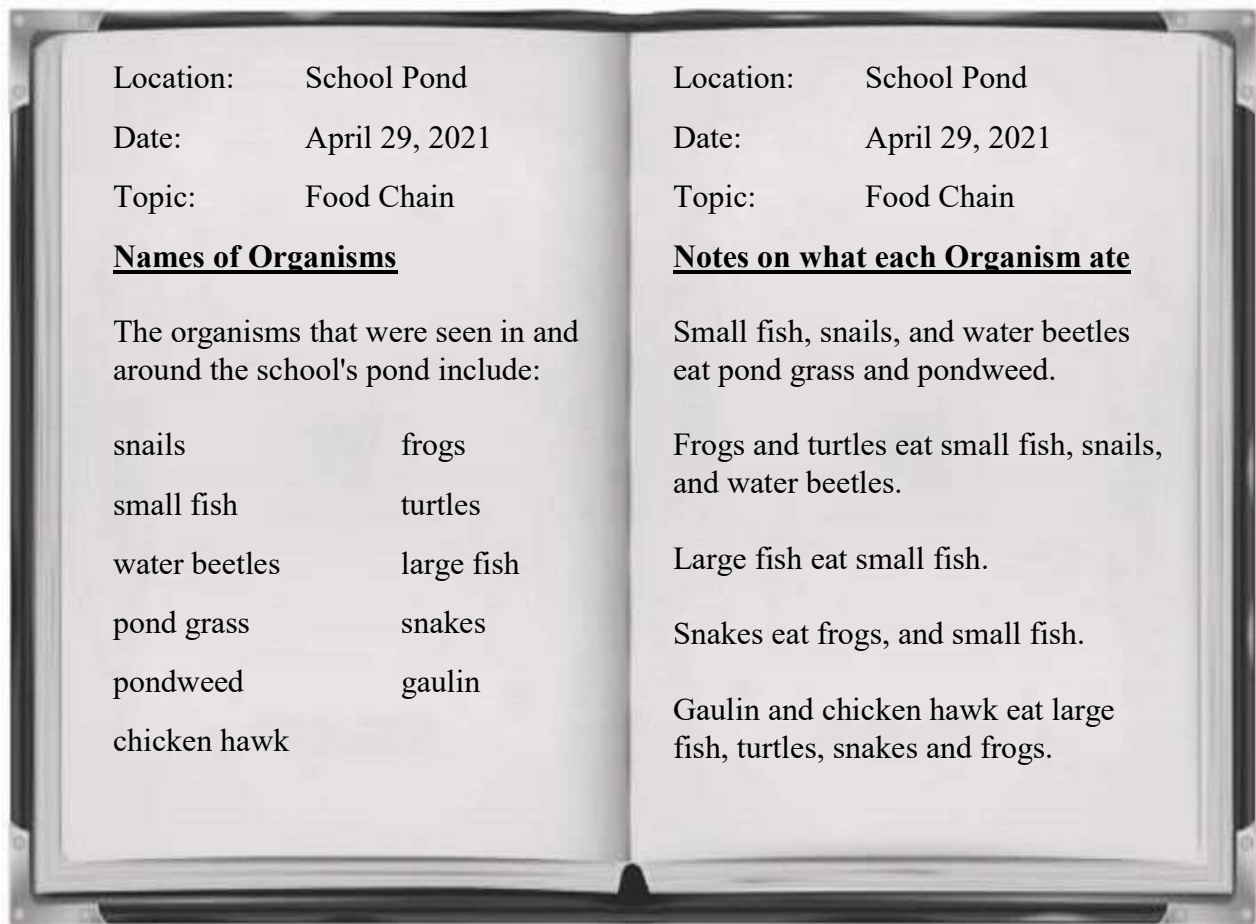
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Part 1 - The Observation

Two pages from a grade 5 student's notebook are shown below. The student's name is Marsha. The pages show the notes she made while observing the pond over the four-month period.

- The page on the left shows the **names of the organisms** Marsha was able to identify.

- The page on the right shows **what each organism ate**.

Examine the pages from Marsha's notebook then use them to answer questions 1, 2 and 3.

Location:	School Pond	Location:	School Pond
Date:	April 29, 2021	Date:	April 29, 2021
Topic:	Food Chain	Topic:	Food Chain

Names of Organisms

The organisms that were seen in and around the school's pond include:

snails	frogs
small fish	turtles
water beetles	large fish
pond grass	snakes
pondweed	gaulin
chicken hawk	

Notes on what each Organism ate

Small fish, snails, and water beetles eat pond grass and pondweed.

Frogs and turtles eat small fish, snails, and water beetles.

Large fish eat small fish.

Snakes eat frogs, and small fish.

Gaulin and chicken hawk eat large fish, turtles, snakes and frogs.

Marsha and her group members were asked to create two food chains. The diagram below shows one of the food chains they created. Use it to answer question 1.

pond grass → snail → frog → gaulin

1. Use the food chain to identify one producer and one consumer.

    Producer   _____

    Consumer   _____

Help Marsha and her group members by creating the second food chain in the space provided below.

2. Use the information in Marsha's notebook to create the second food chain. The food chain should have more than three organisms.
    Do not use any of the organisms used in the first food chain.

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3. Identify a predator of the turtle. Explain **ONE** possible effect that a **DECREASE** in the turtle population could have on this predator. **Justify your explanation using information from Marsha's notebook.**

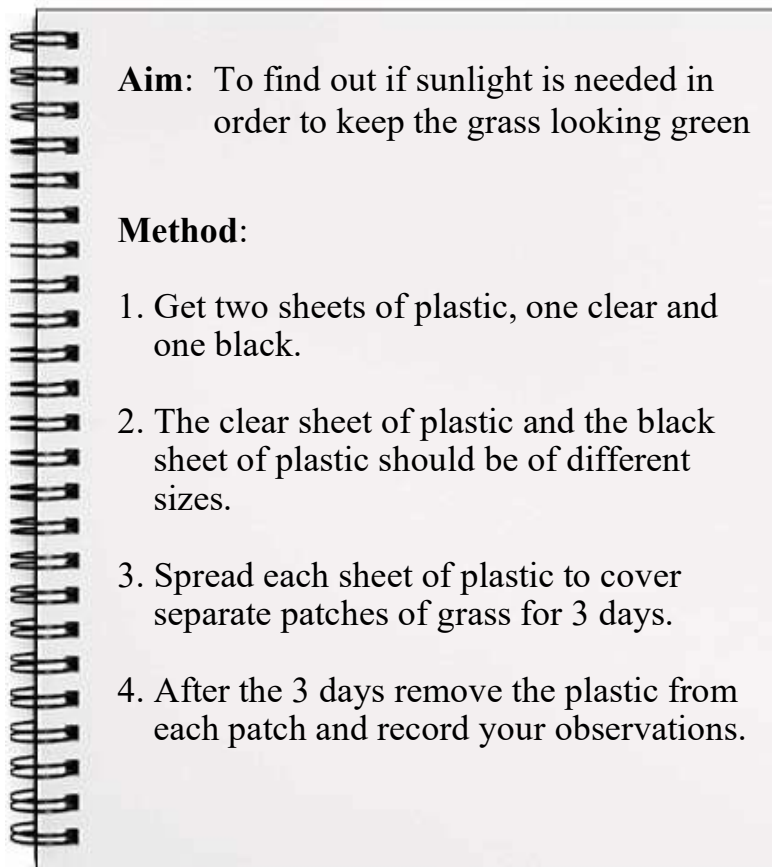Name of turtle's predator: _____

> **Explain here:**

Part 2 – Testing a Hypothesis

At different points near the pond, the grass looked brown. The group believed that the grass looked brown because it did not receive enough sunlight.

The group decided to carry out an investigation to test their hypothesis.

The aim and method for the investigation is shown below. Use the information to answer question 4.

Aim: To find out if sunlight is needed in order to keep the grass looking green

Method:

1. Get two sheets of plastic, one clear and one black.

2. The clear sheet of plastic and the black sheet of plastic should be of different sizes.

3. Spread each sheet of plastic to cover separate patches of grass for 3 days.

4. After the 3 days remove the plastic from each patch and record your observations.

4. **ONE** of the steps in the method is **INCORRECT**. In the space provided below, write the correct step so that the investigation will represent a fair test.

Part 3 – Presenting Data

The group of students was asked to record the population size of two pond organisms; **Organism A and Organism B**. This was done once each month for four months. The table below shows the group's findings.

Table Showing Population Size of Two Pond Organisms over Four Months

Month	Population Size	
	Organism A	Organism B
January	45	5
February	40	10
March	35	15
April	25	20

5A. The data in the table was used to create the bar graph shown below. **The bar graph is incomplete.** Use the table to complete the bar graph for January, February, and March. April was done for you. **Be sure to label each bar.**
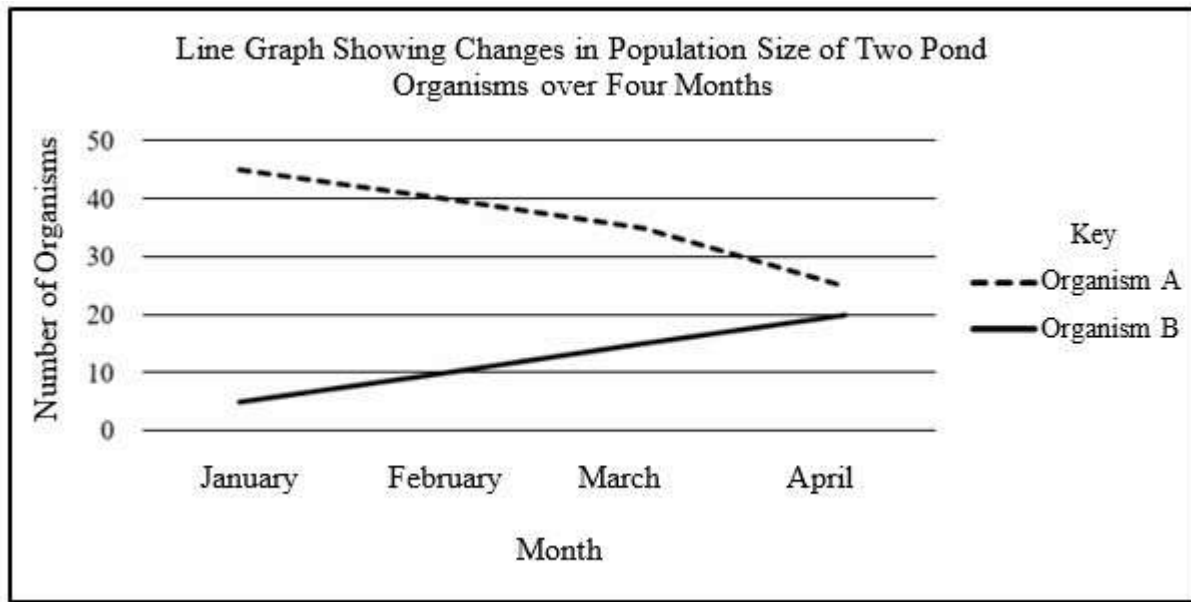

Bar Graph Showing Changes in Population Size of Two Pond Organisms over Four Months
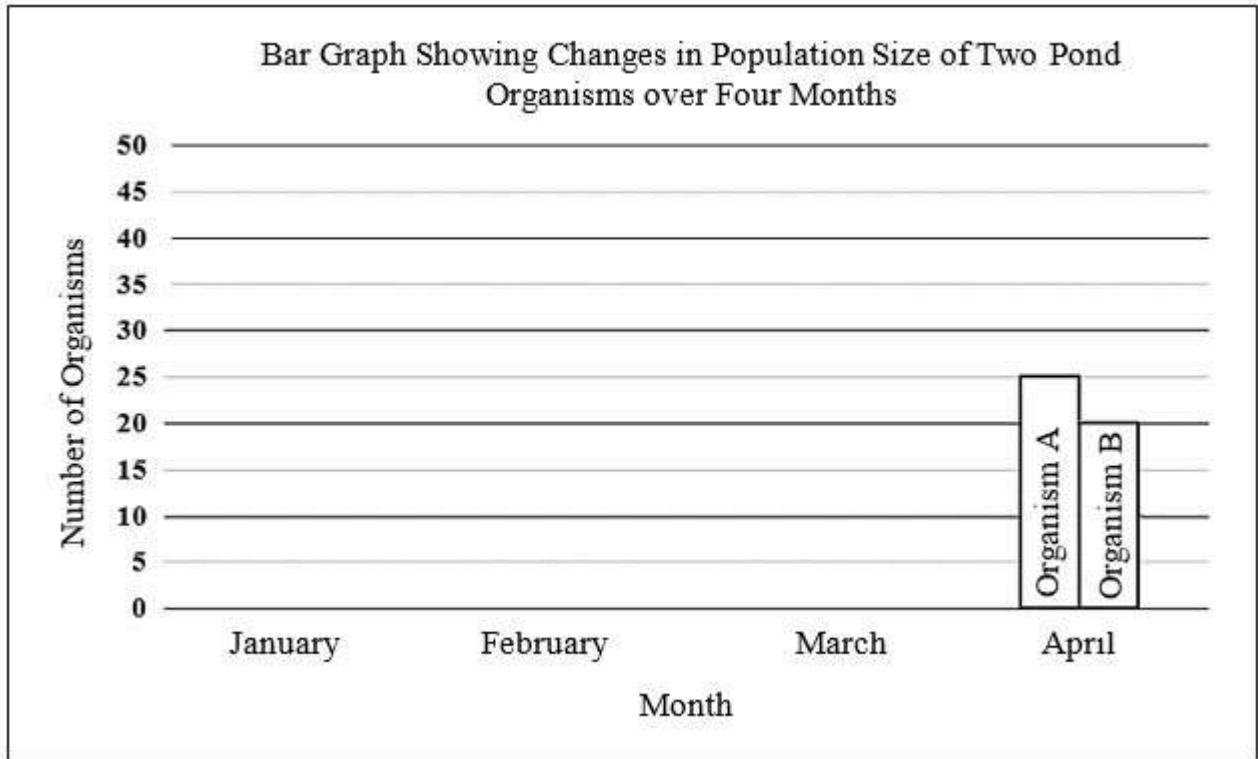
The students also used the data in the table to create the line graph shown below. Use the graph to answer question 5B.

Line Graph Showing Changes in Population Size of Two Pond Organisms over Four Months

5B.   Describe what happened to the population size of each organism from January to April.

> **Organism A**

> **Organism B**

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Use the line graph to answer question 6.

After observing how the population of Organism A and Organism B changed from **January to April**, a student made the following statement.

> **Statement**:
> Organism B is a predator and it feeds on Organism A.

6. Do you agree with the statement? _____

Using information from the line graph, give **ONE** reason to support your answer.

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Primary Exit Profile - 2022

Name: _____

Date of Birth: _____

School Name: _____

School Code: _____

Centre: _____

Parish: _____

Name of Test: PERFORMANCE TASK 2022 - SCIENCE

GENERAL INSTRUCTIONS

Read the instructions below before answering the questions in the booklet:

1. Your booklet contains six (6) questions. Write the answer to all six questions in your test booklet.

2. Read each instruction carefully before responding to the questions in each section.

3. Ensure that all questions are answered.

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