ACTIVITY TWO:	EVEN CREEPY CRAWLIES LIKE CLEAN WATER!

Following on from Activity One, learners use MATHEMATICS to count and illustrate the numbers and types of creatures they found. As many water creatures are sensitive to water pollution, learners can also determine the overall health of the water they explored.

ACTIVITY:

1.   Get each group to count up the tallies of each different type of water creature that they found, in Activity One, and write them down in a table *(photocopy the table provided on page 9)*.

2.   Using the individual tables from each group, the teacher can draw a large table on the chalkboard.

3.   Let the learners add up all the numbers of creatures that were found as a class *(see table below)*

Name of water creature	How many did we find?	Total found by class
Eg Shrimp	17 + 1 + 12 + 9 + 2	41
Planaria	2 + 3 + 7 + 11 + 3 + 1	27

ASK THE LEARNERS:

1. How do we measure water? *(Choose the correct answer/s)*

   milligrams   kilograms   millilitres   ounces   tons   litres

    (*Answer: millilitres and litres*).

2. *Hand back the water containers that the groups used during the previous activity*. Estimate the mass of your group's container in grams. Write down your estimate.

3. Fill your container with tap water. Now estimate the mass of the water in your group's container. Write down your estimate.

4. Using a kitchen scale find out the mass of your container, filled with water. Each group must write down the answer.

5. Now, empty the water out of the containers (preferably onto a flower bed or vegetable garden outside so as not to waste water) and this time, find out the mass of the empty container. Each group must write down this answer.

6. What is the mass of the water in grams? (*subtract the total mass measured on the scale from the mass of the empty container to give the mass in kilograms or grams for the water*).

7. How accurate were your estimates?

8. Draw a bar chart of the types and numbers of animals found in your group *(see example below).*

Graph showing number of creepy crawlies we found in our stream
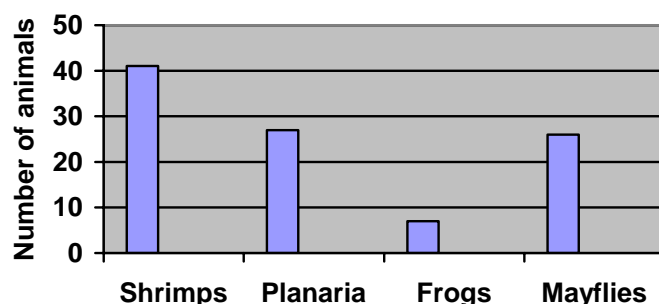
9. How many water creatures prefer only clean water? *(The learners may need to use the notes from Activity One).*

10. How many of the creatures you found can live in slightly polluted water? *(Learners may need to read the information sheets again).*

11. How healthy do you think the river/stream is that we explored in Activity One *(remember that water creatures are very good indicators of water quality – certain creatures like mayfly nymphs and stonefly nymphs are only found in clean, unpolluted water).*

Criteria to assess learners during this mathematics lesson

Criteria	Exceeded requirements of the Learning Outcome	Satisfied requirements of the Learning Outcome	Partially satisfied requirements of the Learning Outcome	Not satisfied requirements of the Learning Outcome
The learner was able to estimate the mass of the water and the mass of the container				
The learner was able to use the scale to measure the mass of the container & the mass of the water				
The learner was able to tally up the information on the identification sheet and transfer it onto the table				
The learner was able to draw a bar graph of the water creatures found during the water study				

Name of Group: _____

Name of water creature	How many did we find?
e.g. Shrimp	*17*