

➤ RECOGNISING AND USING UNITS OF MEASUREMENT

Target Group: **Years 3 and 4**

Australian Curriculum Reference: **Mathematics**

- + Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061).
- + Recognising the importance of using the common units of measurement.

LESSON SUMMARY

Over approximately five weeks, students will learn to select and use appropriate units to measure the growth of seedlings in the classroom. In the process, students develop an appreciation of volunteering time to make their environment and community a better place.

LESSON CONTENT AND METHODOLOGY

- + Ask and brainstorm with the class: who is responsible for planting and maintaining trees, and caring for the environment?
- + Show Lake Macquarie Landcare promotion on YouTube: www.youtube.com/watch?v=DyvKRSj68yw
- + Discuss the ages of volunteers in the advertisement. Discuss parts of the video such as words and images that show the benefits of volunteering for people. This could include things like happy faces.
- + In pairs or small groups, students brainstorm locations around the school and ways they could be involved in planting seeds as volunteers. This could include using the school vegetable garden.
- + Revise and discuss with the students what seeds need to grow.
- + Ask students how they could measure and record the growth of the seedlings they plant.
- + Take students into the school gardens or vegetable patch and ask them to work in pairs to measure and record (in a table) the height of a selected group of plants using various informal units of different lengths. This could include pencils, paper clips or other items.
- + Discuss reasons for the difference in measurements that result in using these random units of measurement (for example 2.3 pencils high, 4.5 paperclips high). Explain the need for a common unit of length to measure things.
- + Introduce the centimetre as a unit of measurement and show it to the students on a 30cm ruler. Demonstrate how students can measure and record the height of their plants using centimetres. Ask students to return to the plants they measured previously and record them again using centimetres.
- + Share and compare findings as a class. Discuss why it is beneficial for everyone to have the same – or very similar – measurements. For example, having common measurements allows us to talk about and understand how big something is.

- + Discuss reasons for any differences. For example, even though everyone used centimetres as a common measurement the results might vary because of different measuring points or because of the way students read the ruler.
- + Students plant seeds in the school vegetable garden and maintain them as they grow. Students are reminded that they are doing what the volunteers in the Lake Macquarie Landcare video were doing, and that they are helping to enrich their environment.
- + Students measure and record growth in centimetres over the growing period.

ASSESSMENT

On a rotational basis, the teacher can observe each student as they measure and record their seedlings.

RESOURCES

- + Promotional ad for volunteering with Lake Macquarie Landcare: www.youtube.com/watch?v=DyvKRSj68yw
- + 30cm rulers
- + Informal units such as pencils and paper clips