

Activity 2: The longest streamer

Rationale

This activity makes it quite clear to students that different measuring units will result in different measurements and initiates thinking about whether a larger unit will result in a larger or a smaller number of units being needed to measure the length. This lays the foundation for conservation of length.

Before using the activity sheet

Prepare streamers of different lengths for the students to measure together with a range of measuring units (paper clips, paddle-pop sticks and so on). At the previous level, students will have had experience of measuring objects with such units, but you may need to discuss the measuring process with them, asking questions such as:

“How could we use this (a paper clip) to find out how long this streamer is?”

“How long do you think it will be in paperclips?”

Once you are comfortable that the students will be able to carry out the measuring, give each student a streamer to measure and explain that their job is to measure their streamer with one type of object of their choice and to record the measurement unit they used and the length as the number of those units.

Using the activity sheet

When the students have recorded their measurements on the page, ask them to show the measurement unit they used to a friend (but not the streamer) and tell them how many were used. The friend does the same. The students then decide who has the longer streamer and say why they think that. At this point ask them to show or to explain (scribe if necessary) their reasoning.

. The students can then swap units with their friend and measure their streamer with the new unit again comparing results and finally directly comparing their streamers if they want to.

At reflection, ask the students to comment on how they worked out who had the longest streamer and to explain how they made their comparisons. They may need materials to be available to model or scaffold their thinking. Involve them in thinking about how unit size affected the number of units used. There may have been some error in the actual measurement due to overlaps, or gaps so review those elements if necessary.

2: The longest streamer

Measure your streamer.
Tell your friend how long your streamer is and
what unit you used to measure it with.
Listen to your friend talk about their streamer.
Who do you think has the longest streamer?

Show your thinking here.

Now compare your streamers.

Goal: knows that it takes fewer long units than short units to measure the same length.

Assessment: Did the student apply their understanding to this context?

Yes No