TRANSPORTATION LENGTH LINE UP

THE CHALLENGE
Discover fun ways of measuring distances.

GRADE LEVEL
Early Elementary School and Pre-School

ACTIVITY DURATION
About 30 minutes, depending on the length of the discussion and the amount of observations done.

MATERIALS
- Different cars, airplanes, trains, motorcycle (any transportation-related toys / models)
- Masking tape
- Measuring tools (yard stick, measuring tape, and ruler, at least one with both English and metric units)

SET UP
This activity requires unobstructed areas for each group. A classroom setting would be appropriate.

ACTIVITY
This activity may be done inside or outside and makes measuring fun using transportation objects. 1) Divide the children into groups of two or three students. 2) Grab any toy vehicles, planes, and trains you have and assign each group with about the same number of toys. 3) Tape a straight line about 2' to 3' long to the table or floor. 4) Have the students arrange the vehicles end-to-end along the tape line. 5) After the toys are lined up, have the students measure their line of vehicles in both inches and centimeters.

Ask questions like: How many toys have you used in your line? Which group has the longest line? Which is longer, an inch or a centimeter? This is a great way to get them thinking about how there are different types of distance measurements and have them understand how they relate to one another.

FOR DISCUSSION
Ask lots of questions! Before they measure the lines, invite the students to guess which length measurement is going to be the longest. Why are some lines longer than others? What if you measured the vehicles side-to-side, like parked vehicles, instead of end-to-end? Would the line be shorter? Provide a table to record observations. Let the kids place the different vehicles along the lines and have fun organizing and sorting them.

Introduce the different types of unit systems:
- **English Units**: The historical units of measurement originally used in England but now used only in a handful of countries (including the United States). In the English system of measurement, the most common units of distance are **inch, feet, yards and miles**.
- **Metric Units**: The metric system was designed to have a set of properties that make it easy to use and widely applicable. In the metric system of measurement, the most common units of distance are **millimeters, centimeters, meters, and kilometers**. Nearly every country in the world uses metric units.