

Why Use a Number Slide?

NUMBER SLIDE

Number slides:

- are an efficient way of teaching students what happens when numbers are multiplied or divided by a power of 10 (positive powers 10, 100, 1000, or negative powers 0.1, 0.01, 0.001).
- help students to realise that there is nothing "magical" happening when multiplying or dividing numbers with a power of 10; simply put, the digits move or "slide" to a new place without changing.
- show students a consistent method for multiplying or dividing by powers of 10 throughout the year levels. Number slides have the advantage of showing:
 - that it is the digits that are moving to a new place, not the decimal point moving.
 - that digits stay together in the same order as they slide. There are no gaps added at any



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• "Adding a zero" (or crossing one off); while it works well for whole numbers in the earlier years, it does not work when decimals are included in later years. It is a misleading method, which needs "reteaching" later, when decimals are introduced.

This approach is very confusing for students and can result in common errors such as:

• "Moving the decimal point" is also mathematically incorrect. Decimal points don't move, the digits do.



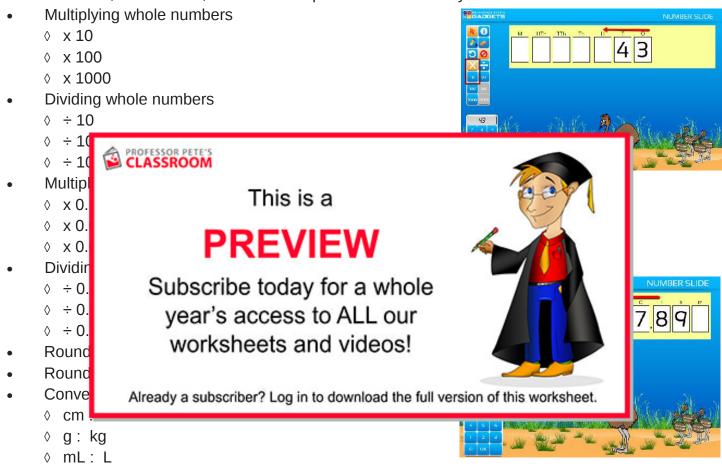
Sequence for teaching with the Number Slide Gadget

NUMBER SLIDE

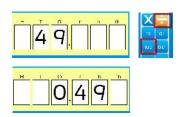
This Gadget covers a large number of activities that span multiple year levels.

The activities range from basic multiplying of whole numbers by ten, to dividing decimals numbers by decimals.

These lessons, listed below, have been sequenced from the very basic to the most difficult.



49 cm = 0.49 m





NUMBER SLIDE

Multiplying by the positive powers of ten (whole numbers):

These are the numbers 10, 100, 1000.

The number slide will slide all the digits the required number of places to the left.

The number gets larger.

