Using the number slide assists students to convert L to mL

Many students become confused about how metric units are converted. The Number Slide app helps students visualize the way numbers' digits "slide" to their new values.

Complete the worksheet WS 1 while working thorough this lesson plan:

1 L = 1000 mL

What does this mean:

- Show students a L in a jug. Compare this to a mL which is 1000th L. (Use a dropper and count out 20 drops of liquid into a teaspoon. A teaspoon holds 5 mL This is roughly a mL. Or, to be more accurate, use a medicine syringe and measure 1 mL exactly.) Compare 1 mL to 1 L the jug full.

- **Say:** 1 L = 1000 mL

- To hel~~p~~
  mnem

  "milli"

- **Ask:** I

- What

- What (
  1000)

Introduce t

- **Enter:**

- **Say:** \

- **Ask:** \
  the th

- **Click: X 1000** in the Toolbox and the 9 will slide to the thousands place and three zeros will appear.

- Have students write their answers in the worksheet

- **Ask:** To convert 2.5 L to mL what will I need to do? (enter 2.5 x 1000)

- **Enter: 2.5 > OK**

- **Ask:** Next step? (multiply 2.5 by 1000) **Click: x > 1000**

- **Ask:** Which way did the 2.5 move? (It moved three places to the left.)

- Point out that though only two zeros were added, the 2 and the 5 still moved 3 places left.

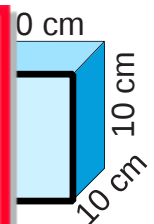- Did the number get larger or smaller? (larger)

- Why does the number get larger when we convert from km to m? (because there are 1000 mL in a L, so the number of mL is multiplied by 1000)

- **Have the students say and write:** 1 L = 1000 mL

- **Work through the rest of the examples** on the first section of the worksheet with the students using the Number Slide Gadget.
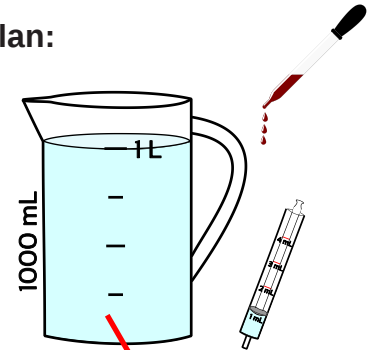
## Using the number slide assists students to convert L to mL

This really is the same process, only backwards. Dividing by a thousand is required to convert from L to kL.

Complete the second section of worksheet WS 1 while working thorough this lesson plan:

1000 mL is the same as 1 L

What does this mean:

- **Say:** Nothing has changed: the 1000 mL = 1 L, except now if we convert from 1000 mL we have to divide by one thousand

- **Ask:** If 1000 mL = 1 L, what would 2000 mL be in L? (2 L)

- What ⟨...⟩

- What ⟨...⟩

Introduce t⟨...⟩

- **Enter:** ⟨...⟩

- **Say:** ⟨...⟩
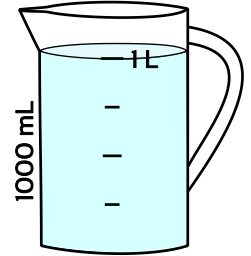
- **Ask:** ⟨...⟩ place)

- **Click:** ⟨...⟩ the on⟨...⟩

- **Ask:** ⟨...⟩ disapp⟨...⟩

- Have ⟨...⟩

- **Enter: 360 > OK**

- **Ask:** To show 360 mL as L what do I have to do? (divide 360 by 1000)
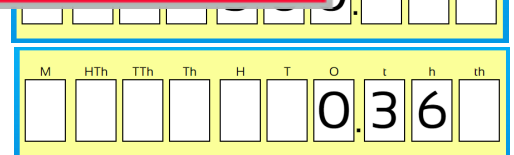
- **Click: ÷ > 1000**

- **Ask:** Which way did the 360 move? (It moved three places to the right.)

- What happened to the zero on the end? (it is a trailing zero so it is not needed)

- Why was there a zero added at the front? (because a zero is needed to show there are no ones)

- Did the number get larger or smaller? (smaller)

- Why does the number get smaller when we convert from m to km? (because there are 1000 mL in a L, so the number of L is divided by 1000)

- **Have the students say and write:** 1000 mL = 1 L

- **Work through the rest of the examples** on the second section of the worksheet WS 1 with the students using the Number Slide Gadget.

ANSWERS

Converting kg to g:

1 mL = 20 drops

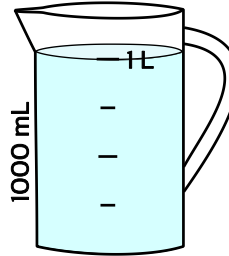1) **1 L** = ___1,000___ **mL**

2) **9 L** = ___9,000___ **mL**

3) **2.5 L** = ___2,500___ **mL**

4) **5.02 L** = ___5,020___ **mL**

5) **35.0** ___ **mL**

6) **0.4 l** ___ **mL**

1 teaspoon = 5 mL

___ **nL**

___ **nL**

___ **nL**

Converting

uid

1) **1,00**

2) **6,000 mL** = ___6___ **L**

3) **360 mL** = ___0.36___ **L**

4) **890 mL** = ___0.89___ **L**

5) **20 mL** = ___0.02___ **L**

6) **5 mL** = ___0.005___ **L**
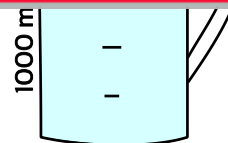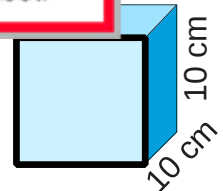
7) **12,400 mL** = ___12.4___ **L**

8) **80,000 mL** = ___80___ **L**

9) **120 mL** = ___0.12___ **L**