The

Long Family & Reunion

CLIP N' SLIDE

The Positive Engagement Project

Making a difference...not a dollar.

The Long Family Clip N' Slide

Long division is very difficult for students; there is no way around it. Long division poses many problems, from the multiple steps that must be followed, (after they divide, they have to multiply, then subtract, and finally bring down a number to start the process all over again), to even the direction in which to begin. For years, kids are asked to compute by starting at the right, with the numbers in the ones place, but the standard long-division procedure asks them to start at the left.

The secret to learning is that we do what makes sense to us. Inherently, we look for the sense in situations, and continue in that thinking until something does make sense. **The Long Family Clip N' Slide**, as well as the **Reunion Clip N' Slide**, gives students a step by step tool, with visuals, to help them remember the steps to follow in the division process until it does make sense.

The Long Family is a tool used by many teachers all over the world who teach the division process. It is fairly simple in the sense that each member of the Long Family has a very specific job. ***Teaching suggestions for each family member are in our Math Concept Learning Bricks.**

Dad's job is to **divide** (the divisor into the dividend).

$$5\overline{)16}\quad 3$$

Mom's job is to **multiple** (the divisor by the digit in the quotient).

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ 15 \\ \hline \end{array}$$

Sister's job is to **subtract** (the product of Mom's multiplication from the digits being divided into).

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ 15 \\ \hline -\ 1 \end{array}$$

Cousin's job (don't forget the cousin!) is to **compare** the difference from sister to the divisor (must be smaller).

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ \underline{15} \\ 1 \end{array}$$

Brother's job is to **bring down** the next digit to the right (if there is one).

$$\begin{array}{r} 3 \\ 5\overline{)16\square} \\ \underline{15} \\ 1 \end{array}$$

Rover's job (Rover is the dog and that is his/her OFFICIAL name) is to either **remain** where you are or **repeat** the previous steps starting with Dad.

$$\begin{array}{r} 3 \text{ r1} \\ 5\overline{)16} \\ \underline{15} \\ 1 \end{array}$$

What is The Long Family Clip N' Slide and how does it work?

The Long Family Clip N' Slide uses the jobs of the Long Family (and their visuals) as a tool to assist students who need help remembering the order division steps and what each job looks like. It is very easy to use. Step one is to print out page **5** in this pack on card stock (in color). Step two will be

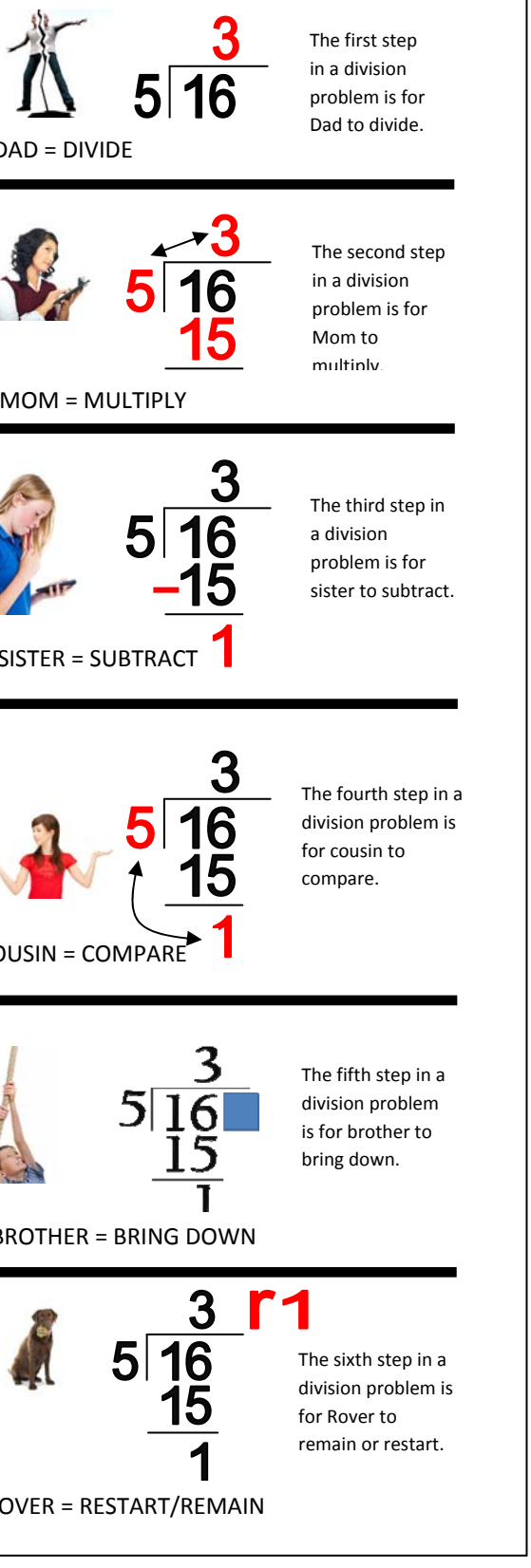
to cut the page into thirds (there are three Long Family Clip N' Slides per sheet). Step three is to attach a paperclip to the left side of each Long Family Clip N' Slide.

Step four is moving the paperclip along the marker.

The **Long Family Clip N' Slide** is a visual tool that allows students to keep track of which step they are on while they are dividing.
All the student has to do is slide the paperclip to the rule they are currently performing on their division problem. This allows students to stay on track with each step of the division process.

The Clip N' Slide marker gives students a concrete tool to help them stay on track and at the same time, gives them an example of what that skill looks like (skill highlighted in **red**.)

Use **The Long Family Clip N' Slide** Powerpoint as an introduction. Found at www.PEPnonprofit.org



$$5\overline{)16}\quad 3$$

The first step in a division problem is for Dad to divide.

DAD = DIVIDE

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ 15 \\ \hline \end{array}$$

The second step in a division problem is for Mom to multiply.

MOM = MULTIPLY

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ -15 \\ \hline 1 \end{array}$$

The third step in a division problem is for sister to subtract.

SISTER = SUBTRACT

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ 15 \\ \hline 1 \end{array}$$

The fourth step in a division problem is for cousin to compare.

COUSIN = COMPARE

$$\begin{array}{r} 3 \\ 5\overline{)16\square} \\ 15 \\ \hline 1 \end{array}$$

The fifth step in a division problem is for brother to bring down.

BROTHER = BRING DOWN

$$\begin{array}{r} 3\ r1 \\ 5\overline{)16} \\ 15 \\ \hline 1 \end{array}$$

The sixth step in a division problem is for Rover to remain or restart.

ROVER = RESTART/REMAIN

$$5\overline{)16}\quad 3$$

The first step in a division problem is for Dad to divide.

DAD = DIVIDE

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ 15 \\ \hline \end{array}$$

The second step in a division problem is for Mom to multiply.

MOM = MULTIPLY

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ -15 \\ \hline 1 \end{array}$$

The third step in a division problem is for sister to subtract.

SISTER = SUBTRACT

$$\begin{array}{r} 3 \\ 5\overline{)16} \\ 15 \\ \hline 1 \end{array}$$

The fourth step in a division problem is for cousin to compare.

COUSIN = COMPARE

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BROTHER = BRING DOWN

$$\begin{array}{r} 3\ r1 \\ 5\overline{)16} \\ 15 \\ \hline 1 \end{array}$$

The sixth step in a division problem is for Rover to remain or restart.

ROVER = RESTART/REMAIN

Reunion Clip N' Slide

What is the Reunion Clip N' Slide and how does it work?

If one digit long division is difficult for students, then multi-digit long division can be downright cruel. The Positive Engagement Project has a way to help students approach larger problems in much the same fashion as The Long Family Clip N' Slide…..it's called the **Reunion Clip N' Slide**!

The **Reunion Clip N' Slide** uses the same jobs of the Long Family, but adds in one critical piece: the Reunion.

The **Reunion** is when the entire family gets together and **rounds** a multi-digit divisor to help give students a better chance of success as they move onto Dad's job of dividing.

$$\begin{array}{r} 30 \\ 28\overline{)2732} \end{array}$$

As you will see on the next page, the process remains the same, but with one additional step (rounding) at the beginning. With that being said, (or written), the visual example that goes with each job of the Long Family had to be changed to accurately show the steps for a multi-digit divisor.

Important note: We suggest that you print the **Reunion Clip N' Slide** on cardstock and in color. You can then place both versions, The Long Family and Reunion, back to back and laminate them together; giving you one tool for both single and multi-digit divisors.

Use **Reunion Clip N' Slide** Powerpoint as an introduction. Found at www.PEPnonprofit.org

REUNION = ROUNDING

$$\begin{array}{r} 30 \\ 28\overline{)2732} \end{array}$$

REUNION = ROUNDING

$$\begin{array}{r} 30 \\ 28\overline{)2732} \end{array}$$

DAD = DIVIDE

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \end{array}$$

DAD = DIVIDE

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \end{array}$$

MOM = MULTIPLY

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ 252 \end{array}$$

MOM = MULTIPLY

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ 252 \end{array}$$

SISTER = SUBTRACT

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ -\,252 \\ \hline 21 \end{array}$$

SISTER = SUBTRACT

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ -\,252 \\ \hline 21 \end{array}$$

COUSIN = COMPARE

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ 252 \\ \hline 21 \end{array}$$

COUSIN = COMPARE

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ 252 \\ \hline 21 \end{array}$$

BROTHER = BRING DOWN

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ 252 \\ \hline 212 \end{array}$$

BROTHER = BRING DOWN

$$\begin{array}{r} 30\quad 9 \\ 28\overline{)2732} \\ 252 \\ \hline 212 \end{array}$$

ROVER = RESTART/REMAIN

$$\begin{array}{r} 30\quad 9\square \\ 28\overline{)2732} \\ 252 \\ \hline 212 \end{array}$$

ROVER = RESTART/REMAIN

$$\begin{array}{r} 30\quad 9\square \\ 28\overline{)2732} \\ 252 \\ \hline 212 \end{array}$$