The Sumerian invention of writing

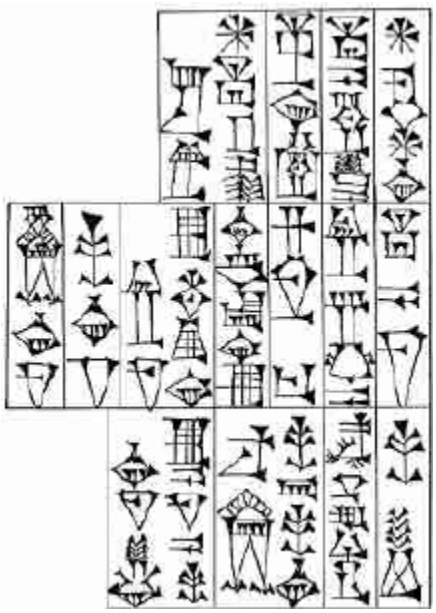
By Jerald Jack Starr. This page originally appeared in SumerianShakespeare.com.

(Hint: press the CTRL key when clicking on a link to make it display in a separate tab.)

The invention and evolution of Sumerian writing

Shulgi commemorative tablet. Enlarge.

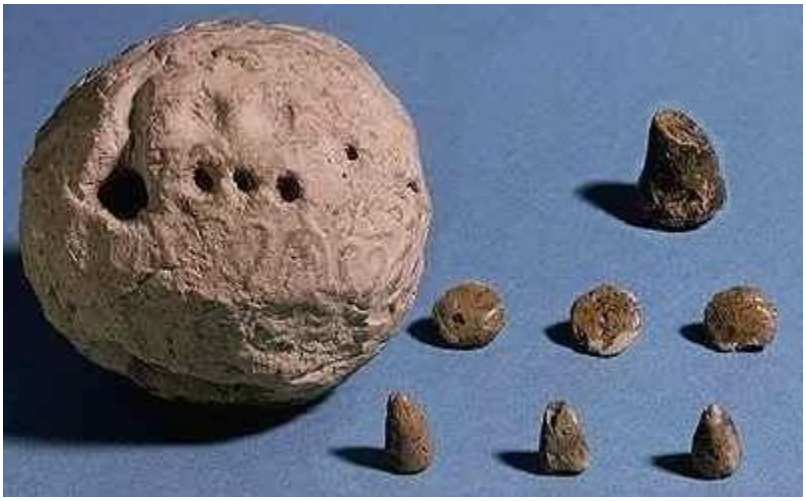
Reading by column from right to left: "(For the goddess) Nimintaba/ His queen/ Shulgi/ The mighty man/ King of Ur/ King of Sumer and Akkad/ Her temple/ He built."



Gudean inscription, dedicating a statue of himself to the goddess Geshtinanna. The inscription is written on the back of the statue of Gudea shown below. The entire statue can be seen in the Gudea Translation.

Shulgi and Gudea were kings who lived more than 4,000 years ago. There were many other kings, all across the world, throughout all of history, that we never even heard of. So why do we know about Shulgi and Gudea? It's simply because somebody wrote about them.

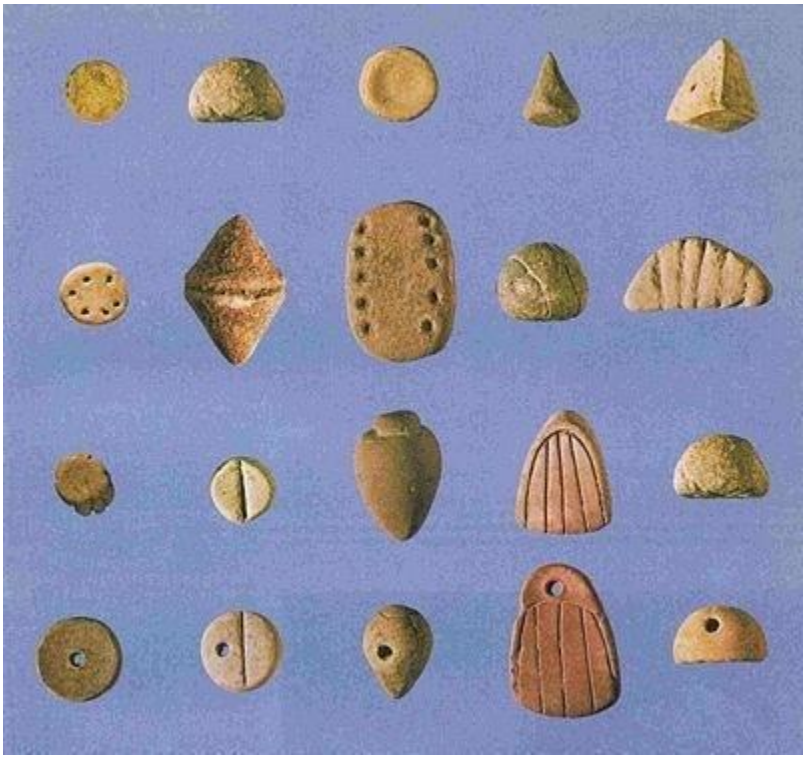
Most people like to think writing was invented to express our inmost thoughts, so we may better understand each other; to write poetry, literature, and philosophy and thus record the human experience; to communicate across vast distances, so we can keep in touch with our loved ones; or to communicate through the ages, and thus record for posterity all our hopes and dreams and sorrows. Most people will therefore be disappointed to learn that writing was invented for the simple purpose of conducting business transactions, to record the exchange of merchandise. The Sumerians invented writing around 3500 B.C.; but it would be almost 1,000 years (circa 2600 B.C.) before writing was used for all the other less practical reasons.



Clay bulla and the commodity tokens that were inside it. The owner's seal is faintly visible on the exterior of the bulla.

Before writing was invented, business transactions were recorded with the exchange of clay tokens that represented the items being traded. The tokens were simple abstract designs used to represent different commodities (sheep, grain, cattle, etc.). A number of tokens were put into a hollow clay bulla (from the Latin meaning "bubble"). The owner's seal was placed on the outside to prevent tampering, so the bulla couldn't be opened and the tokens changed or removed without breaking the seal.

Unfortunately, once the bulla was closed, it was impossible to see what was inside, so the tokens were impressed on the outside of the bulla to reflect its contents, showing the number and type of the commodities being traded.



Sumerian "writing tokens." Each token represents a different commodity.

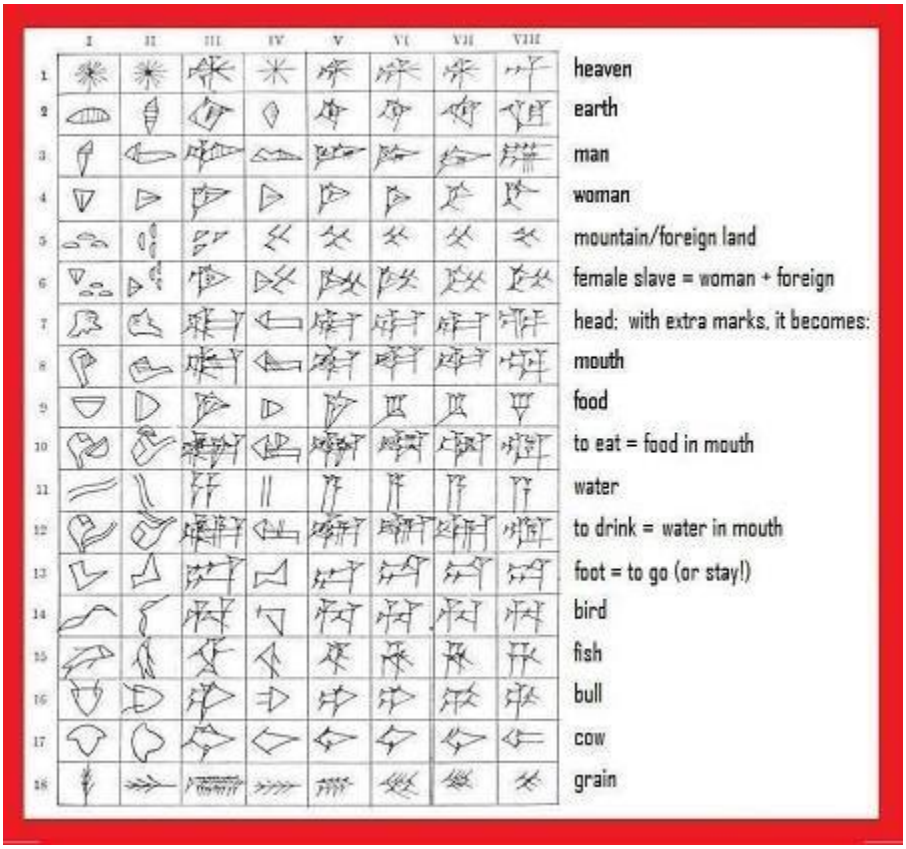
It didn't take long before someone realized that with the token impressions on the outside of the bulla, the tokens on the inside were no longer necessary. Without the necessity of having to store the actual tokens, the bulla was also discarded because the impressions could easily be made on a flat piece of clay. It was soon realized that even the impressions themselves were unnecessary. The token designs could just as easily be drawn on a clay tablet.

The earliest forms of Sumerian writing were pictographs ("picture words") where the sign resembles the object it represents (grain, hand, etc.), as seen on the tablet below:

Pictographs, the precursor to cuneiform writing. On the early tablets, the signs were written vertically. The “dots” along the top are numbers.

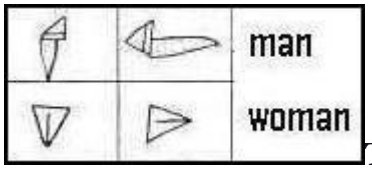
At this stage the pictographs were "drawn" rather than "written." A pointed stylus was used to draw the curved lines of the pictographs, but drawing a curved line on wet clay is not as easy as it sounds and it leaves granulated ridges on either side of the line. When the Sumerians started making the signs more linear and abstract they had to change the stylus to make it better suited for this purpose. They cut a river reed into a triangular profile and then used it to impress a line into the clay rather than dragging it across the surface. This was much quicker and easier than "drawing" the signs and it eliminated the grainy edges of the lines. The resultant appearance of the Sumerian signs, composed of short angular lines, is what gave cuneiform writing its name, from the Latin *cunei*, meaning "wedge."

The evolution of writing: from its earliest form (column I, circa 3400 BC) until the end of Sumerian civilization (column VII, circa 2000 BC) and the beginning of the Babylonian period, column VIII.



Click here to enlarge the chart.

In column I, the signs are simple pictographs and they are drawn with curved lines. In col. II, the signs are rotated 90 degrees, from the vertical to the horizontal. The pictographs become abstract symbols in columns III - VI. They become more simplified in the last two columns.



The signs for man and woman were originally pictographs of their genitals, which probably saved a lot of gender confusion.

Note: The reason a female slave is equated with a foreign/mountain woman is because the Sumerians, who lived in the lowlands, were often at war with the barbaric tribespeople from the neighboring mountains. As is so often the case in history, the prosperous cultivated lowlanders were at war with the rough uncivilized highlanders. The constant regional wars provided the Sumerians with a steady supply of slaves, plunder, and raw materials; although the Sumerians were often defeated in sudden raids by the barbarians.

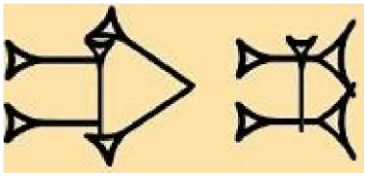
Interestingly enough, all but three of the signs on this chart can also be found on Tablet #36, the story of "The Great Fatted Bull."

The Sumerians started out by making a sign for every object but quickly realized this was completely impractical. Even so, at this point in time they had already accumulated more than 700 signs, of which about 600 were in common use. So the Sumerians began to the write words phonetically, by combining existing signs with the desired pronunciation for each syllable. For example, if a scribe were to hear the English word "ensue," of course he wouldn't have a sign for it, but he could "spell it out" using the signs *en* and *su*. Even though the literal definition of the signs together don't add up to the meaning of the word, a new word is formed based on the pronunciation alone. This makes Sumerian writing the first true writing in the world. It is abstract symbols used to represent the *sound* of a word rather than simply being a "picture" of the word's meaning.

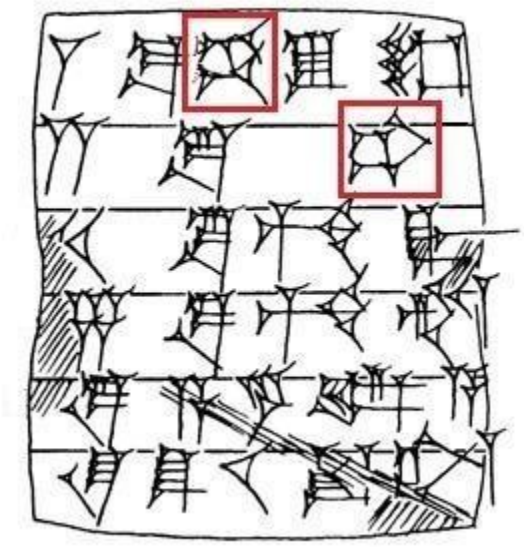
Egyptian hieroglyphics never got past the pictographic form. The Egyptians didn't use a written script until the mid fifth century B.C., fifteen centuries after the Sumerian civilization had passed into history.

Sumerians never quite developed a true alphabet. Their phonetics were based on syllables rather than individual sounds. Using the cuneiform signs, the Babylonians would later create a true alphabet in the modern sense of the word. Each abstract symbol represented a single distinct sound.

Late in the evolution of writing, during the Ur III period, the Sumerians started using a "compressed print." The signs were simplified to make them easier to write and they were shortened to save space on the line. An example is shown below. The sign is gu4, pronounced *gud*, the sign for "bull."
The usual form is on the left. It still retained much of its early pictograph appearance (it looks like a bull head). On the right is the compressed form. The large triangle has been replaced with two smaller triangles, "reverse cunei," facing in the opposite direction, and the vertical line has been moved to the horn area.

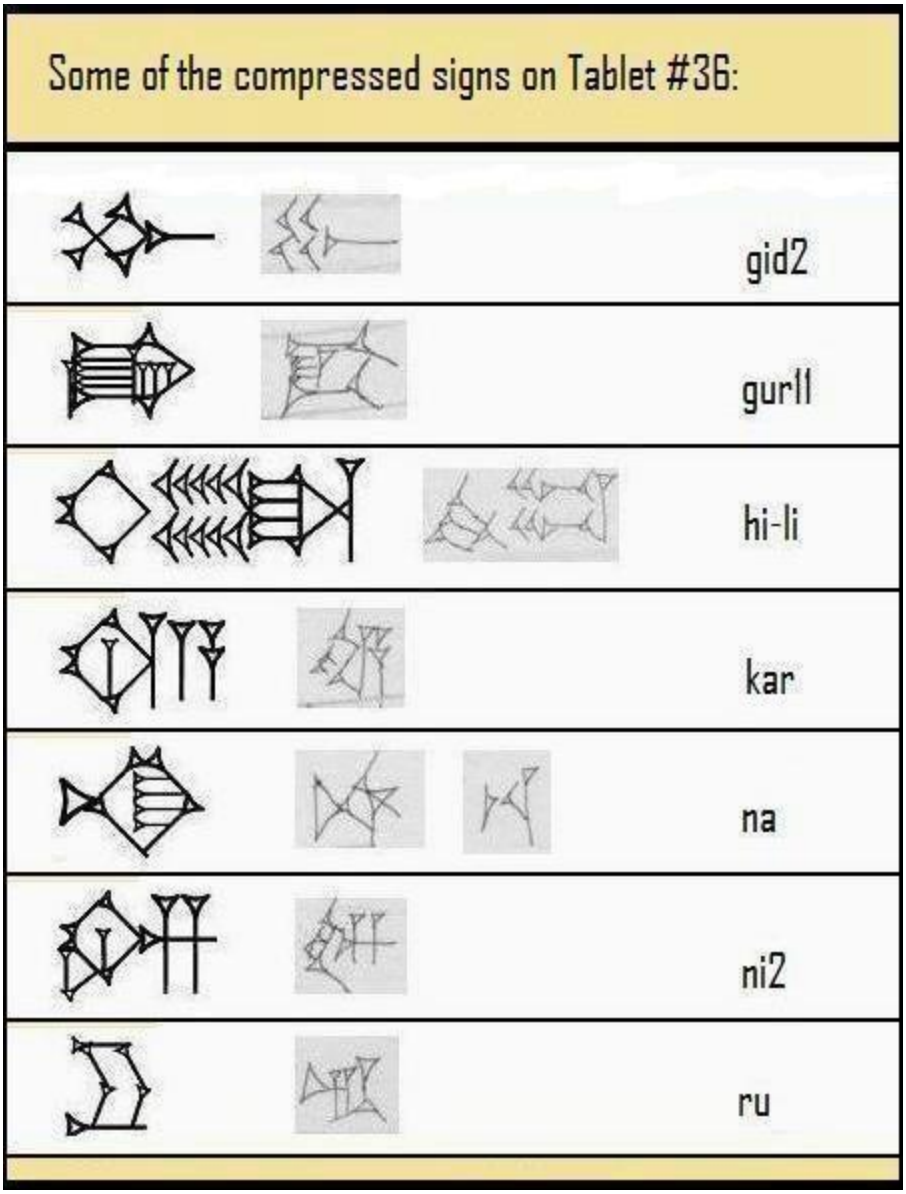


Gu4, "bull, ox," normal and compressed.

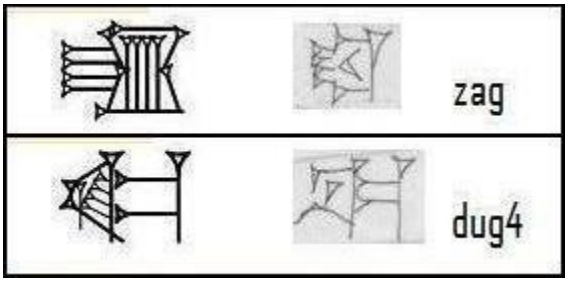


To compress or not to compress? This tablet perfectly illustrates the advantage of using compressed print. On the top line, where there are many signs, the scribe was concerned about running out of space, so he used the compressed version of gu4. On the second line, where there is plenty of room, he used the full version.

There are many compressed signs on Tablet #36. Compression drastically alters the appearance of the signs, making them more difficult to read:



Sumerian signs were very elaborate. While having to copy these complex signs all day long, the scribes naturally looked for ways to simplify them and make them easier to write.



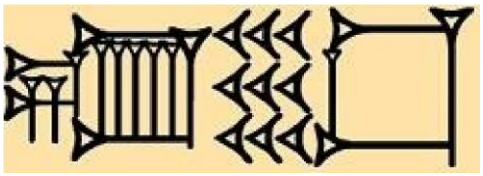
Cuneiform shorthand. Notice how in the above two signs a single mark within the signs represents the more complicated lines. Because the signs were written on a small scale, a scribe didn't always attempt to include every single detail of a sign. Very often he would just dab a mark or two, as if to say, "Something goes there. You know what I mean."

A typical Ur III **administrative tablet**. It records the acceptance (for taxes?) of different kinds of livestock. Reading from the top, it lists 21 fatted bulls, 1 fatted cow, 2 sheep, and 1 lamb. The back of the tablet records the date as being “the month of The Big Festival,” in the year that the enemy city of Huhnuri was destroyed (during the reign of Amar-Suen). See a view of the entire tablet. See if you can find gu4, the compressed sign for "bull or ox." Click here for the answer.

The above tablet is quite small (35 x 32 mm, approximately 1.4 inches). Other tablets were much larger. See an administrative tablet from the reign of Urukagina (circa 2370 B.C.) which records the regular temple offerings of grain and livestock. Literary tablets were even larger, such as this tablet about Gilgamesh, which contains a flood story similar to the biblical tale. Very long compositions were written on rectangular columns, like The King List shown below:

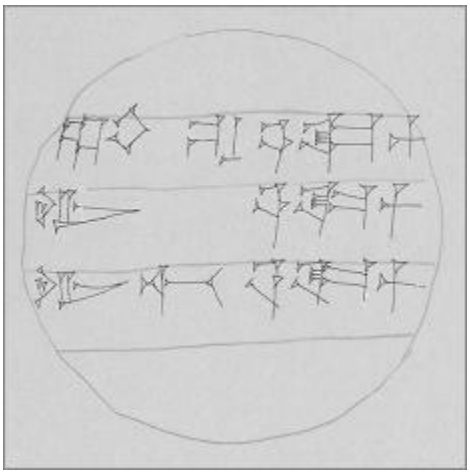
The King List, recording the names of the rulers of Mesopotamia. Enlarge.

As stated earlier, most Sumerian tablets were used for accounting purposes. About 97% of Sumerian tablets are classified as “Administrative”; receipts, ledgers, inventories, and the like. Administrative tablets are usually recognizable by numbers at the beginning of the lines recording the quantities of the items on the list (as seen on the tablet above). Only 3% of Sumerian tablets are classified as “Literature,” such as history, mythology, letters, hymns, proverbs, and other literary works. Sumerians were a practical people. Most of their writing was devoted to the daily necessities of business and government, which is why an original work of fiction like Tablet #36 is such a great rarity.



Dubsar. The Sumerian sign for scribe. It literally means "tablet writer."

Sumerian was a very difficult language to read and write, even for the scribes. There were many complicated signs that had to be memorized, and all the signs had multiple meanings and pronunciations. There were very few clarifying rules of grammar, and there wasn't any capitalization, punctuation, or spaces between the words; so it was difficult to tell where one word ended and another began. A sentence was just one long string of symbols. The scribe did not so much read a line of text as translate it. In addition, the scribe also had to learn business, math, science, and literature so he could write of the these intelligently. The curriculum at a scribal school (*edubba*, meaning 'tablet house') was tough and demanding. It required many years of hard work for a scribe to master the art of cuneiform writing.



Line-drawing of a **scribal school tablet** where the student copied the signs given by his teacher.

There was also a certain amount of “hazing” at scribal schools. A young scribe was often bullied at school by the older boys and he was routinely taunted with remarks like, “Your writing looks like chicken scratches!” “Nobody can read your writing!" and "Not even you can read your writing!”

There's an interesting story about a young boy’s experience at a scribal school:

He goes to school and is immediately scolded because he is late. The schoolmaster relentlessly scolds him for every minor infraction; for speaking without permission, standing when he wasn’t supposed to, and for being slow in answering questions. The schoolmaster even slaps the boy for giving a wrong answer and tells him that he will never amount to anything. The boy goes home and complains to his father, saying he wants to quit. "I hate the scribal life!" The father has an idea. He invites the schoolmaster for dinner.

He lavishes honor and respect on the schoolmaster, gives him expensive gifts, such as a beautiful bowl and a costly robe, then serves him a sumptuous meal with plenty of beer. It isn't long before the schoolmaster is praising the boy to the heavens. "He is a great student, and very smart! He'll go far in this life. One day he will be a great scribe. Nisaba be praised!"

In a way, the above story is about every boy's experience in scribal school. The composition was given as a writing assignment to all students, in all scribal schools, in every generation. The students had to copy it word for word. It was also a pointed reminder to their fathers to make sure the schoolmasters were well paid for their services.

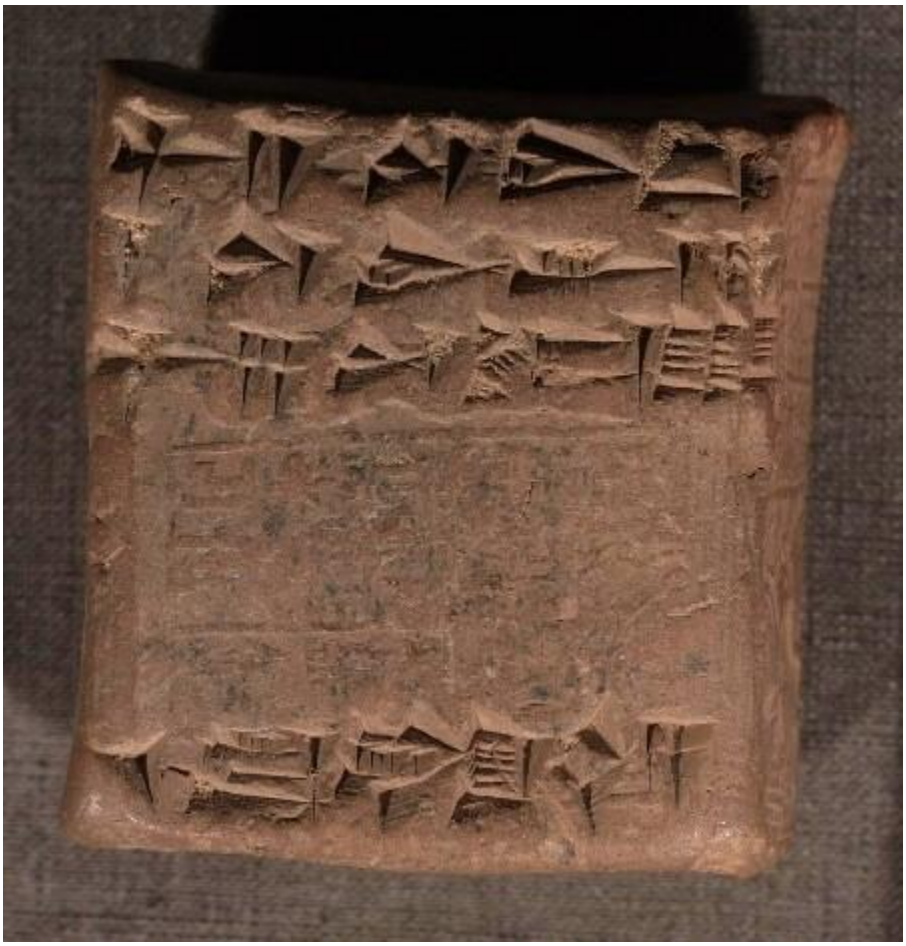
Nisaba zami. “Nisaba be praised.”

Nisaba was the patron goddess of the scribes. She is also the one credited with the invention of writing. In her temple, the scribes offered their "presentation tablets," dedicating to her the best examples of their compositions and calligraphy.

More information about Sumerian scribes can be found on "The Scribe" page of this website.

The scribes continued to hone their craft for 1,400 years, until the fall of Sumerian civilization in the year 2004 B.C. Afterwards their writing lived on in the form of Babylonian literature, which still used the Sumerian writing system in the centuries that followed. The Babylonians also copied much of the history and literature that the Sumerians had written. Were it not for the efforts of the scribes, we would know next to nothing about the Sumerians. Very little of their material culture has survived the millennia; a few statues, some pottery shards, some

jewelry, a few collapsed buildings. If it were not for the writing on thousands of clay tablets, we would barely know the Sumerians had ever existed. We would know nothing of the Sumerian people, their extraordinary civilization, and their great kings like Shulgi and Gudea.



Tablet from the Ur III period, which marked the zenith of Sumerian writing and history.

Cuneiform tablet: in a clay envelope with a (faint) seal impression. Business transactions were often wrapped in clay envelopes and then impressed with the writer's seal to prevent tampering with the contents. This tablet was written by Lugal-e-ban-sha, a scribe for the governor of Umma. Lugal-e-ban-sha lived at about the same time as the scribe who wrote "The Great Fatted Bull." More than a hundred tablets by Lugal-e-ban-sha can be seen in museums all around the world, along with those of his brother, En-kash. Sadly, when a large cache of tablets is found, it usually means the office (or temple or school) where the tablets were stored, was destroyed when the city was sacked and the tablets were buried en masse beneath the fallen debris. Sometimes the tablets were hardened into brick by the flames of the burning buildings. Ironically, it was the destruction of the civilization around them that preserved these tablets for prosperity. Perhaps the tablet of "The Great Fatted Bull" was also preserved this way. One can only guess at the fate of the scribes who wrote these tablets.