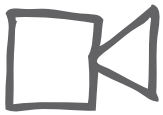


Glyphs and Codes

4th
Grade



Alarm



Snow



Merge



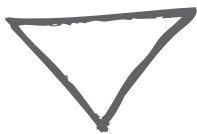
Man



Rainbow



Deer Crossing



Hobos are here



Dangerous man



Get out fast!



Jail



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* *Has an Answer Sheet*

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A glyph is a single, meaningful written mark.

Here are some examples of glyphs used in the English language, among others.

A B C D e f g h i j k

1 2 3 4 ! ? , . & + =

All glyphs are marks but not all marks are glyphs. A glyph must add meaning to what is being written. What other glyphs can you think of that we use?



Letters

Letters are the most common form of glyph that we use. Most of the letters we read are printed on paper using fonts. Fonts are entire catalogues of glyphs designed by someone for printing. The way fonts look has developed from calligraphy over hundreds of years, starting with the first printing press in the 1440s. Below are the most common styles of fonts we use today.

Design your own letters for each different kind of font! A ball point pen can be used to draw out the shapes.

abcdefghijklmnopqrstuvwxyz

Roman (serif) - This is the most common style of glyph. It developed from the inscriptions on towers and palaces in ancient Rome. The *serifs* are the feet and burrs on letters like f and b.

Handwriting practice lines consisting of a solid top line, a dashed midline, and a solid bottom line.

abcdefghijklmnopqrstuvwxyz

Italic (serif) - Italics are based on cursive handwriting and calligraphy. They get their form from cursive handwriting with a broad nib pen.

Handwriting practice lines consisting of a solid top line, a dashed midline, and a solid bottom line.

abcdefghijklmnop

Sans Serif - Sans serif (or san serif) fonts are more simplified versions of the serif fonts. *Serifs* are the little feet and burrs on the end of letters, and *sans* means “without”. Sans serif fonts do not have any embellishments, and typically have the same thickness throughout every part of the letter.

.....
—————
—————
.....

abcdefghijklmnop

Blackletter- This is the earliest style of printed letters and is the easiest to draw. The Gutenberg bible was printed in blackletter. It is made up of simple strokes with a broad nib pen.

.....
—————
—————
.....



utenberg Printing Press

Johannes Gutenberg was a German entrepreneur and inventor. He is considered to be the inventor of the printing press. Although there were many similar machines in Europe, Gutenberg's machine was the most technically advanced and significant. His invention helped start a new age of enlightenment in Europe by making books inexpensive and available to everyone.

Gutenberg's machine used what is called *movable type*. Each glyph was carved out of a piece of metal, and then they were all lined up in a box to create the words on one page. The glyphs in the box were inked and put into a "screw press". The box would get pressed down onto paper, and the inked metal glyphs would be pushed into the paper.



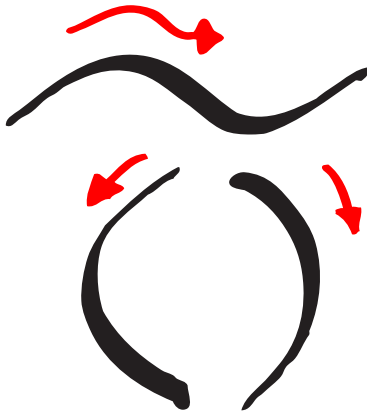
If Gutenberg's machine was not the first printing press why is it the most famous?

What did the printing press make possible that wasn't before?

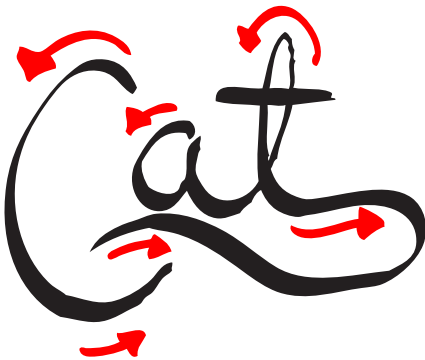
Calligraphy

Calligraphy is the art of writing. Before the printing press, calligraphers wrote whole books by hand! There are many styles of calligraphy. Most modern printed letters are based on them. The foundation of calligraphy is the broad nib pen, which is a pen that's wider than it is thick. A wedge-tipped marker or Sharpie has the same effect. A ball point pen or pencil can be used to draw the calligraphy shapes, but it does not have quite the same look. Try and write the following words using calligraphy strokes.

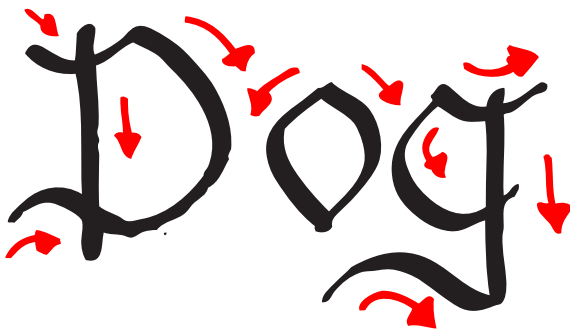
Practice these important strokes in calligraphy.



Try cursive calligraphy.



Try blackletter calligraphy.





languages

Many languages use the same alphabet but many do not. Below is the phrase “thank you” written in four different languages each using a different alphabet. Try to match the phrase to the language and alphabet.

Ευχαριστώ

pronounced - **efk-harist-o**

Спасибо

pronounced - **spa-see-ba**

Thank You

ركش

pronounced - **shock-run**

English

(Latin alphabet)

Greek

(Greek alphabet)

Arabic

(Arabic alphabet)

Russian

(Cyrillic alphabet)



anguages

Languages that use the same alphabet look different from each other when written. Even if we don't understand the language it is easy to notice it by how it is written. Using the Latin alphabet for example, some languages use accents very often while others, like English, don't use them at all. We can also tell the difference because some languages use certain letters more often than others. Each language using the Latin alphabet uses the letters in its own way, according to what works best for it. Using what you may already know, and some research, try to match the sentences below to the languages they are written in.

Hola. ¿Cómo está usted?

English

Hello. How are you?

Czech

Bonjour. Comment ça-va?

German

Aloha. Pehea 'oe?

Spanish

Grüß dich. Wie geht es Ihnen?

French

Dobrý večer. Jak se máte?

Hawaiian

Languages

This is a list of words from other languages that do not translate to English. Create a new English word for each one. Then try using it in a sentence!

Hygge

(noun) It is a Danish word that means complete absence of anything annoying, irritating or emotionally overwhelming, and the presence of and pleasure from comforting, gentle and soothing things.

Uitwaaien

(verb) This is a Dutch word that means taking a walk in the country to clear your head. It translates directly to mean: "walk in the wind".

Qualunquismo

(noun) This is an Italian word that refers to someone who isn't interested in politics or issues in society. It came from a political party that discouraged people from trusting the government.

Ilunga

(noun) This is a Bantu word that refers to a person who doesn't mind being treated badly once, will tolerate it if it happens again, but will do something about it if it happens a third time.

Tingo

(verb) This is a word from the Easter Islands that means borrowing things from a friend's house until there is nothing left. It is taking advantage of a friend and never stopping.

Sympathique

(adjective) This is a French word that directly translates to mean "sympathetic". It means much more than sympathetic though. It refers to someone who is gentle, friendly and considerate of others. The Spanish word *sympatico* means the same.

Why do you think certain words develop in languages that can't be easily translated into others?



Dead Languages

This is a list of the world languages that were once widely spoken, but are no longer the official language of any people.

Latin

Latin was the language of the ancient Roman Empire. After Rome fell, different dialects of Latin developed in different regions. Eventually, they became their own languages. These are called the Romance languages. French, Italian and Spanish are the most commonly spoken ones. Latin is still used today but usually only in some Christian churches and as witty phrases.

Carpe diem

Seize the day

Labor omnia vincit

Hard work conquers all.

aut viam inveniam aut faciam

I will either find a way or make one.



Latin inscribed on an ancient Roman gravestone.

Ge'ez

This is an early Ethiopian language related to Hebrew. It used what is called the Amharic alphabet. It has a similar relationship to languages in West Africa as Latin does to European languages. It was once the language spoken in ancient Ethiopia, but now it is only used in the Ethiopian Orthodox Church.

፤ ምድርም ሁሉ በአንድ ቋንቋና በአንድ ንግግር ነበረች።
mädärämä hulu bä'änädä qwanəqwana bä'änädä nəgəgərə
nābārāčä.

(Excerpt from the story of the Tower of Babel in the Bible)

አኑሃ፡ለአሙ፡ወሰዳግ፡ያዕቆብ፡
ለራሱ፡ወዳር፡ን፡በቃሉ፡ወበ
ክዩ፡ወዳድኦ፡ለራሱ፡ከመ፡
ወልደ፡እንቲ፡ለላባ፡ወእቲ፡ወ
ከመ፡ወልደ፡ርብቃ፡ወእቲ፡
ወሮጾት፡ራሱ፡ወአጸድዳዩ፡
ለአቡሃ፡ዘንቲ፡ነገረ፡ወሰባ፡
ሰመዳ፡ቃለ፡ከመ፡ያዕቆብ፡ወ
ልደ፡ርብቃ፡እንቲ፡ሮጾ፡ወተቀ
በሎ፡ወሐቀ፡ወሰዳግ፡ወወሰ
ዩ፡ቤቶ፡ወነገር፡ለላባ፡ከሎ፡
ዘንቲ፡ነገረ፡ወጸቢሎ፡ለባ፡ለ
ያዕቆብ፡እመኑ፡ወጸመዩ፡ወእመ
ኑ፡ሠጋዩ፡አንቲ፡ወነበር፡መስላ
ሁ፡ሠላሳ፡መዋዕሉ፡
ወጸቢሎ፡ለባ፡ለያዕቆብ፡እ
ሰመ፡እንቲ፡አንቲ፡አተቀነዩ፡
ለተ፡በክ፡፤ግረ፡ወሰባ፡መ
ንቲ፡ወእቲ፡ወቦቲ፡ለላባ፡ክል
ሴ፡አዋልድ፡ከግ፡ለእንቲ፡ተል

An excerpt from the Book of Genesis from the Bible, written in Ge'ez

Mohegan

Mohegan was a Native American language spoken by several Algonquian tribes in present day New York and New England. After the conflict with the Europeans in the 17th and 18th centuries, the tribes were scattered and the language was no longer used. Some Mohegan tribe members are trying to bring the language back into use.

Nuwikôtam nákuskyôn.

Nice to have met you.

Sáp kunáwush!

See you tomorrow!

Kuski nahak mátapsh!

Sit by me!

Yola

Yola was a language spoken in parts of Ireland until the middle 19th century. It developed from early English and eventually became a distinct language rather than a dialect. During the 19th century it was gradually replaced by a mixture of Gaelic and English.

Yerstey w'had a baree, gist ing oor hoane,

Aar gentrize ware bibbern, aamzil cou no stoane.

Yesterday we had a goal, just in our hand.

Their gentry were quaking, themselves could not stand. (Excerpt from a Yola song)

All of these dead languages are still understood and spoken by people. Why is it that they are considered “dead”? What do you think makes a language a “living” language?

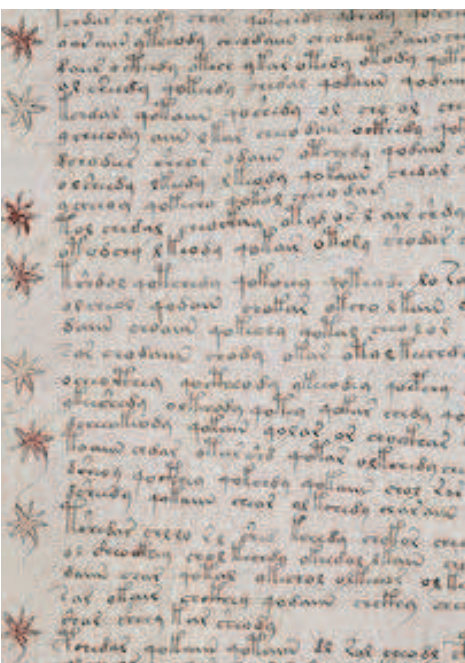
There are many reasons a language can die or stop being used. Name some that you can think of.



Voynich Manuscript

The Voynich manuscript is one of the most mysterious texts in the world. It is believed to have been written in the early 1400s, possibly in Northern Italy. No one knows who the author is. The manuscript is written in an unknown alphabet and language. No one has been able to decipher the code. The illustrations suggest that it is a book of pharmacy and medicine. There are many pictures of plants and medical and astronomical diagrams that match medieval medicine.

Answer the questions on the following page.



There are many languages from thousands of years ago that are not spoken anymore, but most of them are still understood by a few scholars and were not forgotten by history. What if the Voynich manuscript was written in a forgotten language of the 1400s? How do you think the language was forgotten and why?

Some people think the Voynich manuscript was meant to be indecipherable. If it really was written to be a kind of riddle or puzzle, why do you think the author would have done that?

What do you think the Voynich Manuscript is? It could be anything from a dictionary to a personal diary. Or maybe the whole thing is just a hoax. Tell your version of how it came to be!



ncient Alphabets

This is a chart showing how certain letters in modern English can be traced back thousands of years to very early scripts and hieroglyphics. Each row shows the many different glyphs in different languages over thousands of years that have represented the same basic sound.

Create your own new letters in the last column.

Proto Canaanite (c 1700 BC)	Early Names and Meanings	Phoenician (c 1050 BC)	Early Greek (c 770 BC)	Early Roman (c 100 BC)	Modern English	Your Glyph
	<i>alp</i> oxhead				A	
	<i>bet</i> house			B	B	
	<i>digg</i> fish			D	D	
	<i>yad</i> arm			I	I	
	<i>mem</i> water			M	M	
	<i>en</i> eye			O	O	
	<i>ro's</i> human head			R	R	



obo Symbols

During the Great Depression, hobos traveling across the country developed a language of symbols to communicate to each other. They would write or carve the symbols in places they had been telling others what to expect. This is a list of some of them.



Barking Dogs



Jail



Cops are active



Anything goes



Stop



Unsafe place



Cops are inactive



Get out fast!



Kind woman



Hobos are here



Hobos arrested on sight



Don't give up



Danger



Good Water



Dangerous man



Be ready to defend yourself



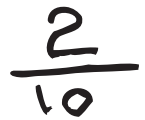
No one home



If you are sick they will help you



Keep quiet



Thieves are about



Someone is home



Good place to camp



Turn right

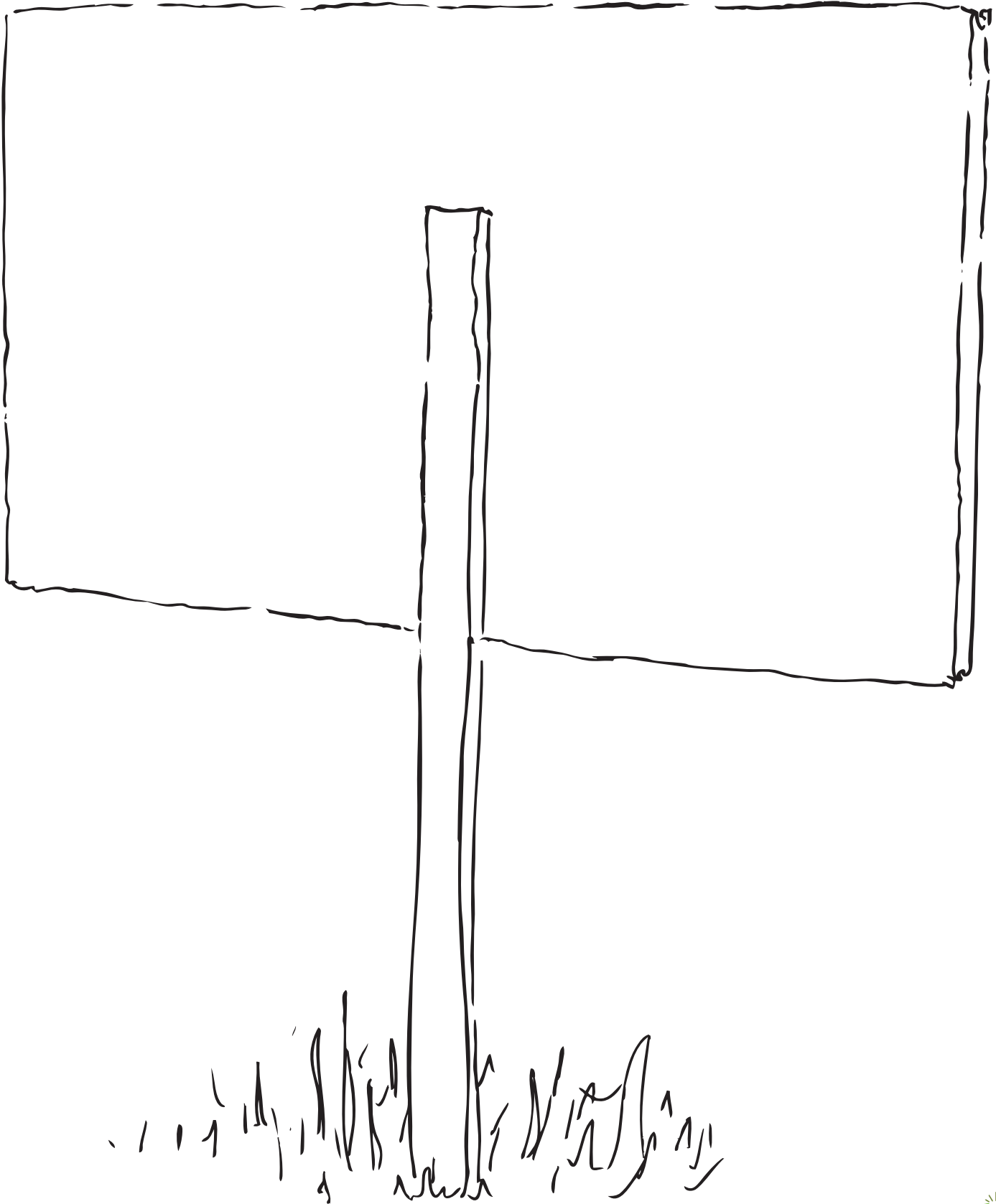


Turn left



obo Symbols

Use the hobo symbols and make some of your own to write a message on the back of the wooden sign for the next traveler.





ymbols

Letters are not the only meaningful glyphs we use. There is a whole language of other symbols that we see and use every day. Here is a list of some. See how many of your own you can add.

Electrical Symbols



Alarm



Resistance



Fuse



Switch

Weather Symbols



Rain



Snow



Haze



Frost



Storm



Dew



Rainbow



Hail

Road Signs



Merge



Windy Road



No U-turn



Pedestrians



Slippery



Falling Rocks



Road Narrows



Deer Crossing

Other Symbols



Man



Woman

Diacritics

Diacritics are the small accent marks above or below letters. They are used in most languages. English does not use them at all, except in words it has borrowed from other languages, such as *résumé* and *café*. They are useful in letting the reader know how to properly pronounce the words they are reading. Each language uses diacritics differently. Below are a few examples.

Acute **á**

The acute diacritic is used in many languages. In most European languages it adds a stress to the letter it is on. For instance, **e** is pronounced *eh*, but **é** is pronounced *ay*.

Grave **à**

The grave accent has many uses in languages around the world. In European languages it is mostly used to distinguish words that are spelled the same, but it doesn't change the pronunciation.

Cedilla **ç**

In French the cedilla is most commonly used on the letter **c**. Without the cedilla **c** is pronounced like *k*. The letter **ç** is pronounced as an *s*.

Umlaut **ä**

An umlaut is used to signify that vowels written together are pronounced separately, like in the word *noël*.

Many English words would benefit from diacritics, especially for people just learning the language. Place accents on the following words where you think they would be helpful.

Certain

Cooperate

Cop / Cop
Police Officer verb meaning "to catch"

Accent

Melee

Can you think of any others?



Geoglyphs

A geoglyph is a large pattern drawn or dug into the ground. They can usually only be seen from a plane or a high point. There are many kinds of geoglyphs and cultures throughout history have created many different styles and for different reasons.

The Labyrinth

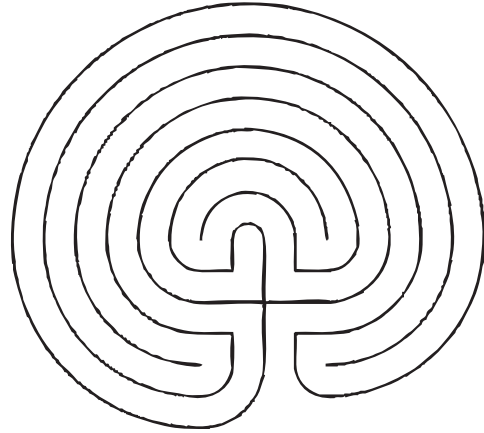
A labyrinth is a type of maze that is contained in a circle. Large labyrinths have been made by cultures all around the world. They can be worked out on paper but are much more difficult when you have to walk through them.

The ancient Greeks have a famous story about a labyrinth. A vicious monster, the Minotaur, lived in a great labyrinth. The Greek hero, Theseus, was sent into the labyrinth as punishment. Fortunately, he had a little help. A young girl who fell in love with Theseus helped sneak his sword into the maze, and gave him instructions on where to go. She also gave him a ball of string so that he could find his way back.

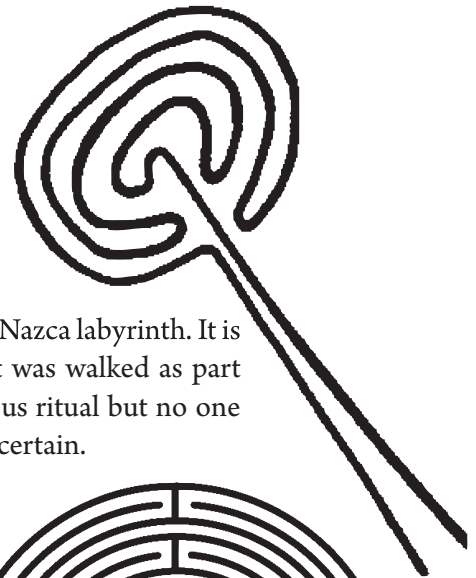
The Nazca people lived in the desert of Peru between 300 BC and 800 AD. There have been many recent discoveries of labyrinths and other geoglyphs that were carved into the desert. Some of them were several hundred feet across.

In Medieval times the labyrinth was used for religious purposes and they are often found in cathedrals.

Try to draw your own labyrinth!



This is considered the classical form of the labyrinth. This basic shape is found on many ancient Greek coins.



This is the Nazca labyrinth. It is assumed it was walked as part of a religious ritual but no one knows for certain.



This is considered the Medieval style of labyrinth. It can still be seen in many cathedrals.



eoglyphs



Crop Circles

Crop circles are patterns found in wheat and grass fields, usually in a circular shape. They have been found across Europe for hundreds of years and are a part of our folklore.

Some crop circles are known to have been done by people, and some have been caused by weather. Some people believe that some of the crop circles were created by alien spaceships and used as markings and signs for other aliens.

Many farmers and other pranksters have admitted to creating crop circles. However, some of them remain a mystery. There are still people who believe crop circles to have a higher meaning.

Can you think of any ways they may have been made? Do you think extraterrestrial life made any of them? Draw your version of a crop circle.



Japanese Writing: Kanji

There are three different Japanese alphabets. The Kanji alphabet is made up of symbols rather than letters. This means each symbol stands for a word or an idea, rather than there being a group of letters forming a word. To read Kanji well, a person needs to know at least 2,000 symbols! Below is a list of a few of them. The characters are written much differently from Latin letters. Practice writing them by hand.

芸

Art

独

Alone

神

God

信

Believe

楽園

Paradise

夢

Dream

命

Life

心

Heart

地

Earth

水

Water

氣

Spirit

望

Hope

森

Forest

太陽

Sun

月

Moon

真

Truth

冬

Winter

夏

Summer

春

Spring

防

Protect



Japanese Writing: Katakana

Katakana is another one of the alphabets used in Japan. The symbols stand for sounds, similar to Latin letters, rather than full words or ideas. The katakana alphabet is most commonly used for spelling out foreign words. Try writing your name using this alphabet.

ア a	イ i	ウ u	エ e	オ o
カ ka	キ ki	ク ku	ケ ke	コ ko
サ sa	シ shi	ス su	セ se	ソ so
タ ta	チ chi	ツ tsu	テ te	ト to
ナ na	ニ ni	ヌ nu	ネ ne	ノ no
ハ ha	ヒ hi	フ fu	ヘ he	ホ ho
マ ma	ミ mi	ム mu	メ me	モ mo
ヤ ya		ユ yu		ヨ yo
ラ ra	リ ri	ル ru	レ re	ロ ro
ワ wa				ヲ wo
				ン n

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Answer Sheets

Glyphs and Codes

Languages #1

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Answer Sheet



anguages: Answers

Ευχαριστώ

pronounced - **efk-harist-o**

Greek

(Greek alphabet)

Спасибо

pronounced - **spa-see-ba**

Russian

(Cyrillic alphabet)

Thank You

English

(Latin alphabet)

شكرا

pronounced - **shock-run**

Arabic

(Arabic alphabet)

Answer Sheet



languages: Answers

Hola. ¿Cómo está usted? (Spanish)

Hello. How are you? (English)

Bonjour. Comment ça-va? (French)

Aloha. Pehea 'oe? (Hawaiian)

Grüß dich. Wie geht es Ihnen? (German)

Dobrý večer. Jak se máte? (Czech)