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Writing History: A Teacher's Guide to the History of Language Technology and Museum Practice

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Writing History:

A Teacher's Guide to the History of Language Technology and Museum Practice

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Writing History: A Teacher's Guide to the History of Language Technology and Museum Practice

By Sonya Ochshorn

Abstract

The following document contains a guide for classroom teachers to use when bringing a class of 6th graders to a museum with ancient writing techniques, illuminated manuscripts, and books printed with movable type in their collection. The guide shows teachers how to guide students through the journey of tackling the essential question, "How have technological evolutions in language affected society?" This guide also helps teachers understand the difference in teaching in a museum setting and why this kind of learning is important for student development.

Table of Contents

Applications	Page 4
Original Material: Teacher Guide	
Introduction to Teacher	Page 8
Teaching in a Museum	Page 20
Stop One: Mesopotamian Cylinder Seals	Page 22
Contextual Information	Page 23
References for Further Reading	Page 24
Stop Two: Illuminated Manuscripts	Page 26
Contextual Information	Page 27
References for Further Reading	Page 29
Stop Three: Movable Type	Page 30
Contextual Information	Page 31
References for Further Reading	Page 32
Bibliography of Images	Page 34
Rationale	Page 35
References	Page 36
Appendix	
Permissions Letter	Page 39

Applications

Language and art are understood through a series of culturally significant symbols. Specifically, language is a system of signs consisting of two pieces: the object and the word that references the object. But those two things are not the same, even if we often think of them interchangeably. Our world gets shaped through our interaction with these objects and the signs we use to convey those interactions. Art is another version of this sign system and is tied very closely to written language. Aesthetic education, museum literacy, and an understanding of the foundations of communication and language is essential to understanding sociocultural norms, traditions, and values. Not only have we (a global human “we”) spent millennia developing our oral and written languages, but we have also made huge breakthroughs in language writing technologies. Throughout this guide the class will look at a range of objects representing important moments in human language history.

This is a guide for teachers to use with their upper-elementary and middle school classes. It was designed with 6th grade (10-12 year olds) in mind, but can be done with a range of students. The purpose of the guide is to create an accessible framework for which to view the history of written language. This document will give educators the information and tools needed to take a group of students through this journey. This guide reflects the needs of diverse New York City schoolteachers and students.

In accordance with the Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects (2010) for grade 6, adopted by New York State this lesson will include comprehension and collaboration through engagement in discussion, expressing ideas clearly, and interpreting information

from multiple formats. Additionally, in accordance to New York City Social Studies Scope and Sequence (2015) this museum trip will include all ten unifying themes:

1. Individual development and cultural identity – by looking at texts originating from around the world they will get a better understanding of cultural history and they will be asked to think about their place in this evolving climate.
2. Development, movement, and interaction of cultures – through the history of writing the students will look at the ways that different cultures developed, changed, and interacted with one another.
3. Time, continuity, and change – this lesson will take students through many time periods where they must examine objects that represent the changes in that society at that time.
4. Geography, humans, and environment – This lesson will show students objects from a range of geographic locations and they will be asked to question the way in which humans interacted with this geography and environment.
5. Development and transformation of social structures – language is the basis for social order and structure and throughout this lesson students will be asked to look at the ways it developed and thus transformed society.
6. Power, authority, and governance – students will be asked to consider the social structures of the time and make inferences about who got to use technology and the power it wielded.
7. Civic ideals and practices – Students will be asked to look closely at objects that represent specific practices and portray civic ideals.

8. Creations, expansion and interaction of economic systems – Many of these objects relate to economic systems or of economic consequence.
9. Science, technology, and innovation – This lesson is based on looking at the change in technology and innovations in language and communicative tools.
10. Global connections and exchange – These objects all have affected the world on a global scale and through the sharing and exchange of ideas and technologies.

More specifically, the Scope and Sequence asks 6th grade to look at the eastern hemisphere and early civilizations and global interactions. The first objects the students will look at are ancient cylinder seals from the Near East. As we move into European objects, students will reflect on the global spread of language and the ways that these objects are related. To reflect the learning goals of the Scope and Sequence students will be asked to gather and interpret evidence through visual clues. Students will consider chronological causation as they look at a series of objects moving forward in time. They will make comparisons between objects and contextualize them with prior knowledge and experience. They will be asked to use geographic reasoning when they're thinking about the materiality of the objects, what they would have been used for, and how they would have been used. Through a discussion of how objects were used, what they cost to make, and who had access to them, the students will explore ancient economic systems and civic participation.

This trip will also utilize learning standards as laid out in the Blueprint for Teaching and Learning in Visual Arts (2015). Based on the expectations for 5th grade developing art literacy the students will look and discuss art using accountable talk

techniques like sharing and building on ideas, observation, question and response and inferences based on the visual information. They will also make connections and interpret the world through observation by comparing and contrasting works of art around the single theme of writing technology. It is also a blueprint standard for 5th grade to take students to a museum and learn about the collection. This trip also takes into account 8th grade learning goals such as developing art literacy through looking and discussing a single work of art for an extended period of time. This trip only includes three stops that will give students ample time to spend with any one particular work of art. They will also be asked to use a work of art as a primary document for understanding the history of language based technology and use visual evidence to hypothesize about the time period, culture, and political climate. Relatedly, students will learn to recognize the sociocultural and historical importance of art by comparing it to their classroom studies and prior experiences.

Writing History:

A Teacher's Guide to the History of Language Technology and Museum Practice



Clifford Geertz (1976) defines works of art as, “Elaborate mechanisms for defining social relationships, sustaining social rules, and strengthening social values” (p.1478). As such it is important to be able to interpret these works in order to better understand society. My hope is to help create what Gilbert (2016) calls a “museum-literate” student. Gilbert defines a museum literate student as someone who can, “question what is put forth” (p.60). Part of that is putting themselves into the experience and questioning the authority of knowledge. Using the information that the museum places

before them, a museum-literate student can go further and evaluate what that means in terms of society, culture, and their own identity and understanding.

This is a constructivist approach where a student is making connections between their lives and the objects.

Based on this personal interpretation, it is the job of the educator to help the students with their own goals, separate from the goals of the exhibition and program design. As Mater (2005) states, “relevance is in the life of the beholder” (p. 14). It is the job of the educator to engage the student in the process of learning. The aim of this guide is give teachers the tools to help students

become museum-literate and understand the connection between objects and sociocultural understanding.

I think hands-on, inquiry based exploration is important to get students to that goal. Asking them to question their beliefs and assumptions so they can consider another point of view.

While it is valuable for students to come away with a scholarly understanding of the history of the written word, the museum should not become a second classroom. In order for students to become curious, they must find their own connection. I hope to give them access to questions and tools to uncover answers and continue to dig deeper.



ewey (1983) says it is the role of the teacher to create meaningful experiences and

to be able to identify what he calls worthwhile experiences. An educator should be able to use their surroundings, both physical and sociocultural, to create these experiences (p. 40). Part of creating this understanding, and teaching students to be museum-literate is through aesthetic education which Greene (1981) states, “is a process of initiating persons into faithful perceiving, a means of empowering them to accomplish the task – from their own standpoints, against the background of their own awarenesses [sic]” (p.45).

As an educator my ultimate goal is for students to come away with a sense of wonder and a desire to continue to explore and ask questions. We live in an era when there is so much

access to information, but there is also certain apathy about learning. I want to instill the idea that learning is a never-ending process of uncovering mysteries. I think it's important to give the learners the tools to individually take this



journey and find their own paths.

I want students to come away from a trip to the museum with an understanding that learning is not a stagnant practice, just as the evolution of language is not stagnant. Learning is a journey you take for a lifetime. The

objects of the past do not hold value simply because they are old, or even because they tell us about a time we otherwise wouldn't know about. They are important because they help us conceive of the future. They tell us about a history that continues past the objects creation, past the objects intended use, past the object being placed into the museum, but a history that led up to that very moment, of the student, standing in front of the object, and wondering about it. All of that history, all the stories that object tell, help to inform the student, or any person looking at a collection, of the future they want to create.

This idea of storytelling can be aligned with what Mater defines as contextual learning. Knowledge in a

museum is always a story, in this case, we're telling the story of the written word. Just as in any story, and in life, there is a connection between the personal and sociocultural which will be the lens through which students make their connections (2005, p.15).

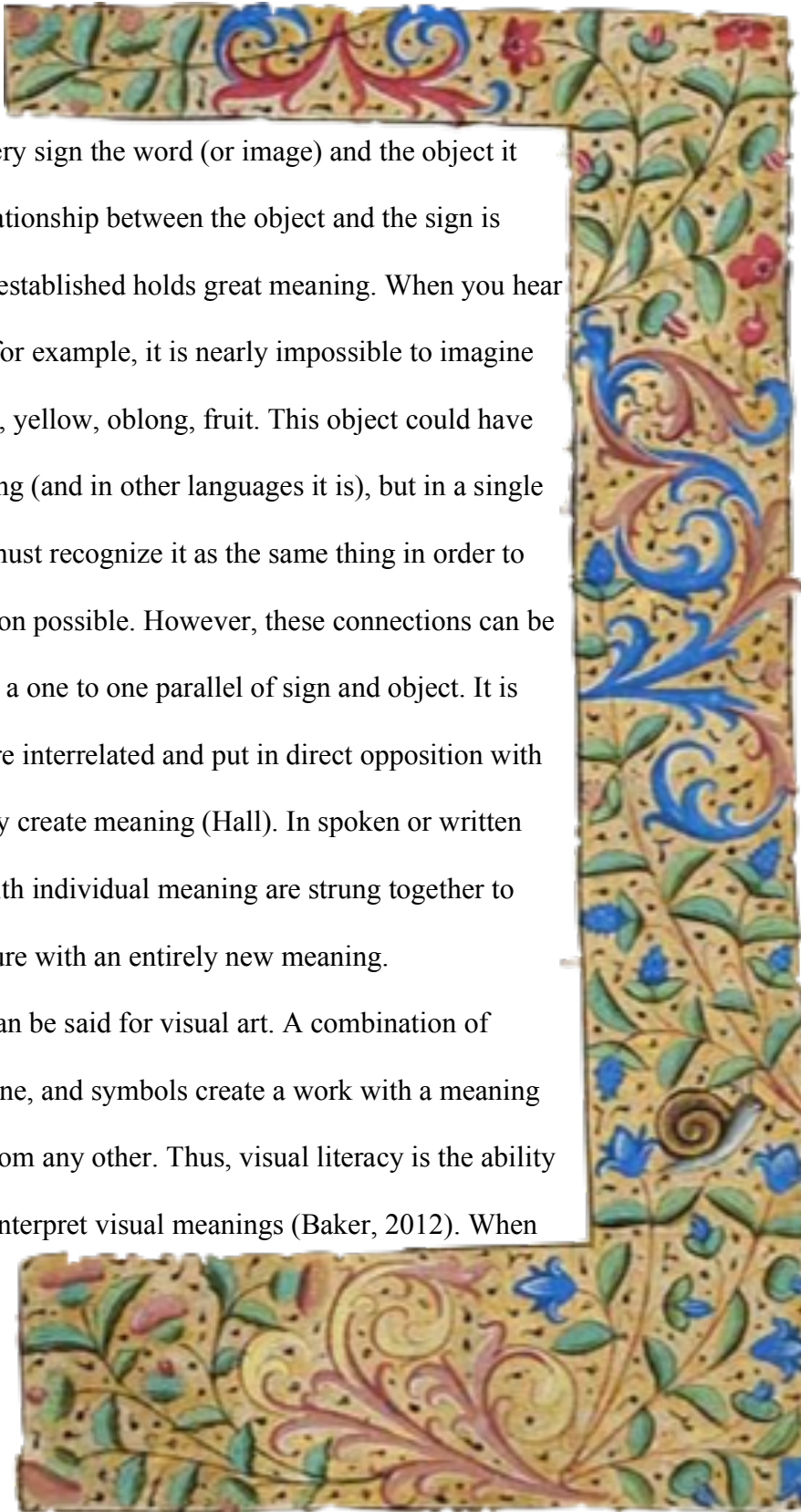
Geertz says the capacity to view signs is a human capacity (1976). As



technology has increased and globalism has become common and widespread, we're asked more and more often to use this capacity to understand our environment. Interpretation of

images, icons, and symbols is essential to everyday life (Baker, 2012). We're constantly bombarded with images and we need to be able to understand what they mean and how they relate to us. Something as simple as Emoji texting to something as complex as advertising all require these skills. Walter Lippmann (1922) recognized this complexity back in the 1920s, and it has only increased since then. It is impossible to make sense of everything we see, hear, smell, taste, and think, and so our minds have created filters and methods of interpretation. Lippmann theorizes we create simple versions in order to slowly decipher all the information. These become the basis for symbolic interpretation.

Stewart Hall makes it clear there



are two parts to every sign the word (or image) and the object it references. The relationship between the object and the sign is arbitrary, but once established holds great meaning. When you hear the word “lemon” for example, it is nearly impossible to imagine anything but a sour, yellow, oblong, fruit. This object could have been named anything (and in other languages it is), but in a single society, everyone must recognize it as the same thing in order to make communication possible. However, these connections can be more complex than a one to one parallel of sign and object. It is when these signs are interrelated and put in direct opposition with other signs that they create meaning (Hall). In spoken or written language, words with individual meaning are strung together to create a larger picture with an entirely new meaning.

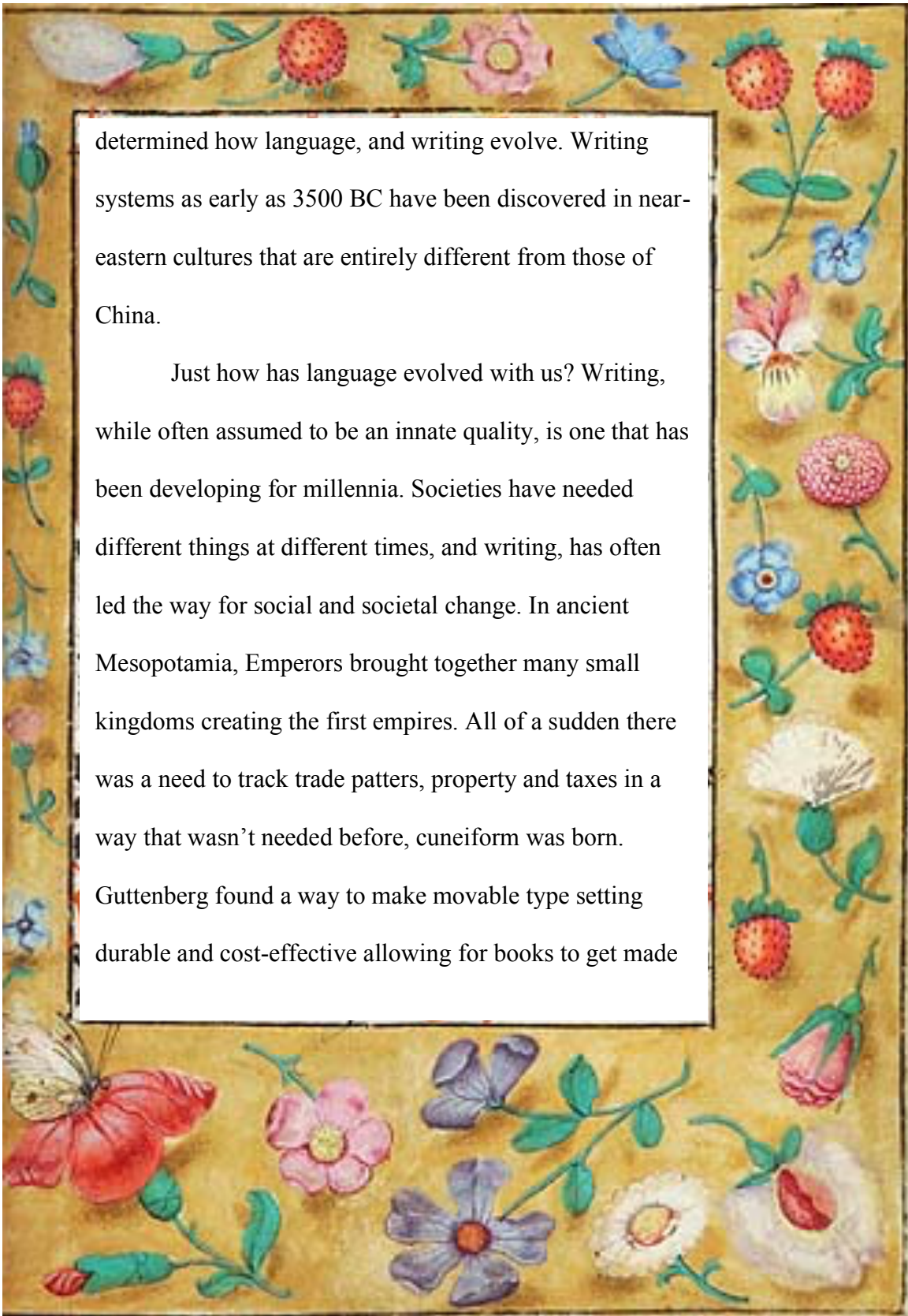
The same can be said for visual art. A combination of technique, color, tone, and symbols create a work with a meaning entirely different from any other. Thus, visual literacy is the ability to understand and interpret visual meanings (Baker, 2012). When



semiotics (the study of signs or words) is applied to culture, it allows us to read culture as if it were language (Hall). It can go beyond a means of communication to a mode of deeper thought, something words might not be able to express. Art acts as a text of culture to allow viewers to read the signs within a work to gain a deeper understanding of the artists' perspective on society (Geertz, 1976). According to Jacques Maquet (1986), "This visual relationship between a viewer and an art object is a specific mental phenomenon" (p.158) and as such, it

can be taught, developed, and improved through practice and study.

In order to understand the signs of writing, it is important to be able to analyze the symbols of art. Written language has its roots in artistic expression. Darwin observed with finches that varying circumstances lead to changing outcomes. Finches developed different beaks to depending different landscapes; humans developed different forms of communication depending on where they are and what the needs are of that time. Evolution doesn't always lead to improvements, just variation. There is no clear "first language" (although there have been some immoral attempts to find it) nor is there much evidence that early languages were influenced by each other. The needs of a given time/place



determined how language, and writing evolve. Writing systems as early as 3500 BC have been discovered in near-eastern cultures that are entirely different from those of China.

Just how has language evolved with us? Writing, while often assumed to be an innate quality, is one that has been developing for millennia. Societies have needed different things at different times, and writing, has often led the way for social and societal change. In ancient Mesopotamia, Emperors brought together many small kingdoms creating the first empires. All of a sudden there was a need to track trade patterns, property and taxes in a way that wasn't needed before, cuneiform was born.

Gutenberg found a way to make movable type setting durable and cost-effective allowing for books to get made

more quickly and more affordably. Suddenly, it was feasible for more people to be literate leading to the European age of enlightenment and reason. Have these technological advancements come about because someone saw a need for them, or did they arrive by chance and we rose to the occasion and took advantage of all they had to offer? How did these technological advancements change society and the world we take for granted today?

We evolve with our language, using it to tackle the challenges we're faced with, but also allowing it to shape our capacities and us. Just as biological evolution is not planned, some changes being helpful, some harmful; language gets warped and adjusted, sometimes leading to better communication,



sometimes miscommunication. But through these trials and errors our world is shaped.

Developmental theory suggests learning happens as we interact with our environments and then reflect on those interactions (DeSantis & Housen, 1996). As an educator it is our job to provide students with positive, full experiences in diverse environments. While the students can (and do) interact with their environment all the time, they may not have the opportunity, or the skills, to reflect on the interaction. By providing specific experiences, we can weave reflection into it, thus giving them the tools to grow and learn as richly as possible.

Students in middle school are at the beginnings of the formal operational stage. It is at this time that students are developing the ability to think about hypotheticals and abstractions. They're moving beyond only concrete methods of thought and considering metaphor and symbolism (DeSantis & Housen, 1996). By giving students access to visual icons, symbols, and symbolic language, they're getting access to a higher order of thought. Creating experiences that will ask them to consider visual communication, interpret and analyze it will push them in the development of their formal operational stage as well as teach them to think critically about the world around them.



Throughout this exploration I hope to tackle the essential question of how have technological evolutions in language affected society? Groups will be asked to look at objects related to writing at different times and places in history and wonder about how these advancements came about and why. What do these objects have in common and what makes them unique? Why are these objects important and what stories do they tell? By puzzling over these questions, I hope the audience comes away with a stronger understanding of cultural shifts and ideas we take for granted. What happened to allow these changes to occur and what changed because of them?

Carr (2003) says a “good question is at the center of experience. [...] The good question determines the depth, intensity, and extent of the learner’s inquiry and attention” (p.97). Ideas of property, ownership, and belonging have been so constructed over time it is difficult to imagine them as anything other than absolutes. Systems of power, methods of communication, belief systems are so rooted in our daily life we forget to imagine what the world might look like without them. Writing is one of the foundational inventions that have allowed humans to progress to what we see today. By following it’s thread throughout history, I hope that we can create a paradigm shift in our understanding of what is absolute in society.

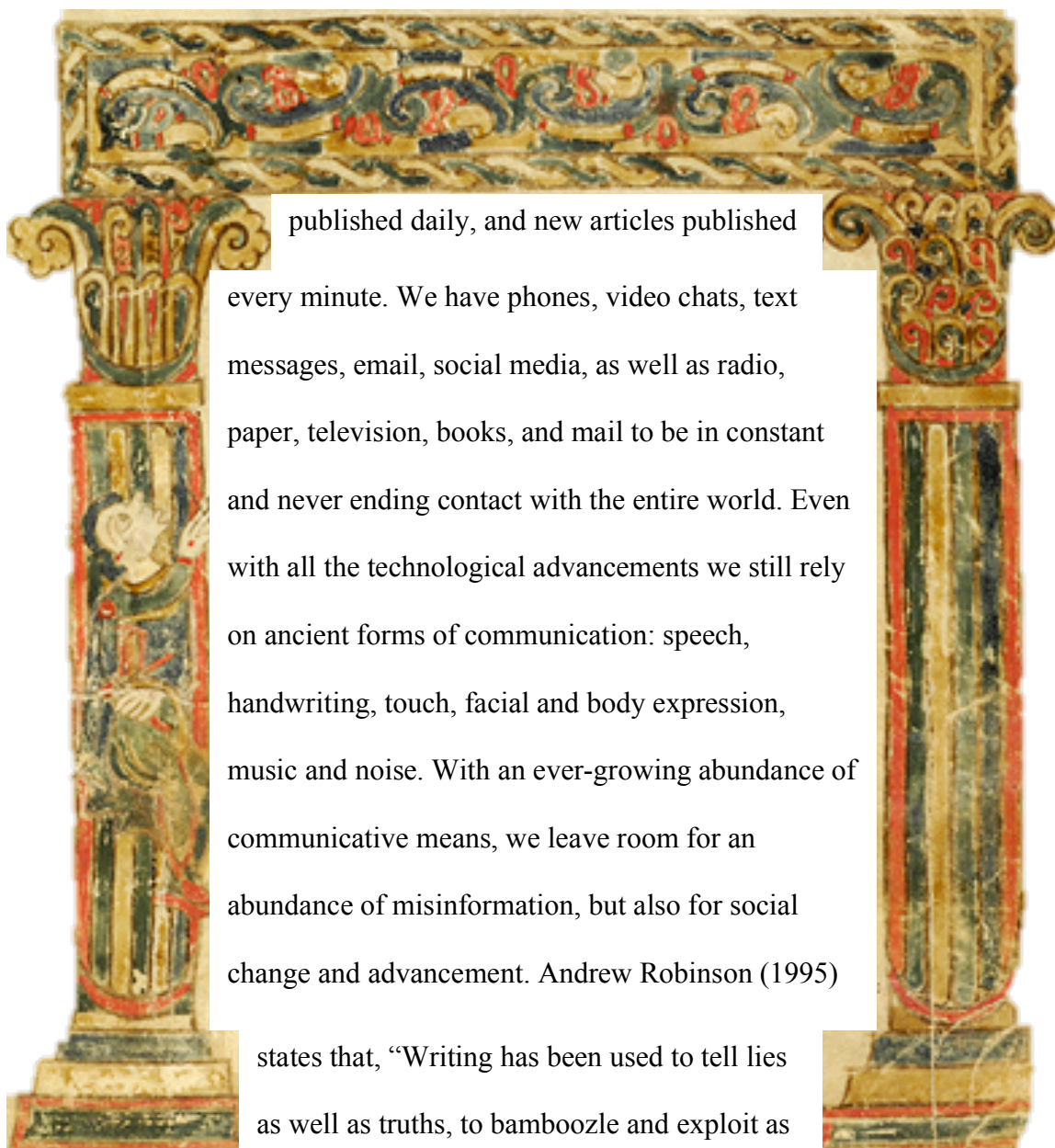
Learning visual literacy will both allow students to develop their language skills within a classroom

context, but it will also allow them to develop their critical thinking and analysis skills outside of a classroom. Interpreting images can directly lead to students having the ability to critically analyze literature, visual and verbal marketing, television and film and any other method of communication that comes their way. Learning how to interpret art helps the students create the “simple versions” Lippmann discusses and



will allow them to make sense of the world around them.

Language is just one form of communication, but its impact cannot be understated, or even fully realized. Today we can communicate across the globe in a matter of seconds. We can communicate through letters, pictures, even videos; speech can be turned into text with the press of a button and vice versa. New books are



well as to educate, to make minds lazy as well as to stretch them” (p.8) While this is true, by unraveling the history and connectivity of language, across time and space, we can begin to understand its impact on the past and present and prepare for the ways in which it will change. We can unpack our assumptions and look critically at the things we take for granted and the things we take as absolute truths. We can further our understanding of the world and our capacity to change and evolve alongside it.



Teaching in a Museum

Teaching in a museum is not a direct translation from a classroom setting. Students will be in unfamiliar territory and interacting with the public, because of this it's important to consider the spaces you will inhabit at the museum. Are there many distractions? Can the students all see the object at the same time? Is there enough space for the students to stand? Can they sit? Is the room often crowded and loud? Preparing students for what to expect before coming to the museum will help them feel comfortable and confident in the space. Lessons where they practice looking at images and analyzing them will prepare them for the museum experience.

Museum spaces have been curated to place objects in direct conflict with one another, where each object is telling a piece of a story and all objects hold meaning. The physicality of these objects is what allows scientists and historians to make discoveries; thus every visitor coming to see them has the opportunity to observe these same nuances and gain knowledge and insight. It's important to focus the students' observation on the objects directly. Students should be part of the process of learning (Mayer, 2005, p.14). Allow their reflections to guide the conversation, letting the objects speak for themselves. Gilbert states that a museum-literate student should question what they see and be able to evaluate it based on their own experience (2016, p.60). Through discussion with classmates, students can find answers largely on their own. The informational content should be dispersed at pivotal moments, but in a conversational way, allowing the students to wonder and make inferences.

Museum learning is about more than the content. To create museum-literate students, the process of questioning and observing is essential. Carr says, “In environments where learners think and act for themselves, the good question is at the center of experience. As a mechanism, even if it is tacit, the good question determines the depth, intensity, and extent of the learner’s inquiry and attention” (2003, p.97). The essential question leads the way for inquiry. In this lesson beginning with the question, how have technological evolutions in language affected society, will guide students to other questions about technology, human evolution, language, and sociocultural climates. Through this one question, they will find “ins” that they can connect to personally. Topics lead to a defined content while essential questions lend themselves to query.

In this guide you will be given a large amount of content and resources to learn about the three objects classes will visit. However, this content should not be given to the students as a lecture, but rather dispersed with discretion as the conversation naturally dictates. The importance should lie with the observations of the students and asking them to consider their prior knowledge, experience, and imagination.



Cylinder seal and impression. Mesopotamia, Akkadian period (ca. 2334–2154 B.C.). Serpentine. Pierpont Morgan Library. Morgan Seal 245

Line the students up around the cases, spreading them out as much as possible. Give them a brief description of ancient Mesopotamia. Where is it? How old are the objects? As a class, discuss the seals. What do they see? What is it made out of? How do they think it was made?

Next, pair the students and have each pair come up with a short story describing the image. Ask them to really look at the molded images and think about what the characters look like, where they are, what's around them? Who are the central figures? What is important? What story does the object tell?

Have a few of the groups share their stories with the class and discuss their seal. Ask the class if any of the objects have the same images? Ask them to consider other things we use that are all unique, how do we prove our identity today. Explain how the cylinder seal was an early “signature” used for signing and authorizing trade deals. What do they think changed to make a signature necessary?

To expand this activity, have the student-pairs with another group. Ask the second group to draw a picture of the story as they tell it. Have them pass their picture on to another group and ask that group to caption the picture. This version of telephone-Pictionary both allows students to use their imagination and creativity, but also shows them how easily it is to change the story and miscommunicate ideas. As a class discuss the benefits and problems of written language and pictorial communication.



Griffin Fighting Griffin Demon Armed with Dagger for Small Calf Below. Cylinder seal. Mesopotamia, Middle Assyrian period (ca. twelfth/eleventh century B.C.). Chalcedony. Pierpont Morgan Library. Morgan Seal 608

CONTEXTUAL INFORMATION

Cylinder seals are some of the first examples of written communication that still exist today. Moreover, they are relatively intact and look today, much how they would have looked 5,000 years ago. These seals would most likely have had a gold cap (since looted by early Western Archeologists or even ancient-contemporaries at

the owner's time of death) and a leather rope to make the object wearable. Cylinder seals were used two-fold. They were highly personal objects that would be made specifically for an individual, such as a king, priest, or trader. The imagery they depict would have symbolic or religious significance to the owner. As such, they were used as protective objects. Worn around a wrist or neck to keep them close they could help ward away evil. Many of these objects show fight scenes between gods and monsters, good and evil; hybrid animals show the strengths the owner wants to possess and images of nature show abundance and wealth.

These seals also had a highly practical use. They could be rolled in wet clay to create an imprint. Because of their individual nature, they acted as a signature proving and certifying ownership and trade. Rolled onto an account record, it proved that the transaction was agreed upon and who the rightful owner was. Rolled onto a clay envelope, it would show who the package was for, and let the receiver know if the object had been tampered with. Rolled onto a door, the seal acted as a lock, proving if the door had been opened.

REFERENCES FOR FURTHER READING

The Story of Writing: Alphabets, Hieroglyphs and Pictograms

By Andrew Robinson

1995, Thames & Hudson Ltd: London

This book may be too advanced for students to read, but it offers a deep history of the cultural climate surrounding ancient civilizations as writing developed. It does a good job of giving a global perspective.

The Story of Writing

By Carol Donoghue

2007, Firefly Books Ltd.: Buffalo, NY

This book is written for students, it connects ancient technology with modern technology allowing students to make clear connections. It ranges from the ancient to present day.

In August Company: The Collections of the Pierpont Morgan Library

By The Pierpont Morgan Library

1993, Pierpont Morgan Library: New York, NY

This book gives a very in-depth look at the Morgan Library's collection of cylinder seals. Not for students to read, but will give the teacher a deeper understanding of the artistry involved in the creation of the seals.



Pierpont Morgan Library. MS M.1. *Jeweled Cover of the Lindau Gospels*, France, ca. 875.

Move on to the next object, the illuminated manuscript. Explain to the class that they're moving forward in time and headed west geographically to Europe. Choose one particular manuscript that is large enough for the whole group to see, ask the students to look closely at the object and try to analyze what they are looking at. Ask the students, what is happening in the image? What visual clues make you think that? What else helps us understand this image? (Chin, 2017, p.64).

If they haven't touched on these topics yet ask them to reflect on the similarities or differences between seals they just saw, and manuscript they're now looking at. What is the benefit of the book format? Are the words easy or hard to read, do you think you could guess what is happening just by pictures (if there are any)? What do they notice about the construction of the object? How do you think it's made? How long would this have taken?

Stop Gwo: Illuminated Manuscripts

Once they have looked at an object as a group, give each student a piece of paper, a hard surface, and an eraser-less pencil, have them look at a manuscript of their choice and choose something to draw. Give them five minutes to sketch.



Pierpont Morgan Library. MS M.917. Pierpont Morgan Library. MS M.945. Singing Angels. The Netherlands, Utrecht, ca. 1440.

Contextual Information

The word manuscript comes from the Latin word “Manu” meaning “by hand” and “scribere” or “scriptus” meaning “written” Today, this derivation can be seen in other romance languages such as the word for “hand” in Spanish is “Mano.” The word “scriptus” is very similar to the English word “script” which is a form of handwriting. “Scribere” sounds very similar to “escribir” the word for writing in Spanish. A

manuscript is something handwritten (Howard, 2005, p.17).

Medieval scrolls and books would have been made by monks who specialized in a particular process. There would be specialists to prepare the parchment, a thin paper-like material made out of stretched and processed sheep skin and vellum, a kind of parchment made from the skin of a calf (Howard, 2005, p.4), assistants to grind and mix the pigments, and then various different people to write, ink, paint, and bind the finished books. There would also be a person dedicated to the illumination of the pages. Illumination means to light up. A room is illuminated with a light bulb, the sun illuminates the sky, and books can be illuminated with gold foil. Because of its chemical composition gold doesn't react with most other chemicals so it won't become dull and it doesn't oxidize, rust, or lose its color. Therefore, the gold laid on the pages in medieval times looks much the same today as it did 1,600 years ago.

Both cylinder seals and illuminated manuscripts are unique, handmade objects that tell stories using imagery. Even with all the advancement in written language, many Europeans were illiterate in the medieval era. Much like the ancient Mesopotamians the ability to read, and the possession of books was mostly reserved for wealthy merchants, royalty, and clerics. Even within these small groups literacy was limited. Often, the images would act as a guide, helping the reader understand what was happening in any given passage. Just as the Mesopotamians would depict fantastical scenes with gods, monsters, and utopian landscape, the Europeans of medieval times depicted scenes from the bible, knights fighting dragons, and even insert themselves as pious idealized patrons of the church.

Most books were used to tell the stories of the bible, although some exist with poetry, myths, history, and genealogy.

References for Further Reading

The History of Making Books

By Editions Gallimard Jeunesse

1995, Editions Gallimard Jeunesse: New York, NY

This interactive book for children lays out the history of book binding and printing. It gives examples from around the world.

What is an illuminated manuscript

By Khan Academy

<https://www.khanacademy.org/partner-content/getty-museum/getty-manuscripts/a/what-is-an-illuminated-manuscript>

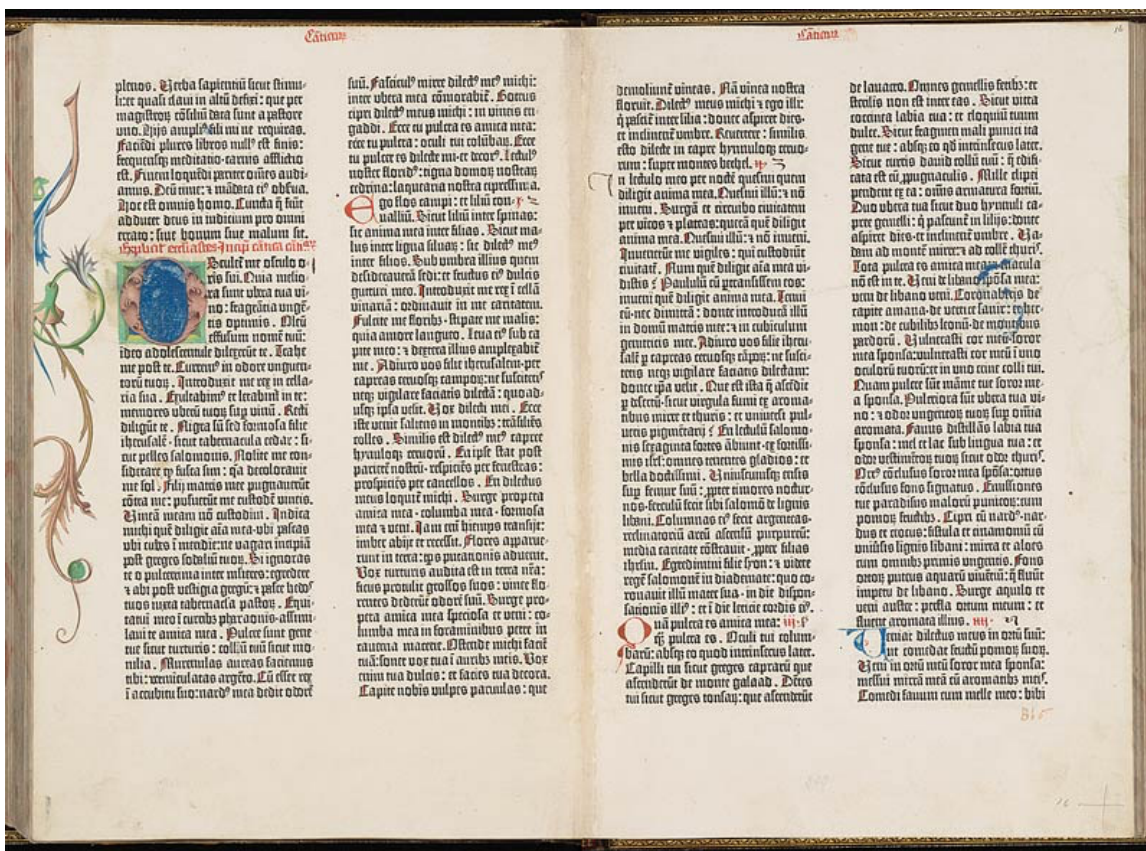
This article and subsequent quiz gives a very quick and easy to understand overview of an illuminated manuscript, the process of making one, the materiality, and the artistry.

Proust and the Squid: The Story of Science of the Reading Brain

By Maryanne Wolf

2008, Harper Perennial: New York, NY

A difficult read if you're unfamiliar with neuropsychology, but a fascinating look at the way the human brain allowed for the creation and adaptation of reading and writing. There is a section that discusses the ways that writing has developed over time and how we have changed educational practices to learn to read.



Biblia Latina, Mainz: Johann Gutenberg & Johann Fust, ca. 1455, PML 12, II, 15v–16r

Finally, move to an early example of a book printed with movable type, like the Gutenberg bible. Once again, ask the students what they notice is different from the manuscript. This might be more difficult, ask them why that might be.

Explain movable type and ask them how this might have changed how books were used or who they were used by.

Ask the students to reflect on their whole experience starting with the cylinder seals. What connections can they make to all three objects? Do they notice any trends in communication? How do they think society has been

Stop Type: Movable Type

shaped based on the technological evolutions related to communication? Thinking past early printing presses, what kinds of technology are used today for communication, how does that effect our relationship to each other and the sociocultural landscape we live in?



Biblia Latina, Mainz: Johann Gutenberg & Johann Fust, ca. 1455

Contextual Information

Johann Gutenberg is widely credited as having invented the printing press. However, books had been printed in China and Korea as early as the 5th century AD, although it is likely that Gutenberg didn't know about these techniques (Meltzer, 2004, p.33). Gutenberg used many new technologies of the time to create the printing press. He combined screw presses, developed an oil-based ink, and used jewelry techniques to make individual letterpresses, thus creating movable type.

This invention spread rapidly through Europe; William Caxton was the first person to print in English around 1476 (Meltzer, 2004, p. 42). No longer did monks need to hand copy scripture; something Martin Luther took advantage of to help

spread the Protestant Reformation in 1517, and copies could more easily be translated into a variety of languages (Meltzer, 2004, p. 45). Materials were cheaper, books could be made faster, and so distribution became more wide spread. Soon printing became a widespread trade, and a model for future mass manufacturing. Apprentices and Journeymen created “brotherhoods” (a predecessor to unions), and would go on strike to demand better living conditions, something apprentices had not often done before.

References for further Reading

The Book: The Life Story of a Technology

By Nicole Howard

2005, Greenwood Press: Westport, CT

Easy to read yet comprehensive, this book is full of information, and with some guidance could be interesting for students. Going from ancient Mesopotamia all the way to the present, this book then looks ahead at what may come next.

Great Inventions: The Printing Press

By Milton Meltzer

2004, Benchmark Books: Tarrytown, NY

Discusses the mechanics and history of printing in an easy to understand manner. Briefly discusses pre-printing, but mostly looks at early presses,

discusses the labor and technology involved, as well as looking at later types or presses and photography.

Gutenberg and the Genesis of Printing

By The Pierpont Morgan Library

1994, The Pierpont Morgan Library: New York, NY

A look at the changing climate of Europe in the early ages of printing as well as an in-depth discussion of the three versions of the Gutenberg Bible in the Morgan Library's collection.

Bibliography of Images

Page 8 – Illuminated letter C

France, Paris, 1679. *La vérité à la place des ombres*. Pierpont Morgan Library. MS M.21.

Page 9 – Illuminated letter D

France, Toulouse, ca. 1110. *Homiliae in Ezechielem*. Pierpont Morgan Library. MS G.6.

Page 10 – Illustration of a bird and flower

Italy, Rome, 1546. *Farnese Hours*. Pierpont Morgan Library. MS M.69.

Page 11 – Floral border design

Northern France, between 1460 and 1499. *Vie de Sainte Marguerite*. Pierpont Morgan Library. MS B.22.

Page 12 – Floral border design

France, perhaps Tours, ca. 1500. *Book of Hours*. Pierpont Morgan Library. MS M.12.

Page 13 – Ornamentation in Black

Italy, Naples, end of the 15th century. *Cuoco Napolitano*. Pierpont Morgan Library. MS B.19.

Page 14 – Floral border design

Netherlands, Utrecht, ca. 1500. *Book of Hours*. Pierpont Morgan Library. MS G.5.

Page 15 – Floral border design

Belgium, ca. 1470. *Book of Hours*. Pierpont Morgan Library. MS M.152.

Page 16 – Illustrated decorative pillar

Hungary, Budapest, 1481. *Breviary*. Pierpont Morgan Library. MS G.7.

Page 17 – Floral border design

France, probably Rouen, ca. 1470. *Book of hours*. Pierpont Morgan Library. MS M.32.

Page 18 – Illustrated archway with clergyman

Southern Italy, 10th or 11th century. *Fables*. Pierpont Morgan Library. MS M.397.

Page 19 – Illustration of a pink flower

Armenia, 1688. *Scholium and epistles*. Pierpont Morgan Library. MS M.625.

Page 22 – Blue cylinder seal with impression of God and servants

Mesopotamia, Akkadian period (ca. 2334–2154 B.C.). Cylinder seal and impression. Serpentine. Pierpont Morgan Library. Morgan Seal 245

Page 23 – White and orange cylinder seal with impression of fighting griffins

Mesopotamia, Middle Assyrian period (ca. twelfth/eleventh century B.C.). Cylinder seal. Chalcedony. Pierpont Morgan Library. Morgan Seal 608

Page 26 – Jeweled book cover

France, ca. 875. *Jeweled Cover of the Lindau Gospels*. Workshop of Charles the Bald, grandson of Charlemagne. Manuscript on vellum. Pierpont Morgan Library. MS M.1.

Page 27 – illuminated page with text and thee angel

The Netherlands, Utrecht. ca. 1440. *Singing Angels*. Pierpont Morgan Library. MS M.917. Pierpont Morgan Library. MS M.945.

Page 30 – illustrated page with printed lettering

Biblia Latina, Mainz: Johann Gutenberg & Johann Fust, ca. 1455, PML 12, II, 15v–16r

Rational

Museums around the world have set a precedent for creating teacher resources for museum field trips. These can take many forms from single lesson plans to more in-depth curriculum resources but they act as a tool for teachers hoping to take a class field trip or infuse their classrooms with a new perspective. However, a guide for a visual history of the written word does not exist in this form. I think placing this inquiry in a museum setting is vital to allow students to see first hand the tools used for writing to gain a better sense of materiality and time.

The Metropolitan Museum of Art has guides and resources on ancient Mesopotamia and ancient writing and non-manuscript medieval art. The Philadelphia Museum of Art has material on symbols and using art as a primary source. The Art Institute of Chicago has a guide on cylinder seals; The British Museum has resources on a variety of early texts. However, none of these combine elements to take a cross-cultural look at the history of written language and publishing technologies. Basing my study on the Morgan Library and Museum's collection I saw a thread that connected not just the evolution of technological advancement, but also society and culture as a whole. Ideas we now take for granted – property, money, education, and etcetera – became possible because of our capacity to invent writing and continued to find ways to make the written word, easier, cheaper, and more quotidian.

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To Whom It May Concern:

I grant permission to Sonya Ochshorn, to use the name of the Morgan Library & Museum and make reference to the institution and all collections in her Integrative Masters Project.

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