**String Instruments**

Page one:

String Instruments

As Silk Road merchants trade their wares, they also trade jokes, stories, songs, beliefs—all kinds of traditions. In these stringed instruments, you can see how one culture's idea changes as it travels. different regional forms.

Page two:

*Barbat*

The *barbat* is one of the most ancient instruments of Persia (modern Iran), dating back to at least 800 BC.

Page three:

Pipa

The pipa is the Chinese version of the barbat. The earliest examples of the pipa date to around 200 BC, when the Silk Road brings traders from Central Asia—and their music—into China.

Page four:

European Lute

The later Arab version of the barbat is called the *oud*. As Islam spreads across North Africa, so does “al-oud,” until it reaches Al-Andalus (modern Spain) and becomes the European “lute.”

Page five:

Yangqin

Other stringed instruments have cross-cultural connections. The Chinese yangqin, played by striking the strings with small hammers, is similar to the Persian santur, an instrument even older than the barbat.

**Shapes**

Page one:

Shapes

A simple glass pitcher from ancient Rome. What happens when artists in Persia or China take this shape and transform it? As trade goods move along the Silk Road, they bring along new ideas about design and materials.

Page two:

Persia

For this ceramic pitcher, an artist in Persia (modern Iran) adopts the shape of the original Roman pitcher, decorates it with colorful birds and adds an animal-headed spout, a common Persian design.

Page three:

Persia

This pitcher from Persia again reflects the original Roman shape but in a more precious material—silver. The female figures also carry objects associated with Dionysus, the Greek god of wine.
Sogdia
This silver pitcher made near Samarkand combines the Roman shape with the senmurv, a creature from Persian mythology. The senmurv appears inside a pearl roundel—a common Persian motif.

China
Chinese artisans invent porcelain and soon master the art form. Yet they also experiment with designs from other countries. This porcelain pitcher made in the 700s combines the Roman shape with the Persian animal-headed spout.

Glass
Difficult to make and transport, glass is as exotic in the east as silk is in the west. Glass from the eastern Mediterranean travels the Silk Road all the way to China.

Islamic Glass
Islamic craftsmen adopt Roman styles in their own fine glassware. This glass pitcher, made in western Asia around 1000, combines the Roman shape with a Persian design of gazelles and parrots.

Persian Glass
This style of bowl is first developed in the Persian Empire, home to many highly skilled and innovative glassmakers.

Imports to China
How precious was glass? Precious enough that this classic Persian glass bowl is buried with its owner in Guyuan, China, in 569, having been carried many miles from where it was made.

Paper
The Chinese invent paper around 50 BC. It's so superior to other writing materials such, as bamboo strips, silk or parchment, that they guard the secret of how to make it for centuries.

Sealed in a cave outside Dunhuang for hundreds of years, this copy of an ancient Buddhist holy text was printed in AD 868—making it the oldest known dated example of a paper book.
Page three:
Paper from Graves
In Turfan, families sometimes bury their dead wearing paper shoes and hats. Because paper is scarce, they reuse old documents—like this exam paper used to line a shoe. The large symbol at far right means “You Pass!”

Page four:
Spread of papermaking
Islamic armies defeat the Chinese at the battle of Talas in 751. In Samarkand, captured Chinese paper-makers are put to work by their conquerors. By 794 paper is being made in Baghdad. The secret is out!

Page five:
Spread of papermaking
This Koran from 971 is the oldest dated paper copy of the Islamic holy book. As Islam spreads to Europe, so does paper: Arabs set up the first paper mill in Al-Andalus (modern Spain) in 1150.

Ceramics
Page one:
Merchants everywhere along the Silk Road want to buy beautiful ceramics from China. The new styles and techniques that traders bring from the east are copied by artists and craftsmen in western Asia.

Page two:
Porcelain
By AD 700, Chinese craftsmen have perfected the art of making porcelain. The secret? A special clay called kaolin, available only in China. Without kaolin, Islamic artists create a white glaze to mimic the look.

Page three:
Sancai
Artists around Xi’an are also using a special sancai, or “three-color” glaze—another Chinese innovation. But Islamic artists soon copy the style and within a few hundred years, sancai designs can be found in Italy.

Page four:
Islamic Influences
Influence flows both ways along the Silk Road. The shape of this Islamic glass bottle is reflected in the shape of the Chinese porcelain vase.

Numbers
Page one:
Numbers
Influence flows both ways along the Silk Road. The shape of this Islamic glass bottle is reflected in the shape of the Chinese porcelain vase.

Page two:
Letters
For centuries, people in western Asia and Europe use letters of their alphabets to represent numbers. This makes bookkeeping and other calculations difficult and time-consuming.
Page three:
Pictograms
The Chinese have pictograms for 1 through 9, as well as for 10, 100, 1000 and so on. These symbols are easier to use than Roman numerals—but a crucial step is still missing.

Page four:
Indian Numerals
By the 800s, Indian mathematicians use a unique set of symbols to represent 1 through 9...as well as 0. Although it seems so simple, the number 0 is crucial for doing advanced mathematics.

Page five:
Zero
With zero as a placeholder, tens, hundreds, thousands and so on can be added in columns according to simple rules.

Page six:
Arabic numerals
Scholars working in Baghdad adopt numerals from the Indian system—including the 0. Through their writings, the system continues to spread, leading to the “arabic” numerals used in much of the world today.

Deserts
Page one:
Deserts
The deserts across Asia offer only harsh terrain with little to eat or drink. You’ll need to find the shortest path with the best access to oases.

Page two:
Gansu Corridor
Going west from Xi'an, you'll have the arid expanse of the Gobi on your right. With the Qilian Mountains on your left, a narrow valley called the Gansu Corridor is the only passage to Dunhuang.

Page three:
Taklimakan Desert
The Taklimakan is one of the largest sandy deserts in the world—it can take 40 days to cross. To survive, you’ll need to travel around the desert, stopping at oasis towns near the mountains.

Page four:
Karakum Desert
Not all deserts present such obstacles. The Karakum is large but less harsh than the Taklimakan. You'll cross it in a few days and arrive in the bustling oasis city of Merv.

Mountains
Page one:
Mountains
The Silk Road crosses many dangerous mountain ranges—including the Himalayas, with the highest peaks in the world. In the deserts, trade routes stick close to sources of water that come from melting snow and glaciers.
Page two:
Tianshan & Kunlun
The Tianshan and Kunlun Ranges are nearly impassable, as is the Taklimakan Desert between. But where they meet, water from the mountains creates fertile valleys and feeds oasis towns like Turfan and Dunhuang.

Page three:
Pamir Mountains
Crossing the Pamirs is notoriously dangerous. If the snow, wind and ice aren't treacherous enough, bandits might ambush you. After the difficult crossing, it's a relief to reach the beautiful Ferghana Valley below.

Page four:
Himalayas & Hindu Kush
The mountains to the south are massive. One route from Kashgar to India lies over the Himalayas, the world's highest peaks. To avoid the Pamirs, you might choose a longer road through the Hindu Kush.

Page five:
Zagros Mountains
The Zagros Mountains east of Baghdad are the last difficult mountains you'll face. These mountains are the largest in Persia, but are still much smaller than the big ranges farther east.

Oases
Page one:
Oases
An oasis is a place in the desert where there is water. In Central Asia, water often comes from melting snow and glaciers in nearby mountains. You'll depend on oasis towns to survive.

Page two:
Oasis to Oasis
When you leave one oasis, you must reach the next before your supplies run out. In the Taklimakan Desert, you'll have to travel about 10 days between towns, hoping you have enough water.

Page three:
Niya
In the small oasis town of Niya, residents grow grain and make wine. But they depend on caravans for many supplies—just as caravans depend on oasis towns for water and food.

Page four:
Merv
The fertile delta of the Morghab River creates an extensive oasis region in the Karakum Desert. The large town of Merv is here—a thriving trading center with lengthy caravans passing through.
**Steppes**

Page one:

Steppes
The vast grasslands that stretch across Asia are called steppes. Much of your route goes across the steppes—and with food and water easier to find, travel here isn’t as difficult as in deserts or mountains.

Page two:

Wei and Huang Valleys
Going west from Xi’an, you have an easy start, spending 10 days or so on the steppes until you reach Dunhuang—the end of the grasslands and the beginning of the desert.

Page three:

Ferghana Valley
The fertile Ferghana Valley greets you upon leaving the Pamir Mountains. The route is flat again, with many streams and rivers flowing down from the mountains.

Page four:

On to Baghdad
The most difficult terrain is behind you. Mostly steppe lands—the southwestern edge of the Great Asian Steppe—lie between you and Baghdad. The Karakum Desert and Zagros Mountains will not be nearly so hard.

**Travelers**

Page one:

Travelers
Many thousands of merchants, diplomats and adventurers traveled the Silk Road over the centuries, but there are only a few whose names and stories have become part of history.

Page two:

Zhang Qian
Zhang Qian (died 114 BC) was an early Chinese explorer whose treks in Central Asia helped open trade between China and the rest of the continent along what would eventually become the routes of the Silk Road.

Page three:

Xuanzang
In the 600s, the Buddhist monk Xuanzang made a pilgrimage from China to India through Turfan and Samarkand, returning through Kashgar and Dunhuang. His trek inspired the Chinese novel from the 1500s, Journey to the West.

Page four:

Ahmad ibn Fadlan
In 921, rulers in Baghdad sent Ahmad ibn Fadlan as an ambassador to the Bulgars, who lived in Central Asia and had recently converted to Islam. He wrote a vivid account of their customs.

Page five:

Parco Polo
Marco Polo, an Italian merchant, left Venice in 1271 on a mission to carry letters from the Pope to the Mongol ruler Kublai Khan. The account of his journeys inspired explorers for centuries to come.
Places of Interest
Page one:
Places of interest
Most Silk Road traders never travel the entire route. How many wondrous sights would you see if you did? Here is a small selection of some of the amazing landmarks along the way.

Page two:
Grand Mosque of Xi’an
The Grand Mosque in Xi’an is built in 742 to support the city’s growing Muslim population. One of the first and largest mosques in China, it’s rebuilt in 1392 with both Arabic and Chinese designs.

Page three:
Jade Gate
A major trade route goes under the Jade Gate—a passageway through the Great Wall, located along the northern border of China. Exiting the gate means leaving China and entering the kingdoms of Central Asia.

Page four:
Astana Graves
More than 1,000 underground tombs are located in Gaochang, not too far from Turfan. Loved ones are buried with beautiful silks, painted figurines and clothing made out of a special material: paper.

Page five:
Registan
When you arrive in Samarkand, you’ll go to the Registan, the city’s central square, to make deals in the shade of the madrasa, or school, built in 1417 by the scholarly ruler Ulugh Beg.

Page six:
Abbasid Palace
This majestic building known as the Abbasid Palace stands near the banks of the Tigris river in Baghdad. It was built as a school for Islamic studies under the caliph Al-Mustansir (1175–1230).

Religions
Page one:
Religions
The Silk Road crosses lands where many religions are practiced. In time, the Silk Road itself helps the spread of Buddhism and Islam. These two beliefs leave a greater imprint on Asia than any others.

Page two:
Zoroastrianism
Zoroastrianism is the state religion of the Persian Empire until its conquest by Islamic armies in 644. This Sogdian text contains a translation of the Zoroastrian prayer Ashem Vohu, which is recited several times daily.

Page three:
Manichaeism
Followers of Manichaeism adhere to the teachings of Mani, shown seated at left, a Persian religious leader born in the 200s. Sogdian traders help spread the religion across Central Asia and into China.
Eastern Christianity
A small number of Christians live across Asia—indeed, a branch of Christianity known as Nestorianism reaches Xi’an in 635. This monument from 781 tells the history of the Christian faith in China.

Buddhism
Siddhartha Gautama—the historical Buddha—is born around 450 BC and his teachings spread across India. By the AD 600s, Buddhism is flourishing in China—and across Asia. Dunhuang and Xi’an are important religious centers.

Islam
Islam began in the 600s and spread across Asia along the Silk Road. In 742, the Muslim community of Xi’an establishes this mosque. By this time, Islam is one of the dominant religions of Asia.

Languages
How many languages are spoken along the Silk Road? One scholar from Dunhuang could supposedly read 36. The total is many more, but a few are especially important.

Chinese
Chinese is the dominant language at the eastern end of the trade routes and its influence extends far to the west. In Kashgar and Khotan contracts and correspondence are often written in Chinese.

Sogdian
Sogdian merchants settle all along the Silk Road, with especially large communities in Turfan and Xi’an. They do business in their native language, which is related to Persian but written in its own distinctive script.

Uyghur
Uyghur is spoken around the Taklimakan Desert and in the steppes to the north. It is the daily language of many people who interact with travelers from China, India and the Islamic world.

Indian languages
India exerts considerable influence in Central Asia. Scholars everywhere translate Buddhist scripture from Sanskrit. Gāndhārī, a northern Indian language, is used for official documents in the oasis kingdoms along the southern edge of the Taklimakan.

Arabic
Arabic spreads along with Islam. While Persian and Central Asian languages still thrive alongside it, officials, scholars and writers of every background eventually use Arabic as an international language.
Populations
Page one:
Populations
When a city prospers, its population grows. It might shrink as a result of war or disease, or when trade moves elsewhere. Touch again to see the populations of five major cities from AD 500-1500.

Page two:
Peak Populations
Xi'an c.700 1,000,000
Turfan c.1500 40,000
Samarkand c.1450 150,000
Baghdad c.930 1,100,000
Constantinople c.700 800,000

Political Realms
Page one:
Political Realms
The Silk Road belongs to no one country or empire. In the year 500, the Chinese and Persians control most of the route. Over the next 1,000 years many empires will rise and fall.

Page two:
500-700
618: Rise of the Tang Empire
650: Islamic armies conquer the Persian Empire

Page three:
700-1000
750: Rise of the Abbasid Empire
907: End of the Tang Empire
960: Rise of the Song Empire

Page four:
1000-1300
1000s: Beginnings of Ottoman Empire in Persia and Asia Minor
1200s: Mongols conquer most of Asia

Page five:
1300-1500
1368: Rise of the Ming Empire
1453: Ottoman Turks conquer the Byzantine Empire

Patterns
Page one:
Pearl Roundel
As traders move merchandise along the Silk Road they also carry artistic ideas. The Persian pearl roundel—images, often animals, surrounded by a ring of dots—is found as a decorative pattern all along the route.
Page two:
Persia
The rooster inside the roundel of this vase from the 600s is an ancient Persian symbol of royalty. Since the rooster awakens men to pray it also becomes a symbol of piety to Muslims.

Page three:
Sogdia
This colorful silk coat made for a Sogdian child is beautiful but not royal. The animals in the roundel are ones very commonly seen in Sogdian art—pairs of ducks.

Page four:
Turfan
Two birds in a roundel appear on the silk blouse of this figurine made further east along the Silk Road. Her clothes show how a fashionable woman dresses in Turfan in the 600s.

Page five:
Dunhuang
More pearl roundels can be seen on the pillow under this Buddha from the caves near Dunhuang. Inside each roundel is a pair of ducks—the influence of Sogdian weavers living and working in Dunhuang.

Page six:
China
This porcelain pitcher decorated with pearl roundels comes from China—but shows the influence of many cultures. The figure inside is a Hindu god from India, and the bird-headed spout is a Persian motif.

**Aromatics**

Page one:
Aromatics
People use the aromatics you’ve seen for sale in the Turfan market for many purposes: as medicines, in religious ceremonies and much more. Many are imported from remote and sometimes mysterious regions.

Page two:
Frankincense & Myrrh
Incense made from frankincense and myrrh is widely used in Christian, Jewish and Buddhist rituals. The resins used to produce them have come from the Arabian Peninsula for thousands of years.

Page three:
Sandalwood
Sandalwood is an important material in Buddhism—its fragrance is believed to suggest divinity. One sacred relic, a statue known as “The Sandalwood Buddha,” traveled across Asia as the religion spread.

Page four:
Aloeswood
In China, incense is often made from aloeswood, a substance believed to have healing properties. Imported mostly from the kingdom of Champa, in what’s now Vietnam, aloeswood has the reputation in Europe of coming from Paradise.
Gems and Minerals

Traveling the Silk Road is difficult and dangerous—heavy cargo only makes the journey more demanding. Light but valuable items like gems and minerals are easier to transport and yield large profits.

Page two:

Lapis Lazuli
This beautiful blue stone is popular in Chinese jewelry and in Tibet is valued more highly than gold. Most lapis comes from the Kokcha River Valley and is sold at the market in Khotan.

Page three:

Amber
When the resin inside a tree hardens and becomes a fossil, the result is amber, which has long been carved into jewelry. The largest deposits are in what’s now Myanmar and along the Baltic Sea.

Page four:

Carnelian
Carnelian is imported into China from western Asia and is used mostly for small items like cups and jars. But a Persian embassy once presented a couch made of carnelian to the Chinese emperor.

Dyes

Many clothes, rugs and other textiles found along the Silk Road are colored with natural dyes made from plants and animals. Some of these colors have special meaning, indicating wealth and power or religious devotion.

Page two:

Indigo
First produced in India, indigo is one of oldest dyes in use. Some ancient Chinese silks are dyed with indigo imported from Samarkand. Today, synthetic indigo is seen everywhere, from blue ink to blue jeans.

Page three:

Murex
Roman emperors—and only emperors—wore silk from China colored purple with a dye made from the shell of this Mediterranean mollusc. Incredibly valuable, murex dye was worth more than its weight in gold.

Page four:

Saffron
Saffron—painstakingly gathered from the saffron crocus—has always been extraordinarily expensive and often, like Roman purple, reserved for nobility. Its golden yellow is the official color of Buddhist robes.
Textiles

You'll see much more than silk traded on the Silk Road. Textiles of all kinds are easy to transport, so you can carry them long distances and trade them for other goods.

Silk

There are buyers for Chinese silk everywhere you visit. This remarkable fabric is not only used for clothing—people also use it for bowstrings and to write on. Officials are even paid in bolts of silk!

Cotton

Cotton has been grown in India for thousands of years and reached China by the 400s. Since the 700s, farmers in the Turfan region have been growing it to meet Chinese demand.

Wool

Wool fabrics, especially carpets, are exported from the Persian Empire out of cities like Bukhara. As a trader in the 700s, you might carry Persian rugs to China where they are much in fashion.

Images of Buddha

Images of Buddha in this style first appear in northern India, near where Buddhism originates.

Seated Buddhas

The tradition of showing Buddha seated in meditation also begins in India and spreads east. In this statue from Turfan, the pedestal is decorated with pearl roundels—originally a Persian design associated with royalty.

Gestures

Hand gestures have special meanings in Buddhism, standing for concepts like meditation, wisdom or dispelling fear. This Chinese sculpture displays the symbol for teaching and identifies this Buddha as Vairocana, the embodiment of spiritual wisdom or insight.

Bamian Buddhas

Some statues of Buddha are monumental—this one in Bamian was taller than a 10-story building and was carved out of the surrounding cliff. This statue and another nearby were sadly destroyed by the Taliban in 2001.

The Magao Caves

The Magao Caves near Dunhuang house more than 2,400 Buddha statues in 492 caves decorated with even more paintings of religious deities.