Summer Institute 2024: Cross-Cultural Perspectives Along the Silk Road
Partnership with the British Library

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Title of Unit/Lesson

Paper on the Silk Road: How a Propitious New Technology Accelerated Cross-Cultural Connections & Information Accessibility

Organizing/Essential/Guiding Questions

Students will understand reoccurring themes on the Silk trading routes and essential key factors that influenced success and the spread of paper as a new technology.
These themes are:

- The cross-cultural exchange & transference of knowledge
- The need for human connections & resources
- Being resourceful in times of need or scarcity
- Accessibility

Introduction/Overview

Paper was one of the most important technologies traded on the Silk trading routes. It allowed information to become widespread and readily available to larger populations and cultures. This technology improved the way we documented ideas, religious documents, stories, record keeping, communication and more. Papermaking methods and recycling techniques were also exchanged and highly valued. Resources and materials provided in one area might have been scarce or expensive in another, because of this, it required humans to become innovative and resourceful. In this activity, students will have the opportunity to use their problem solving skills with limited papermaking supplies and explore the possibilities of what will make paper.

This lesson is divided into two parts. Part I will require students to work together, think strategically and critically on how to resolve an issue when there are limited supplies. The purpose of this part is so students can understand the type of conversations and problem solving individuals who partook in the exchange of paper on the Silk routes had.

Part II of this activity is the hands on paper making lesson where students will have the opportunity to make a sheet of paper from recycled pulp.

Content Standards

CA HSS Content Standards: 6.5.5, 6.6.7, 7.3.1, 7.5.6
CA HSS Analysis Skills (6–8): Research, Evidence and Point of View 5
CA CCSS for ELA/Literacy: SL.6.1, L.6.5, L.6.6, RH.6-8.1, RH.6–8.2, WHST.6–8.9
CA ELD Standards: ELD.PI.6.1, 3, 6a, 6b, 10b, 11a; ELD.PII.6.1, 6

Objectives

Students will gain understanding in these areas:

- Problem solving
- Resourcefulness
- Highlight communication
- Cross-cultural exchange and relationships
- Research skills

Materials/Resources

- Items that can be recycled made up of different materials, such as:
    - Cardboard
    - Scrap paper
- Items that might need a little experimentation to recycle:
    - Tea bags
    - Cotton socks, cotton scraps
    - Milk carton (some contain aluminum lining or plastic)
- Other materials that you may or may not be able to recycle (this is essential in order for students to distinguish what can and cannot be recycled during the research process)
- Papermaking sieve
- Pantyhose
- Picture frame with a thin border
- Cheesecloth
- Binder clips

Special Equipment

- Papermaking kits - sieves (various sizes, select whichever and how many might best suit your classroom)
- bowls/containers for pulp
- Hand size towels and regular towels
- Bins at least 5 inches deep and wide enough for papermaking sieves
- Blender
- Drying rack

Teacher Preparation

For best results, soak paper scraps or cardboard overnight in warm water, then blend to create pulp. You can also soak scraps of paper for an hour or two before Part I of the activity. Store pulp in a container and have this ready to use for Part II of the activity.

Time/Timeline

Complete activity: one class period, about an hour.
25-30 minutes for Part I, 20-25 minutes for Part II and 5-10 minutes for clean up.

Procedures

Part I

1. Once students are seated, invite students to participate in a quick meditation to metaphorically transport them to 11th century Dunhuang. Students will take on the role of civilians who were given the opportunity of a lifetime. A wealthy scribe who works directly for the Emperor is offering a great amount of gold to anyone who can come up with a tool or resource that will help spread his wisdom and ideas.
2. Students will have the opportunity to vote whether they would like to work independently or in groups. If the class size is over 20, students will all be placed in selected groups, if class size is smaller students can work independently or pick their own groups.
3. Once the groups have gotten together, the students will have the following materials displayed before them:
    - A milk carton
    - A clump of tea bags
    - Cardboard
    - Scraps of paper
4. Have groups discuss among themselves what they would do with each item if they were to create something from them that adheres to the wealthy scribe's demands. Have students share what kind of tool/resource they would create. If a group does not share that they would make paper, reintroduce how paper was a propitious new technology in the 11th century that helped spread religion and other ideas throughout the Silk routes.
5. Select groups at random to each take one item from this selection until there aren't any items left. There will be groups that are unhappy with their selections. Have these students share how they feel and to think about what they can make with the items they were able to acquire.
6. Place the next items before them:
    - Papermaking sieve
    - Pantyhose
    - 2 Picture frames with a thin border
    - Cheesecloth
    - 2 piles of binder clips
7. Have groups select one item at a time until all items have been claimed.
8. Now that all groups have materials one can use to make paper, have each group discuss among themselves and document what they would do with each item and how they would achieve making a sheet of paper.
9. If there is time, have students share their procedure with the class. If you are limited in time, move on to the next step that will lead into Part II.
10. Have students revisit their reactions and the way they felt after they selected their items. Many of them might have felt disappointed or frustrated that they did not end up with items that were their first choice. Have two or three students share their responses aloud.
11. Remind students that paper was an essential resource and was highly valued. Since there were many periods where materials were limited or scarce, individuals had to recycle and come up with innovative ways to create this tool.

Part II

1. Have students work in groups to for best results, if limited in supplies, demonstrate how to make paper and have each student attempt to make one sheet of paper.
2. Spread a handful of pulp in a bin full of water. Stir well, these pieces should be loose and spread throughout the water.
3. Submerge paper making sieve underwater and slowly raise the sieve once pulp has settled on top and have created a thin but bountiful sheet. Make sure the sieve is fully covered.
4. Place the sieve on top of the larger towel and remove excess water with the hand towel. Place a dry towel flat, on top of the sheet and flip the screen.
5. Gently remove the sheet from the sieve, beginning at the corners and lie flat on a towel or dry surface to dry.

You can also show this video to students and have them follow along: Quick Paper making Tutorial

Use any remaining pulp with water on any plants or soil.

Assessment

Educators will assess the success by asking for direct feedback on the activity or a written survey on how they plan to apply what they learned in the future.