

# **Acrobats, Abacus, and Alphabets: Making Connections to China through Arts Integration in the Elementary Setting**

Curriculum Project

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## **Outline:**

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**Student Level:** Kindergarten-5<sup>th</sup> Grade (Elementary)

**Overview:** The purpose of this project is to integrate the teaching of visual art with other classroom contents (Science, Math, Reading, Writing, History, and Character Education) in the study of China. This curriculum project consists of three arts integration lesson plans spanning six grades.

The first lesson plan, *Global Citizenship: Air-Color-Dance-Think*, incorporates environmental concerns with the creation of an art installation and developing a performance art activity. This will manifest through the research of current air quality levels in China and at home, a collaborative art installation project incorporating the symbolic colors represented in the air quality index chart, a movement activity connecting air quality levels to emotions and quality of life and a follow up activity inspiring students to problem solve ways to address this growing global concern. The teacher will emphasize China's rich history of performance (acrobats, opera, Chinese New Year parades, etc.) as inspiration for the movement activity. This lesson is suggested for grades Kindergarten and 1<sup>st</sup> grade (Science & Social Studies collaboration)

The second lesson plan, *Abacus Art: A Story of Art, Math, and Trade along the Silk Road*, allows students to draw relevant connections between visual art, mathematics, and the history of China. During this lesson, students will investigate the history of the abacus and look for it in famous Chinese paintings (such as *Along the River During the Qingming Festival*). Students will then create a small abacus to use in their own personal math practices. This lesson is suggested for grades 2<sup>nd</sup> – 3<sup>rd</sup> (Math collaboration)

The third, and final, lesson, *Visual Correspondence: Calligraphy as Art and Writing*, focuses on the ancient Chinese art form of calligraphy. During this lesson, students will study and interpret visual representations of various languages; or mainly Chinese and English. Students will examine the evolution of the Chinese character from the pictograph to the present styles; as well as the influence of calligraphy and linguistics in the works of contemporary artists (such as Xu Bing). Students will incorporate knowledge learned into an art and pen-pal writing activity. This lesson is suggested for grades 4<sup>th</sup> – 5<sup>th</sup> (Grammar & Writing collaboration).



AIR QUALITY INDEX CHART

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
<i>When the AQI is in this range:</i>	<i>...air quality conditions are:</i>	<i>...as symbolized by this color:</i>
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

**Lesson Title:** *Global Citizenship: Air-Color-Dance-Think*      **Grade Level:** K - 1

**Student Outcomes:**

- Students will research air quality conditions in their local area and within China
- Students will learn about and discuss contributing factors of low or high numbers on the air quality index
- Students will collaborate to create an art installation and performance connecting air quality levels with the corresponding color on the air quality index chart

**Essential Questions/Depth of Knowledge (DOK):**

- To what extent do our actions as a species affect our environment?
- What is the nature of relationships among people, their environment, and art in various cultures?

**Curriculum Standards:**

National Visual Arts Standards:

- **(K-4)** Content Standard 2: “Using knowledge of structures and functions”
  - Achievement Standard: Students...
    - ...know the differences among visual characteristics and purposes of art in order to convey ideas
    - ...describe how different expressive features and organizational principles cause different responses
    - use visual structures and functions of art to communicate ideas

National Science Education Standards:

- **(K-4):** Content Standard A: “As a result of activities in grades K-4...”
  - ...all students should develop abilities necessary to do scientific inquiry and understanding about scientific inquiry

### **Materials:**

- Fabric/ribbons (maroon, purple, red, orange, yellow, green), curtain rod for hanging, scissors, sewing materials/stapler/tape/fabric glue (\*pick how you'd like to add fabric to hanging rod)

### **Teaching Sequence:**

1. Teacher will introduce current environmental concerns and assist students while they research the air quality levels at home and in various cities in China.
2. Teacher will show students a visual image of the air quality chart and assign a color for each table/group.
3. Students will use scissors to cut fabric or ribbons in their assigned color.
4. Teacher will collect ribbons for each group and help students hang them on rod.
5. Students will use sharpie to write the date of the air quality level on the corresponding fabric.
6. Teacher will pass out ribbon wands (a stick with long ribbon tied to end OR you can purchase some like these: <http://www.enasco.com/product/SN01899C>).
7. Students will discuss in small groups how each color and corresponding air quality index would make one feel.
8. Teacher will demonstrate how to use movement to express an emotion.
9. Students will take turns using ribbon wands to demonstrate their feelings if they were affected by a specific air quality level (i.e. maroon/hazardous might manifest as a sluggish movement while green/good might be more energetic).
10. Teacher will lead a discussion on how we can all act as global citizens to take responsibility for taking care of our planet.
11. Students will brainstorm ways to make positive changes in their future actions and use these ideas to create artist statements.
12. Art will be displayed around school with informative artist statements, photos of cities in China as well as our local area, and a visual representing the air quality index.

### **Accommodations/Modifications:**

- **ELL student accommodations**
  - Students who are English Language Learners will be provided with a diagram in their native language that shows English and native language terms for parts of the air quality index chart.
- **Special/Ex. Ed. Student needs**
  - Teacher will provide Ex. Ed. Students who need modifications with a partner to help them manage safe use of scissors and other materials
- **Differentiation for various levels of experience**
  - Teacher will read aloud the words on air quality index chart to help those students with lower reading abilities.
  - Students with behavioral problems will be seated away from one another in an effort to cut down on learning interruption.
- **Multiple learning styles (4MAT)**
  - Type 1 (Wants to know WHY)

- Will be provided with extra time during lesson to reflect on essential questions and personal connections to symbolic imagery/motivation of art assignment (through a sketchbook entry).
- Type 2 (Wants to know WHAT)
  - Will be allowed to check out iPads for further research on the environmental concerns in China and around the world.
- Type 3 (Wants to know HOW)
  - Will be allowed to experiment with other art media to draw/color the air quality index chart before moving on to creating final collaborative art production assignment.
- Type 4 (Wants to find out WHAT IF)
  - Will be given opportunity to lead group discussion about “global citizenship.”

**Assignments & Activities:**

- Research air quality levels at home and in China
- Collaborative art production of a large scale hanging fabric installation (connecting colors to air quality index chart)
- Movement activity connecting colors and meanings on air quality index chart

**Technology:**

- Promethean Board Flip Chart to introduce lesson
- Air quality index website (<http://airnow.gov/index.cfm?action=aqibasics.aqi>) & (<http://aqicn.org/city/beijing/>)
- iPads available for checkout from library to use as research tool

**Assessments/Evaluations:**

- Informal assessment done by teacher (visually while walking around room and during class discussions) answering the following questions about each student:
  - Did the student create an original artwork?
  - Can the student demonstrate knowledge of vocabulary through active participation in class discussions?
- Formal assessment
  - Artist Statement (teacher will conference one-on-one with students to help them create a statement about what meaning they gained from the lesson and performance activity and what connections they can draw between how visual art helps us communicate scientific scenarios).



**Lesson Title:** *Abacus Art: A Story of Art, Math, and Trade along the Silk Road*

**Grade Level:** 2-3

**Student Outcomes:**

- Students will learn about the history of the abacus in various cultures and study how the Silk Road contributed to its arrival and use in China
- Students will look for the abacus or “suanpan” in the famous painting *Along the River During the Qingming Festival*
- Students will create an original abacus to be used for math purposes

**Essential Questions/Depth of Knowledge (DOK):**

- How do universal themes that cross over the various academic disciplines affect our interactions with one another?
- What is the nature of relationships among people, art, and math in their daily lives?

**Curriculum Standards:**

National Visual Arts Standards:

- **(K-4)** Content Standard 4: “Understanding the visual arts in relation to history and cultures”
  - Achievement Standard: Students...
    - ...know that the visual arts have both a history and specific relationships to various cultures
    - ...identify specific works of art as belonging to particular cultures, times, and places
    - ...demonstrate how history, culture, and the visual arts can influence each other in making and studying works of art

Common Core Math Standards:

- (2): Understand place value. CCSS.MATH.CONTENT.2.NBT.A.1  
Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones
- (3) Use place value understanding and properties of operations to perform multi-digit arithmetic. CCSS.MATH.CONTENT.3.NBT.A.1  
Use place value understanding to round whole numbers to the nearest 10 or 100.

**Materials:**

- Popsicle sticks, beads, thin dowels or skewers (thin enough for beads to go on and move freely), glue

**Teaching Sequence:**

1. Teacher will introduce lesson by showing an actual abacus (or one on screen if you don't have access to one, I bought one online fairly inexpensively).
2. Teacher will show students a visual image of painting *Along the River during the Qingming Festival* and ask students to look for an abacus in it (show close up as painting is big).
3. Teacher will guide class discussion about how the people in painting (in apothecary shop) might have made use of an abacus and how we might use one today.
4. Teacher will pass out materials and demonstrate how to create popsicle stick abacus interactive sculpture.
5. Students will add bead to dowels.
6. Students will line up beaded dowels and glue to Popsicle stick frame.
7. After the abacus sculptures dry (next class period), teacher will demonstrate how to count, add, subtract and count place value with abacus.

**Accommodations/Modifications:**

- **ELL student accommodations**
  - Students who are English Language Learners will be provided with a diagram in their native language that shows English and native language terms for art materials, abacus parts, and math terms.
- **Special/Ex. Ed. Student needs**

- Teacher will provide Ex. Ed. Students who need modifications with a partner to help them manage safe use of materials and to help guide them through the sequence of the art production activity.
- **Differentiation for various levels of experience**
  - Students with behavioral problems will be seated away from one another in an effort to cut down on learning interruption.
- **Multiple learning styles (4MAT)**
  - Type 1 (Wants to know WHY)
    - Will be provided with extra time during lesson to reflect on essential questions and personal connections to symbolic imagery/motivation of art assignment (through a sketchbook entry).
  - Type 2 (Wants to know WHAT)
    - Will be allowed to check out iPads for further research on the history of the abacus and the Silk Road.
  - Type 3 (Wants to know HOW)
    - Will be allowed to experiment with digital abacus online activity before creating art production assignment.
  - Type 4 (Wants to find out WHAT IF)
    - Will be given opportunity to discover ways to use abacus to solve other math problems (not just ones demonstrated in class).

**Assignments & Activities:**

- Class discussion about the abacus, Silk Road, and painting *Along the River During the Qingming Festival* (discuss how the abacus was used as a tool to calculate goods exchanged along the Silk Road trading route and how you can also see the abacus being used by vendors in a pharmacy as a mathematical tool. Help students draw relevant connections between art, math, and history).
- Art production of an original abacus
- Math practice using completed abacus

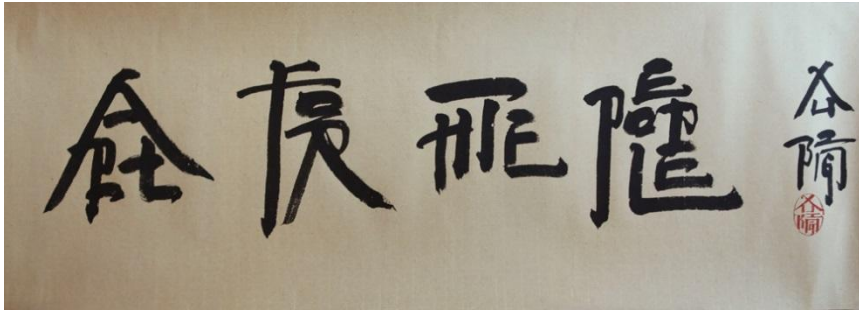
**Technology:**

- Promethean Board Flip Chart to introduce lesson
- IPADs available for checkout from library to use as research tool

**Assessments/Evaluations:**

- Informal assessment done by teacher (visually while walking around room and during class discussions) answering the following questions about each student:
  - Did the student create an original artwork?
  - Can the student demonstrate knowledge of vocabulary through active participation in class discussions?
- Formal assessment
  - Artist statement explaining symbols behind colors chosen for beads
  - Mathematics worksheet (completed with aid of abacus and graded )





**Lesson Title:** *Visual Correspondence: Calligraphy as Art and Writing*

**Grade Level:** 4-5

**Student Outcomes:**

- Students will investigate various alphabets (English, Chinese and other pictograph styles such as Ancient Egyptian)
- Students will learn about and discuss how artists use text in their artwork
- Students will collaborate to create an artwork employing Chinese characters and calligraphy techniques

**Essential Questions/Depth of Knowledge (DOK):**

- Why were written languages created long ago?
- What are the purposes of including text in a visual form such as a painting or drawing? Does it enhance or take away from the artwork? Why or why not?

**Curriculum Standards:**

National Visual Arts Standards:

- **(K-4)** Content Standard 3: “Choosing and evaluating a range of subject matter, symbols, and ideas”
  - Achievement Standard: Students...
    - ... explore and understand prospective content for works of art
    - ... select and use subject matter, symbols, and ideas to communicate meaning
- **(5-8)** Content Standard 2: “Using knowledge of structures and functions”
  - Achievement Standard: Students...
    - ... generalize about the effects of visual structures and functions and reflect upon these effects in their own work

- ...employ organizational structures and analyze what makes them effective or not effective in the communication of ideas
- ...select and use the qualities of structures and functions of art to improve communication of their ideas

Common Core ELA Standards:

- **(4): Research to Build and Present Knowledge.** CCSS.ELA-LITERACY.W.4.9  
Draw evidence from literary or informational texts to support analysis, reflection, and research.
- **(5) Text Types and Purposes** CCSS.ELA-LITERACY.W.5.2  
Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

**Materials:**

- Paper, bamboo calligraphy brushes, Chinese calligraphy ink, visuals

**Teaching Sequence:**

1. Teacher will introduce visual examples of the Chinese language from past to present
2. Teacher will show visuals of Chinese text in art and other language/text in artwork from other cultures (including work from Xu Bing and other Chinese artists)
3. Students will practice calligraphy techniques in sketchbook first.
4. Students will practice calligraphy techniques on reusable gridded “Magic Calligraphy Practice Scroll” (can be found here <http://www.amazon.com/Reusable-Calligraphy-Practice-Character-Alignments/dp/B0063UABC8>)
5. Students will design composition of art scroll and will include at least 3 Chinese characters-written language symbols (traditional examples for scroll include, but are not limited to, mountain scenes, seasonal landscapes, bamboo, cherry blossoms, and Chinese zodiac animals).
6. Students will sketch out design on pre-cut watercolor scroll paper (cut in long rectangle to mimic scroll)
7. Students will paint in design with watercolor paints
8. Student will add Chinese characters with bamboo brush and India Ink

**Accommodations/Modifications:**

- **ELL student accommodations**
  - Students who are English Language Learners will be provided with a diagram in their native language that shows English and native language terms for art materials, Chinese characters, artists themes available for scroll painting, etc.
- **Special/Ex. Ed. Student needs**
  - Teacher will provide Ex. Ed. Students who need modifications with a partner to help them manage safe use of materials and to help guide them through the sequence of the art production activity.
- **Differentiation for various levels of experience**
  - Students with behavioral problems will be seated away from one another in an effort to cut down on learning interruption.
- **Multiple learning styles (4MAT)**

- Type 1 (Wants to know WHY)
  - Will be provided with extra time during lesson to reflect on essential questions and personal connections to of the subject matter they choose for their scroll (through a sketchbook entry).
- Type 2 (Wants to know WHAT)
  - Will be allowed to check out iPads for further research on the history of scrolls in China and within other cultures.
- Type 3 (Wants to know HOW)
  - Will be allowed to experiment with “Magic Calligraphy Practice Scroll” for a longer period of class time.
- Type 4 (Wants to find out WHAT IF)
  - Will be given opportunity to discover ways to use a water bottle with hole in lid to draw temporary/ephemeral Chinese characters on the sidewalk outside.

### **Assignments & Activities:**

- Class discussion about the history of the Chinese language from the pictograph to current characters
- Art production of an original scroll using calligraphy techniques

### **Technology:**

- Promethean Board Flip Chart to introduce lesson
- iPads available for checkout from library to use as research tool

### **Assessments/Evaluations:**

- Informal assessment done by teacher (visually while walking around room and during class discussions) answering the following questions about each student:
  - Did the student create an original artwork?
  - Can the student demonstrate knowledge of vocabulary through active participation in class discussions?
- Formal assessment
  - Pair-Share Critique (Students swap art and use guiding questions to share their art and give constructive feedback)

## **Other Resources**

### **Optional Follow-Up Activities**

- General classroom teacher can supplement Air Quality research by having students look up air quality date in China and at home and create mathematic graphic chart to display results
- Consider having students perform their “Air-Color-Dance-Think” ribbon performance during a PTA event or other school-wide gathering
- Give completed abacus creations to classroom teachers and have them use them during their math instruction

- Have school-wide Silk Road interactive demonstration (students can bring in items to trade and classrooms can be decorated to represent different stops on the trade route).
- Invite a Chinese citizen or cultural society member into your classroom to share their story
- After students have practiced writing Chinese characters, allow them to write letters to students in a Chinese school (establish connection with a teacher at a Chinese school first) and the Chinese students can practice their English in their response letters

### Additional Resources

Visual Sourcebook of Chinese Civilization:

- <https://depts.washington.edu/chinaciv/>

Air Quality Web Links:

- <http://airnow.gov/index.cfm?action=aqibasics.aqi>
- <http://aqicn.org/city/beijing/>

Calligraphy Web Links:

- <http://www.mandarintools.com/chinesename.html>
- [http://www.ancientchina.co.uk/writing/challenge/cha\\_set.html](http://www.ancientchina.co.uk/writing/challenge/cha_set.html)
- <http://goodcharacters.com/alphabet/images/080908-midautumn.pdf>

Abacus Web Links:

- <http://www.wikihow.com/Image:Use-an-Abacus-Step-1-Version-3.jpg>
- <http://rightstartmath.com/resources/interactive-al-abacus>

Free Online Power Points about China

- <http://countries.pppst.com/china.html>
- <http://ancienthistory.pppst.com/china.html>
- <http://china.mrdonn.org/calligraphy.html>

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### **Images in order of appearance:**

“Chinese Acrobat Children Image,” <http://www.bigfootevents.co.uk/entertainment/Themed-Events/Chinese-Theme-Night>

“Air Quality Chart Image,” <http://fyi.uwex.edu/shwec/2012/11/19/air-quality-alert-prompts-smoke-concerns/>

“Chinese Students Using Abacus,”  
[http://big5.news.cn/gate/big5/news.xinhuanet.com/english/photo/2013-12/05/c\\_132944684\\_5.htm](http://big5.news.cn/gate/big5/news.xinhuanet.com/english/photo/2013-12/05/c_132944684_5.htm)

“Completed Art Abacus Example Image,”  
[http://www.angelfire.com/my/zelime/abacus\\_instructions.html](http://www.angelfire.com/my/zelime/abacus_instructions.html)

“Detail of painting *Along the River During the Qingming Festival* Showing People Using Suanpan or Abacus in Pharmacy,” <http://en.wikipedia.org/wiki/Suanpan>

### **Websites:**

“National Science Education Standards”  
<http://www.csun.edu/science/ref/curriculum/reforms/nse/nse-complete.pdf>

“National Visual Arts Standards,”  
[http://www.arteducators.org/store/NAEA\\_Natl\\_Visual\\_Standards1.pdf](http://www.arteducators.org/store/NAEA_Natl_Visual_Standards1.pdf)

“Common Core Math Standards,”  
<http://www.corestandards.org/Math/Content/2/introduction/>

“Abacus Practice Sheets,” <http://webhome.idirect.com/~totton/abacus/PDF.htm>

“Common Core ELA Standards,” <http://www.corestandards.org/ELA-Literacy/W/4/>

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