

LESSON PLAN

Designing with Numbers



Subjects: Math, Social Studies, Humanities

Grade Level: Elementary, Middle School/Junior High

Duration: 45 minutes

Dynasty: Qing (1644–1911)

Object Type: Costume and Textile

Themes: Power and Privilege; Daily Life and Folkways; Animals and Nature

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Summer *chaofu* (formal court dress) for a top-rank prince

China

Qing dynasty, ca. 1820–75

Silk gauze with embroidery in silk and metallic-wrapped threads

55 1/2 X 67 in

Gift of Shirley Z. Johnson. Freer Gallery of Art, F2015.7

Objective

Students will look closely at a Qing dynasty court robe known as a *chaofu*. They will learn about the beliefs in Chinese numerology and its relationship to language. After counting the symbols, they will learn why specific numbers of special images appear on the robe. Several related math problems are included.

Essential Questions

- What is a symbol?
- What can numbers represent?
- How do beliefs about numbers in China relate to the language?
- How were beliefs incorporated into other cultural practices like dress and decoration?

Background Information

A *chaofu*, or audience robe, was the most formal court dress for men during the Qing dynasty (1644–1911). It was intended to be worn on important occasions, such as court assemblies or state sacrifices. Fastened at the side, *chaofu* have long sleeves and a hip-length bodice attached to a pleated skirt. The garment was worn with a flaring collar, a hat with insignia signifying the wearer's rank, and ceremonial boots. The background is dark slate blue gauze filled with embroidery on the front and back. Its airy material suggests a summer version of a robe because winter *chaofu* were of heavier silk with fur lining or trim.

The Qing court had detailed rules about the appropriate materials and design for *chaofu* worn by different ranks of nobility and officials. This *chaofu*, with five-clawed dragons and eighteen (a multiple of nine, the number closely associated with the emperor) dragon roundels, corresponds to the rank of a high-level prince. Dragons that face front appear prominently on the chest and back as well as on each shoulder. They are surrounded by five-colored clouds and other auspicious symbols such as bats and lotuses. Right underneath is a cosmic mountain at the center of the sea. The *chaofu* was carefully designed so that the major motifs are placed symmetrically from front to back and side to side.

Vocabulary

auspicious: successful or prosperous; a sign of future success.

chaofu: literally, “audience robe”; a dress that the emperor, nobility, and court officials wore for formal occasions. Design and decoration of *chaofu* depended on the rank of the person who wore it.

homophones: words that are pronounced alike but have different meaning.

numerology: a belief in a divine meaning of numbers and their influence on human life.

Procedure

1. Have students follow the steps below to look closely at and discuss the object “Summer *chaofu*.”
2. Distribute the Lucky Numbers graphic organizer and draw students’ attention to the meaning of numbers in Chinese culture.
3. Have students revisit their observations and discuss how the number of symbols might represent the owner of the garment and its purpose.
4. Have students solve the Lucky Numbers math problems.
5. Choose an extension project to further extend or assess students’ understanding.

Discussion Questions

Describe

- What do you see?
- What colors and shapes can you identify?
- What items are depicted multiple times? How many of each can we find?
- How many of each item are there?

Analyze

- What patterns do you notice?
- Who do you think made this garment?
- Why do you think they made it?
- Who do you think wore this garment, and why do you think they wore it?

Interpret

- Why do you think this garment is in such good condition?
- Why do you think certain patterns appear on this garment?
- Why might these images and their numbers be important?
- What might the images and the number of times they appear have to do with who wore the garment and why they wore it?

Inquire

- What beliefs about numbers are you familiar with?
- Why would it be important to have clothing reflect beliefs?
- What rules about dressing do you follow?
- Looking at our own clothes, what symbols do we see that are important to our culture? What do they mean?

Extensions

Visual Arts

- Design your own *chaofu* for a royal ceremony, incorporating a lucky number of royal symbols.
- Design and make T-shirts with lucky numbers of lucky symbols. Wear them on a lucky number day.
- Design your own dragons with lucky numbers of features (claws, teeth, wings, scales, ears, etc.)
- Research artists who incorporate math into their work. Create a gallery of famous artworks by these artists with annotated pictures describing how they used math.

English Language Arts

- Chinese numerology is based on a series of homophones, words that sound alike. Write a story that uses a selection of English homophones.
- Write a paragraph about your favorite number. Give specific reasons why it is your favorite.
- Write a paragraph about a special symbol in your culture. Where is it found and what does it stand for?

Social Studies

- Walk around your neighborhood and look for important symbols. Make a book of pictures or photographs that record these symbols and describe what they mean.
- Research the formal or royal dress of cultures other than China. What is similar? What is different?
- Research other kinds of rules that royal leaders make. What can they control?

Resources

Blog Post about *chaofu*. <https://asia.si.edu/new-arrival-a-robe-for-royalty/>

Portrait of a Qing courtier. <https://asia.si.edu/object/S1991.105/>

Manchu court dress (a section of the exhibition catalogue *Worshipping Ancestors: Chinese Commemorative Portraits*).
<https://archive.org/details/worshippingancest00stua/page/130>

Chinese Dress in the Qing Dynasty, Powerhouse Museum (Sydney, Australia).
http://archive.maas.museum/hsc/evrev/chinese_dress.html

Imperial Robe, National Gallery of Victoria (Melbourne, Australia).
https://www.ngv.vic.gov.au/asianart/resources/pdf/Sheet7_AsianEduRes_A4_sheets_DVD.pdf

Symbols and emblems on an imperial robe, National Gallery of Victoria (Melbourne, Australia).
https://www.ngv.vic.gov.au/asianart/resources/pdf/AsianEduRes_DVD_Imperial_robe.pdf

Symbolism of Dragons, Kyoto National Museum (Japan). <https://www.kyohaku.go.jp/eng/dictio/senshoku/48koutei.html>

View this object online at <https://asia.si.edu/object/F2015.7/>

Learn more at <https://asia.si.edu/teachingchina>

