

LESSON 3

TIME TO SHINE!

What are the world's all-time greatest gems?

Travel back in time to learn about the world's greatest gems! In this lesson, students learn to see gems through a cultural and historical lens, expanding their understanding of what makes a gem valuable to include sentimental as well as monetary value. Students will take on the roles of gemologists as they explore the **GemKids Jewelry Time Machine** website in various hands-on differentiated tasks.

TOPICS

Gems and Jewelry Throughout History

SUBJECT CONNECTIONS

English Language Arts, Technology, Art, Social Studies, History

TIME REQUIRED

One 60-minute class period
(Note: Lesson can be divided into two shorter sessions after *Jewelry Time Machine* activity.)

SUPPLIES

- Folder for each student, or section of an existing binder
- 3–4 sticky notes per student
- Computers or tablets with Internet connection
- Lined paper or student journals

PREPARATION

- Copy student handout (1 per student)
- Prepare *What Is Valuable? Anchor Chart* (see Image 3.1 on page 22)
- Prepare computers or tablets for online student use

- Prepare materials for *Gem Lab* activity:

- Choose age-appropriate centers
- Print out *Gemology Lab Direction Slips* (*Appendix F*, p. 48)
- Prepare center materials and divide into bins with direction slips

STUDENT HANDOUTS

- *Gemology Lab Planning Sheet* (p. 28)

KEY VOCABULARY

value, valuable, monetary, sentimental, era

LEARNING OBJECTIVES

Students will be able to...

- Make personal connections with the concept of sentimental versus monetary value
- Explain why a gem is valuable
- Explore the continuity and change in how jewelry has evolved over time
- Compare and contrast jewelry from around the world

ESSENTIAL QUESTIONS

- What is value?
- How is value different to different people?
- How has jewelry changed and stayed the same over time?
- Why are gems important to society, both now and in the past?

Topaz has an exceptionally wide color range. Imperial topaz is a medium reddish orange to orange-red and the most valued species of topaz.



Topaz

DID YOU KNOW?



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WARM-UP (15 MINUTES)

1) IMAGINE... (FREE-WRITE)

The purpose of this warm-up is to connect kids personally to the idea that objects have both sentimental and monetary value.

"Imagine that you were going on a long trip and could only take three items from your home with you. What would you take, and why?"

Students write freely in response to this open-ended prompt, and share their writing with a partner or table group.

2) WHAT IS VALUABLE TO ME? (DISCUSSION)

Come to the rug and have students quickly share their three items.

Write the key words on the *What Is Valuable?*

Anchor Chart (see Image 3.1) or on the board and use student examples to teach the meaning.

- *value*
- *valuable*
- *monetary*
- *sentimental*

Ask, *"How is value different to different people?"*

Connect that, throughout history, some very expensive gems became very important to certain cultures. Ask, *"Why do you think some gems were valuable to a whole group of people?"* Mention how some things lose value, while others gain value over time, and ask what causes those changes in value. Record students' thinking on *What Is Valuable? Anchor Chart*.

Pearls of Wisdom

The pearl is the queen of gems and the gem of queens.

CHINESE PROVERB

What is Valuable?

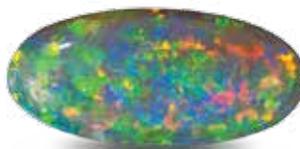
We think...

- Value: _____
- Valuable: _____
- Monetary: _____
- Sentimental: _____

Image 3.1: *What Is Valuable?* Anchor Chart



Nessie is a 2-meter (6.6-foot) prehistoric reptile called a "plesiosaur." Nessie's bones turned into opal over millions of years.



Opal

DID YOU KNOW?



VALUABLE GEMS IN HISTORY

<p>ANCIENT EGYPT EMERALD</p> 	<p>The first known emerald mines were in Egypt, dating from 4,000 years ago. Ancient Egyptians believed that the color green promoted health in babies and crops. Queen Cleopatra, Egypt’s last pharaoh, had a passion for emeralds, and often gave gifts of emeralds carved with an image of her face.</p>	
<p>ANCIENT BURMA RUBY</p> 	<p>Rubies from Burma (today’s country of Myanmar) have been around since 600 AD. Early Burmese warriors carried rubies to make themselves invincible in battle. They actually put rubies under their skin!</p>	
<p>NORTH AMERICA TURQUOISE</p> 	<p>Turquoise is called the “fallen sky stone” by Native American tribes. Some tribes believed that the stone had healing powers, while others believed that the stone would bring success in battle. Today, turquoise is still used in Native American ceremonies and rituals.</p>	
<p>CHINA JADE</p> 	<p>Jade has long been considered valuable in Chinese culture and history, and it is still popular today. Its colors range from chalky white to apple green to lavender. Jade is two different minerals – nephrite and jadeite – but both are cherished in China. An ancient Chinese saying goes, “Gold has a value; jade is invaluable.”</p>	



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RESEARCH (15–30 MINUTES)

3) THE GEMKIDS JEWELRY TIME MACHINE

This excellent interactive website allows kids to scroll through different eras and view some of the great jewels of all time.

Allow students to explore the **GemKids Jewelry Time Machine** (gemkids.GIA.edu/jewelry-time-machine) with a partner.

Alternately, view an abbreviated timeline with the whole class while students record their thinking. Younger students may need your help in understanding the timeline structure of the website. Let students' own curiosities and interests drive the learning as you circulate to hear thoughts and questions.

Draw a large timeline from the year 3000 BCE to today on the board (see example in Image 3.2 below).

When students are finished exploring, use the class timeline to record what students noticed at different eras. Define *era* as "a period of time."

Ask:

- Which is the earliest era? What did you notice about their jewelry?
- Which was your favorite era? What did you notice about the jewelry of that era?
- How has jewelry changed over time? How has it stayed the same over time?
- What developments in history may have changed the style of jewelry over time?



Tourmaline

Tourmaline is known for its dazzling colors. Some have more than one color, like watermelon tourmaline, which is pink in the middle and green around the outside.

DID YOU KNOW?

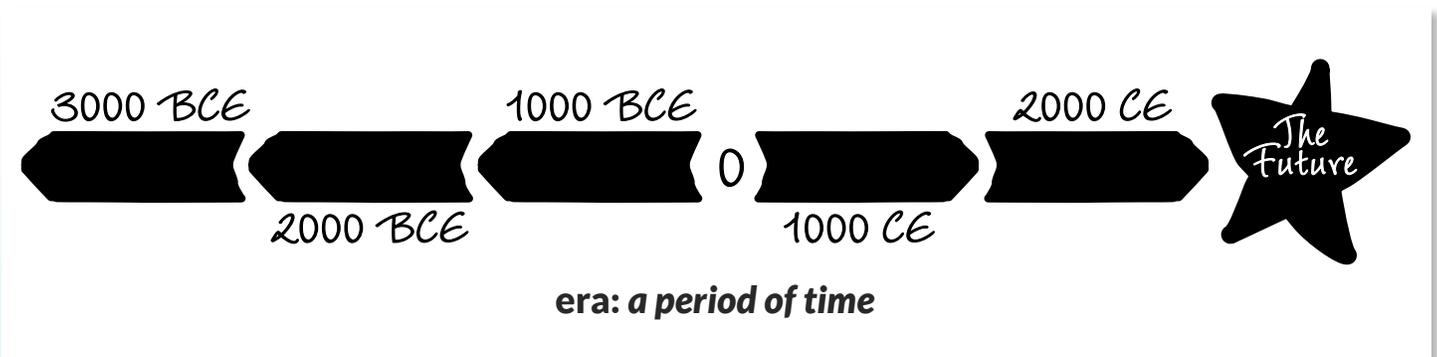


Image 3.2: Jewelry Timeline



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MAIN ACTIVITY (25 MINUTES)

4) THE GEM LAB (LEARNING CENTERS)

It's time to get creative! These independent art activities are structured to take place in "centers," or simultaneous activity stations.

Explain to students that they'll be working together to create a collection of artworks that teach about jewelry and gems throughout time. Introduce learning centers and let students choose where to go. Distribute *Gemology Lab Planning Sheet* (p. 28) to guide student work.



Ruby

Get Ready

1) **Choose the best activities for your students:** Use the *Gemology Lab Direction Slips* (Appendix F, p. 48) to determine the best options for your students.

2) **Gather the correct supplies:**

- Be a **Bench Jeweler** – Foil, various art supplies like sequins, yarn, glue, construction paper
- Be an **Appraiser** – Blank paper, colored pencils
- Be a **Gem Historian** – Blank paper, colored pencils
- Be a **Jewelry Designer** – Blank paper, colored pencils
- Be a **Gem Curator** – Blank paper, colored pencils, scissors, glue or tape, map
- Be a **Field Gemologist** – Blank paper, colored pencils, encyclopedia or world map

3) **Prepare the technology:** This activity would work best with tablets or laptops for each pair of students, but can also be modified for a classroom with limited tech resources: limit options, print images in advance, give groups turns on the computers, have students sketch at the computer and work at their seats.

A zircon found
in Australia is the
oldest mineral
on earth: It is
4.4 billion years old!



Zircon

DID YOU KNOW?



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REFLECTION & WRAP-UP (15 MINUTES)

5) TIME TO SHINE! (PRESENTATION)

Display student work on desks or walls. Play music from Thailand or India, homes to some of the largest gem markets. Give students time to walk around and write feedback on sticky notes, in the form of “Polished” and “Rough” comments. Invite other classes or community members.

6) CIRCLE OF REFLECTION

Come to the rug or meeting place. Ask students to turn and talk to a friend about the following questions:

- *Why do you think gems are valuable?*
- *How did jewelry stay the same over time? How did it change over time?*
- *What factors do you think influenced these changes in jewelry? Think about tools, technology, transportation, and so on.*
- *Why do you think gems and jewelry are important to society, both now and in the past?*

Go around the circle and ask every student to share one thing he or she found interesting from learning about gems throughout history.

Pearls of Wisdom

There are three things extremely hard: steel, a diamond, and to know one’s self.

BENJAMIN FRANKLIN

Morganite was named in honor of a famous American banker, J.P. Morgan. He was one of the most important gem collectors in the early 1900s, and donated gems to museums.



Morganite

DID YOU KNOW?



EXTENSION ACTIVITIES

COMMON CORE MATH

The *Diamonds from the Mine* handout (**Appendix G**, p. 49) can be assigned for homework, used during Guided Math, or used as an independent assignment. Levels correlate to grades: **Level One** is 3rd grade, **Level Two** is 4th grade, **Level Three** is 5th grade.

FAMILY TIME MACHINE

Invite students to share the **GemKids Jewelry Time Machine** and other **GemKids** online resources with parents (gemkids.GIA.edu).

DAZZLING GEM RESEARCH AUCTION PROJECT

Extend student learning with the **GemKids Gem Explorer** interactive tool on the **GemKids** website (gemkids.GIA.edu). Organize a creative research-based auction simulation. Assign each student a gem, then give them time to create an informational poster to display before the auction starts. Advanced students may also use the **GIA Gem Encyclopedia**. Buyers can be given a certain amount of money to purchase fake gems. Display posters in the classroom.

GEM GEOGRAPHY

Provide students with blank world maps to create their own gem geography maps. Have each student pick three different gems and research where they are found. Then, ask students to translate their findings to the blank map and create their own key. Ask students why they think certain gems come from certain locations. Enhance the tech component by integrating Google Maps, and letting students plot points where gems are found around the world. Students could also use Google Translate to learn the names of gems in local languages.

MY PERFECT GEM

Let students find their ideal gem with the **GemKids** interactive *Find My Gem* game (gemkids.GIA.edu/FindMyGem).

Pearls of Wisdom

I adore wearing gems, but not because they are mine. You can't possess radiance, you can only admire it.

ELIZABETH TAYLOR



NAME: _____

DATE: _____

GEMOLOGY LAB PLANNING SHEET

My gemology job is...	I am working... <input type="checkbox"/> Independently <input type="checkbox"/> With a partner <input type="checkbox"/> With a small team
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Write your directions here:

Space for planning and drawing

Remember to write your name on all of your papers!

