LESSON 4
LOOK INTO THE CRYSTAL BALL
What is the future of the bling business?

What does the future hold for gems, gemologists, and your students? In this lesson, students get to know current ethical issues and careers in gemology. As students explore issues that matter to the world community, they will strengthen their own classroom community with *The Bling Business Machine* (a collaborative theater game) and *Passing Notes* (a silent conversation protocol) activities.

**TOPICS**
Current Issues, Ethics, Careers in Gemology

**SUBJECT CONNECTIONS**
English Language Arts, Social Studies, Ethics, Community

**TIME REQUIRED**
One 60-minute class period (Note: Lesson can be divided into two shorter sessions after *The Bling Business Machine*.)

**SUPPLIES**
- Folder for each student, or section of an existing binder
- 3–4 sticky notes per student
- Computers or tablets with Internet access
- Lined paper or student journals
- Timer
- *Show What You Know! KWL* from Lesson 1, p. 13

**PREPARATION**
- Copy *Passing Notes Set* (1 set per 3 students)
- Copy *Pearls of Wisdom* (2 copies per student)
- Prepare *The Bling Business Machine Anchor Chart* (see Image 4.1, p. 31)

**STUDENT HANDOUTS**
- *Passing Notes Set* (includes Note #1, Note #2, Note #3) (pp. 35–37)
- *Pearls of Wisdom* (p. 38)

**KEY VOCABULARY**
ethical

**LEARNING OBJECTIVES**
Students will be able to...
- Discuss ethical issues in the field of gemology, including questions about theft and imitation gems
- Dramatize the connectivity among various jobs in gemology
- Express how ethical issues affect the field of gemology
- Reflect on key points

**ESSENTIAL QUESTIONS**
- What can I do to solve ethical problems in the world of gemology — and beyond?
- What kinds of jobs are there in gemology?
- How do gemologists work together to solve important problems?

**DID YOU KNOW?**
Renaissance painters used lapis lazuli to make "ultramarine" blue paint. Nothing could compare to its brightness.
WARM-UP (10 MINUTES)

1) BLING BUSINESS BRAINSTORM
Divide students into small groups and give them 5 minutes to brainstorm as many gemology jobs as they can. When time is up, go around the room for each group to say one job, as you record them on the board. Help students fill in any jobs that are missing. Give hints, if necessary.

POSSIBLE BLING BUSINESS JOBS
Choose the jobs that you have discussed in the previous lessons.

- Gem Miner (extracts gems from nature)
- Buyer (buys and sells gems)
- Gem Lab Scientist (uses microscopes and other tools to identify gems)
- Gem Cutter (uses tools to cut and polish rough gems)
- Appraiser (decides what a gem is, and how much it is worth)
- Jewelry Designer (turns creative ideas into jewelry)
- Bench Jeweler (makes or repairs jewelry)
- Retailer (sells gems and jewelry to customers)
- Laboratory Gemologist (person who studies and identifies gems)
- Field Gemologist (visits mines and collects gems from around the world)
- Jewelry Historian (studies the history of jewels)
- Gem Researcher (learns about gems)
- Diamond Grader (grades diamonds according to the 4Cs and provides quality reports)
- Gemology Instructor (teaches the principles of gemology and practice of gem grading and identification)

POSSIBLE BLING BUSINESS JOBS
Choose the jobs that you have discussed in the previous lessons.

- Kunzite

DID YOU KNOW?
Although 100 years might seem like a long time, it is really not that long ago in the world of gems. Kunzite was discovered in 1902 in San Diego County, California, in the United States.

TEACHER TIP
Online Display
Display the “Careers” page on the GemKids site while you play this game. Students will benefit from the visual reminder, and you can click on the definition instead of writing them all on the board.
Go to gemkids.GIA.edu/resources/careers

Pearls of Wisdom
Many individuals have, like uncut diamonds, shining qualities beneath a rough exterior.
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INTRODUCTION (15 MINUTES)

2) THE BLING BUSINESS MACHINE
Show students how the parts of the “bling business” work together with this adaptation of a classic theater game, “Human Machine.” In the first part of the game, each student “adds on” to the scene to show how gemology jobs work together. In the second part, you’ll dramatize how unethical behaviors interrupt the machine and jeopardize the field.

How the Machine Works
Write “The Bling Business Machine” on the Anchor Chart on the board or chart paper (see Image 4.1). Ask students, “Which job comes first?” (Miner)

Call on a student to answer the question, explain the job, and come to the front and make a simple motion that evokes mining. For example, the student could crouch down and pretend to hit a rock with a pick. Student continues making simple motion, record “Miner” on the Anchor Chart.

Teach students that, when you call “Stop!,” the machine must stop. When you call “Go!,” the machine continues working. Demonstrate with miner a few times.

Ask, “What happens after the miner finds the gemstones?” Call on student to answer question and join the miner, adding to the scene. Continue with entire job chain (using the brainstorm list) — until every job is dramatized.

What Breaks the Machine
“Stop!” interrupts the machine. Explain that, in a perfect world, the machine would run smoothly. However, in the real world sometimes there are problems, sometimes people make ethical mistakes.

Let students act out what would happen to the machine if...

• a miner got hurt
• someone stole the gems from the jeweler
• the appraiser lied

Write the word “Ethical” on the Anchor Chart, and ask for student definitions. Explain that when individual people make bad ethical choices, it has a negative effect on many others. Define “ethical” as “honest, and making the right choices.”
MAIN ACTIVITY (30 MINUTES)

3) WHAT WOULD YOU DO? PASSING NOTES ACTIVITY

In this activity, students will engage with each other in a “nonverbal conversation” about ethical dilemmas. This technique allows a safe space in which to honestly explore the challenging topics of greed, peer pressure, and lying.

Students sit in groups of three. Distribute a set of Passing Notes (pp. 35–37) to each group — there should be three scenarios for each group, three papers total.

Explain the rules: This is a silent activity called Passing Notes. When I start the timer, you will take one note, read it, and write your thoughts. You may answer the question, and write questions or comments. When the buzzer goes off, put your pencil down.

- Set the timer for 4 minutes: Each student takes one paper, reads the scenario and silently writes his or her answer on the paper. When timer buzzes, students finish their sentences and pass the papers to the right.
- Set the timer for 5 minutes: Each student reads the scenario and the comments of the first student, and can respond to the scenario or the comments of the first student, or can ask questions. When timer buzzes, students finish their sentences and pass the papers to the right.
- Set the timer for 6 minutes: Each student reads the scenario and the comments of the first and second students, and can respond to the scenario or the comments, or can ask questions. When timer buzzes, students pass papers around and read ideas. Give students time to talk about the scenarios.

Continuing the Conversation

Students will likely be eager to continue talking about these ethical issues. Here are some ways to continue the conversation and support students in their critical thinking:

- Post completed Passing Notes papers in the classroom and let students read each other’s ideas.
- Pass the papers around for a second round, and have students comment on each other’s new ideas.
- Give students time to write in their journals about one of the prompts.
- Use the Passing Notes protocol for other ethical dilemmas in your class community.

DID YOU KNOW?

Some peridot comes from outer space! This image on the left is of an actual slice of meteorite with peridot crystals. It was found in Argentina in 1951.
4) ETHICS IN THE WORLD DISCUSSION
Now that the students have been thinking about ethical issues that connect to their own lives, engage them in a more complex ethical situation: the dangers of mines. This is a sensitive topic — consider the maturity of your students when you decide how to talk about it.

Here is a possible script: “Like all mining, gem mining can be dangerous work. Also, gems have been used as money to buy weapons and fund violent conflicts. It might be dangerous for people who work in those mines or live near those conflicts because they may get hurt.”

Possible questions:
• Have you heard of this? Where did you hear about it?
• Why would a miner work in a dangerous mine?
• Do you think people should buy gems from mines where workers can get hurt?

Teach students that gemologists are very concerned about this problem, just like they are concerned about the problems in the Passing Notes activity. Teach students about the Kimberley Process and conflict-free diamonds (see Teacher Tip! sidebar).

Explain that trained experts are needed to keep mines safe, be able to evaluate their find, appraise fairly, keep sellers honest and ethical, and protect the environment.

REFLECTION & WRAP-UP (20 MINUTES)
5) WHAT DID I LEARN? (SELF-ASSESSMENT)
Redistribute Show What You Know! KWL handout from Lesson 1, p. 13, and ask students to fill in what they learned. If students get stuck, they can look through their gemology folders for ideas or work with a partner. If doing this lesson in isolation, give students sticky notes to add information about careers in gemology and ethical issues onto the Anchor Chart.

6) PEARLS OF WISDOM CLOSING CIRCLE
Distribute Pearls of Wisdom handout (p. 38). Students choose the two most interesting things they learned about gems and write them inside two pearl shapes. Sitting in a circle, each student reads one Pearl of Wisdom and places it on Anchor Chart. Encourage students to give original ideas each time and not to repeat answers. If they get stumped, allow a friend to share an idea.

TEACHER TIP
Ethical Diamond Resources
Background information for teachers about the Kimberley Process, conflict-free diamonds, and any other efforts by the gem industry to deal with the safety of miners, can be found at:
• voices.nationalgeographic.com/2012/01/12/conservation-gemstones-beyond-fair-trade/
• www.kimberleyprocess.com
• www.state.gov/e/eb/tfs/tfc/diamonds/index.htm
• www.responsiblejewellery.com

DID YOU KNOW?
For centuries, people thought spinel was ruby. It was discovered to be a separate mineral a couple of centuries ago. Even so, spinel is loved for its rich red color and history.
EXTENSION ACTIVITIES

COMMON CORE MATH
The Jewelry on the Red Carpet handout (Appendix H, p. 50) 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.

DEAR PARENT OF A GEMOLOGIST:
Send home the Parent Connection newsletter (Appendix I, p. 51) to involve families in the children’s learning.

GEMS IN THE NEWS
Read aloud a current news article while students follow along in their own text and record their thinking. Discuss how gems may appear in the news and our daily lives. Try this New York Times article: www.nytimes.com/2013/06/13/science/in-glittering-gems-reading-earths-story.html

ASK A GEMOLOGIST
Watch an interview from GIA’s Tucson 2014 Gem Show videos (GIA.edu/tucson2013-show) or divide students into small groups to browse and watch interviews. To prepare for writing the letter, students look through gemology folders to generate a list of Shimmering Questions, which can be added to the KWL chart from Lesson 1, p. 13.

Students can email: gemkids@gia.edu, or mail letters to:
GemKids at GIA
The Robert Mouawad Campus
5345 Armada Drive
Carlsbad, CA 92008

Fancy color diamonds come in almost any color you can imagine. Red, green, purple, and orange are generally the most rare, followed by pink and blue. Yellows and browns are the most common fancy colors.
NOTE #1

You are with your class on a gemology field trip and have gone into the tunnel of a local gem mine. While your classmates are inspecting a crystal with the teacher, you notice something sparkling between two rocks. You use a stick and a paper clip from your pocket to get it out. It is a gem! It is glittering and dark red! You have never seen anything so beautiful in your life! You are able to get the gem out and keep it for yourself, but it doesn’t belong to you. It belongs in a museum. If you tell the mine owner, the gem will be taken away. What do you do? Write or draw out your answer.
NOTE #2

You love learning about gems, so you grow up and become a gemologist and gem cutter. You become a very talented gem cutter. In fact, you are so talented that you can make an imitation that looks like a natural diamond to most people. If you sell these imitation diamonds, it is important to disclose that they are not natural, but rather made by man. If you decide to go into the business of selling imitation diamonds, what would you do to remain an honest and ethical business person? Write or draw out your answer.
NOTE #3

You were born and raised in Asia. You live in Bangkok, a city in the country of Thailand, that is known for colored stones. You are the fifth generation in your family to run a very successful and well-known family business, a retail jewelry store specializing in colored gemstones and jewelry. Because you have worked at the store for as long as you can remember, the gem and jewelry industry is second nature to you. A competing retailer comes in to the store and asks that you come work for him. You feel that you should be loyal to your family, but at the same time, you would like to experience working for someone else. **What do you do?** Write or draw out your answer.
PEARLS OF WISDOM

Directions: Write the most interesting things you learned about gems and gemology in the pearl below.

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