

1st Grade**Unit Name****Where in the World Is? Australia – Lesson 3****Lesson Name****Time Needed (Hours/Days)****Lesson: Australia Lesson 3****3-5hrs****Grade****Subject****Course****K - 2****Social Studies****TAG****GA Standards of Excellence & TAG Standards**

Please include both GSE & TAG Standards

GA STANDARDS OF EXCELLENCE**Social Studies:****1st Grade**

SS1G2 Identify and locate the student's city, county, state, nation (country), and continent on a simple map or a globe.

SS1G3 Locate major topographical features of the earth's surface.

- Locate all of the continents: North America, South America, Africa, Europe, Asia, Antarctica, and Australia.
- Locate the major oceans: Arctic, Atlantic, Pacific, and Indian Ocean.
- Identify and describe landforms (mountains, deserts, valleys, and coasts).

Science:

S1E1. Obtain, evaluate, and communicate weather data to identify weather patterns.

- Analyze data to identify seasonal patterns of change.

(*Clarification statement:* Examples could include temperature, rainfall/snowfall, and changes to the environment.)

2nd Grade

S2E3. Obtain, evaluate, and communicate information about how weather, plants, animals, and humans cause changes to the environment.

(*Clarification statement:* Changes should be easily observable and could be seen on school grounds or at home.)

Creative Thinking & Problem Solving Skills Standard:

- The student questions accepted practices, rules, and existing principles to discover new knowledge.
- The student designs, applies, evaluates, and adapts a variety of innovative strategies to when problem solving (e.g., recognizes problems, defines problems, identifies possible solutions, selects optimal solution, implements solution, and evaluates solution).
- The student incorporates brainstorming and other idea-generating techniques (synectics, SCAMPER, etc.) to solve problems or create new products.
- The student demonstrates skills in fluency and flexibility to solve problems or create new products.
- The student develops original ideas, presentations, or products through synthesis and evaluation.

6. The student, independently or through collaboration with classmates, clarifies, illustrates, or elaborates on an idea for product improvement.
8. The student tolerates ambiguity when solving problems.
9. The student recognizes and assumes risks as a necessary part of problem solving.
10. The student monitors and reflects on the creative process of problem solving for future applications.

Essential Question(s)

What should students know when lesson is completed?

How does Australia's unique location and oceanic community impact Australia's economy?

Teacher Lesson Preparation

Prepare to make copies of documents for the lesson Creative Problem Solving Lesson that are attached and that are separate for Day 3.

Read Mess: Dive In! (Background info and problems/solutions) (attached)

- Explain to the students that the coral reefs are in danger and dying. A list of the threats to coral reefs is included on the following website.
<http://mbgnet.mobot.org/salt/coral/threats.htm>
- Possible solutions to the coral reefs threats
<http://terrax.org/teacher/lessons/australia/reef/ways.aspx>
- Use the newspaper format graphic organizer to record problems and possible solutions and ways to keep the reef safe.
- Discuss how kids can help stop this destruction.
- **Country Comparison Chart Completion**
- **Make copies of "Name That Country!"**

Activating Strategy (for example: Hook/Mini-Lesson/Warm-Up/Connection to Prior Learning)

- **Brainstorming: Pose this question to your students and have them write their response in journals "Would you rather be an animal who lives in Australia or a plant who lives in Australia? Tell why!**
- Make a list of threats to animal and plant communities.
- **Magic Carpet/Fly to Capital**
- **Map of the Country**

Instructional Sequence and Activities including use of technology

Building Background:

- Pose the following questions: What are coral reefs and where might you find them? Are there different types of coral reefs and different types of corals?
- Begin with reading "The Mess" Attached is a background information sheet for students. You will have to go over how to complete each step of a CPS with the students. The steps are on "Lesson 3" they are not attached to this lesson plan.
- Review the **Rules of Brainstorming**: 1) Go for quantity. 2) Wild and crazy ideas are okay. 3) Piggy-back on the ideas of others. 4) No judgment—positive or negative.
- **Problem-Finding: Assist** groups will brainstorm the problems seen as a result of the mess. Opportunity is provided for grouping of similar problems and selecting from the top three. From the top three problems, each group will develop a problem statement beginning with “How might we...”
- **Idea-Finding:** Each group will brainstorm solutions to the problem statement. Opportunity is provided for grouping of similar problems and selecting from the top five.
- **Solution-Finding:** Each group will develop criteria to evaluate the five solutions and use a decision-making grid to determine the best solution. Opportunity is provided for research to make valid evaluations against the criteria.
- **Acceptance-Finding:** Each group will develop an action plan for implementing the solution.
- The following websites provide visuals & interactive experiences for students:
- Describes to the students what a coral reef is.
<http://www.enchantedlearning.com/biomes/coralreef/coralreef.shtml>
- The website below is an interactive website showing the Great Barrier Reef.
http://www.nationalgeographic.com/earthpulse/reef/reef1_flash
- The following website gives instructions for making a three-dimensional mural of the Great Barrier Reef and describes a coral reef.
<http://ted.coe.wayne.edu/sse/units/aussie.htm#day9>
- This site shows types of coral.
<http://www.seasky.org/reeflife/sea2b.html>
- Below is how to make an edible coral polyp.
<http://www.aquarium.usm.edu/coralreef/o4.pdf>
- Add Australia to the Comparison Chart based on information of Australia.
- "Name That Country!" Complete worksheet

Assessment Strategies

Add Australia to the Comparison Chart based on information on Australia. Students will write in their journal what they learned about Australia's unique location and oceanic community.

Differentiation

Scaffolds/ Interventions/Extensions/Enrichment

CPS group assignment

Student choice for the synthesis of CPS Mess

- Make a poster highlighting a particular species found in a coral reef and create a species profile.
- Create a travel brochure explaining to tourists how to help save the reef.
- Make a picture dictionary of ten reef inhabitants.
- Compose a letter to the Prime Minister of Australia about what you have learned about coral reef issues.

Materials/Links/Text References/Resources

Worksheets listed below for the lesson

CPS Mess

"Name That Country!"

Use with students as references/resources guide:

<https://www.edutopia.org/>

<http://kids.nationalgeographic.com/explore/countries/australia/#koala-closeup-tree.jpg>

<https://www.cia.gov/library/publications/the-world-factbook/geos/as.html>

Are We There Yet?: A Journey Around Australia

by Alison Lester

Where the Forest Meets the Sea

by Jeannie Baker

Diary of a Wombat

by Jackie French

Animalia

by Graeme Base

Unit Name	Our Universe		
Lesson Name	Comets		
Time Needed (Hours/Days)		Day Four	
Grade	K-1-2	Subject	Science, Social Studies
Standards/Elements CCGPS, GPS/GSE (where applicable) and TAG Standards			
<p><u>Science</u></p> <p>SKE1. Students will describe time patterns (such as day to night and night to day) and objects (such as sun, moon, stars) in the day and night sky.</p> <p><u>TAG Standards</u></p> <p><u>Advanced Communication Skills</u></p> <ol style="list-style-type: none"> 1. Uses written, spoken, and technological media to convey new learning or challenge existing ideas. 2. The student produces written and/or oral work that is complex, purposeful and organized. 3. The student creates products and/or presentations that synthesize information and communicate expertise to a variety of authentic audiences. 7. The student responds to contributions of others, considering all available information. 8. The student participates in small group discussions to argue persuasively or reinforce others' good points. <p><u>Creative Thinking and Problem-Solving Skills</u></p> <ol style="list-style-type: none"> 5. The student develops original ideas, presentations, or products through synthesis and evaluation. 7. The student uses analogies and metaphors <p><u>Higher Order and Critical Thinking Skills</u></p> <ol style="list-style-type: none"> 2. The student responds to questions with supporting information. 6. The student extrapolates verbal-linguistic (e.g., analogies) and visual-spatial patterns (e.g., tessellations) to determine relationships. 			

14. The student identified basic principles that are central to understanding a field of study.

Enduring Understanding

There are a variety of bodies in space, including comets.

Essential Question(s)

What makes a comet different from a star or a planet?

Teacher Lesson Preparation

Create the Comet Mystery Boxes. You will need:

- 3-4 boxes (shoe or packing boxes work well)
- 1 block of ice (frozen in a pie tin works well)
- 2 cups potting soil – add rocks, packing material, or sand to create more texture
- 2 cups Fiber or Poly-fill
- 1 potato (look for odd shapes or ones with a crater)
- Trays or bags (to hold box filling materials)
- Trash bags for lining boxes.

Gather materials for “Comet on a Stick.”

- Chopsticks or popsicle sticks
- Metallic ribbon (3 different colors)
- Aluminum Foil

Activating Strategy: Mystery Boxes

(Directions for making the boxes - https://www.nasa.gov/pdf/570282main_CMB_Directions.pdf)

Introduce students to the physical characteristics of comets by using a tactile learning experience. Using only their hands, students will reach into a series of boxes and feel the variety of materials and structures within (ice, potting soil, poly-fill, and a potato). (Do not tell them yet that each box contains an object that represents a quality of comets.) Once all the students have observed all the boxes, have them share what they found as a group. Record these observations in a place they can all see. Ask the students if they can think of anything (a “body”) in space that has all four of these things? (A comet.)

Comets have **ice** in the middle (nucleus).

Comets have dust and **dirt** blown away from the nucleus in the tail.

The coma is a fuzzy haze that surrounds the nucleus. Comet comas look fluffy in telescopes, like a **cotton ball**.

A comet's nucleus is hard but not round, like a **potato**.

Show a six-minute video about comets - <https://www.youtube.com/watch?v=mQErMYDfw0Y>

Instructional Sequence and Activities Including Use of Technology

Activity One: Let's Make a Comet

Comets are part of our solar system family. They are made of old leftovers after the Sun, the planets, and the moons were formed. A comet is a small chunk of dust and ice that orbits, or travels around, the sun. It is sometimes described as a "dirty snowball." The only solid part of any comet is in the middle or nucleus. There are billions of comets in the solar system, but most never pass close by Earth. About once a year a comet comes around that we may be able to see with our unaided eyes. It might look like a fuzzy cotton-ball—maybe faint, maybe bright—usually with one or two long tails. Most comets come from a region beyond the orbit of Neptune.

Comets orbit the Sun just like planets and asteroids do, except a comet usually has a very elongated orbit. As the comet gets closer to the Sun, some of the ice starts to melt and boil off, along with particles of dust. These particles and gases make a cloud around the nucleus, called a coma. The coma is lit by the Sun. The sunlight also pushes this material into the beautiful brightly lit tail of the comet.

Make a "Comet on a Stick." Directions are included in the lesson folder.

Activity Two:

Look at photographs of comets. Hover over each photo before expanding it to gain information about the comet. https://solarsystem.nasa.gov/asteroids-comets-and-meteors/comets/overview/?page=0&per_page=40&order=name+asc&search=&condition_1=102%3Aparent_id&condition_2=comet%3Abody_type%3Ailike

Review facts about comets - https://stardustnext.jpl.nasa.gov/mission/pdfs/comet_fun_sheet3.pdf

Show: <https://stardustnext.jpl.nasa.gov/multimedia/ci/index.html>

Activity Three: Metaphorical Expression

Direct Analogy:

After gaining background knowledge about comets, students will complete the Direct Analogy graphic organizer by identifying as many similarities and differences as they can between a comet and an ice cream cone. Have students share their ideas with an elbow partner or in small groups.

Personal Analogy:

Next, students will create personal analogies pretending as though they are a comet. Have students share their ideas with others.

Assessment:

Students will write a paragraph, poem, or song about their life as a comet. As time allows, share with others. Consider using Flipgrid as a tool for students to share with a real-world audience.

<https://flipgrid.com/>

Differentiation

Extension:

Read The Comet Sisters (in the lesson folder). Science facts and value lessons are blended in a mythical story about the Villagers of the Earth and the Comet Sisters in space. See how many facts about comets your students can find hidden in the story.

Extension:

Research specific comets: (Graphic Organizer included in lesson folder.)

Comet Hale-Bopp ♦ Comet Halley ♦ Comet West ♦ Comet Shoemaker-Levy 9 ♦ Comet Tempel-Tuttle ♦ Comet Encke ♦ Comet Wild 2

Extension:

Make a comet (requires dry ice) - <https://stardust.jpl.nasa.gov/classroom/activities/2-stardst-ch02.pdf>

Materials/Links/Text References/Resources

Comet Mystery Box Directions - https://www.nasa.gov/pdf/570286main_Comet_Mystery_Boxes_Guide.pdf

How to Build the Comet Mystery Box – https://www.nasa.gov/pdf/570282main_CMB_Directions.pdf

https://stardustnext.jpl.nasa.gov/mission/pdfs/comet_fun_sheet3.pdf

<https://www.youtube.com/watch?v=mQErMYDfw0Y>

<https://www.nasa.gov/comets/>

<https://nssdc.gsfc.nasa.gov/planetary/planets/cometpage.html>

Unit Name		Where is the Dodo Bird?-Lesson 3	
Lesson Name		(Creative Problem Solving)	
Time Needed (Hours/Days)		1	
Grade	3	Subject	Science
Standards/Elements CCGPS, GPS/GSE (where applicable) and TAG Standards			
<p>Science GSE S3L2. Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment</p> <p>Creative Thinking & Problem Solving Skills (CPS) Elements 2. The student designs, applies, evaluates, and adapts a variety of innovative strategies to when problem solving (e.g., recognizes problems, defines problems, identifies possible solutions, selects optimal solution, implements solution, and evaluates solution). 3. The student incorporates brainstorming and other idea-generating techniques (synectics, SCAMPER, etc.) to solve problems or create new products. 4. The student demonstrates skills in fluency and flexibility to solve problems or create new products. 5. The student develops original ideas, presentations, or products through synthesis and evaluation. 6. The student, independently or through collaboration with classmates, clarifies, illustrates, or elaborates on an idea for product improvement. 10. The student monitors and reflects on the creative process of problem solving for future applications.</p> <p>Advanced Research Skills (ARS) Elements 1. The student uses a variety of print and non-print resources to investigate a topic of interest. 3. The student uses concepts within and across disciplines to develop valid hypotheses, thesis statements, or alternative interpretations of data. 5. The student gathers, organizes, analyzes, and synthesizes data from multiple sources to support or disprove a hypothesis.</p> <p>Advanced Communication Skills (ACS) Elements 1. The student uses written, spoken, and technological media to convey new learning or challenge existing ideas. 2. The student produces written and/or oral work that is complex, purposeful, and organized, includes relevant supporting examples and manipulation of language. 6. The student anticipates and addresses potential misunderstandings, biases, and expectations in communication with others. 8. The student participates in small group discussions to argue persuasively or reinforce others' good points.</p>			
Enduring Understanding			
<p>The Student Should Know: Animals have unique characteristics.</p> <p>The Student Should Understand: Animals, humans, and the environment depend upon one another for survival.</p> <p>The Student Should Be Able to Do: 1. Utilize advanced research and advanced communication skills in order to create and share newly acquired information. 2. Brainstorm ideas about why animals are endangered.</p>			

3. Compare and contrast endangered animals.

Essential Question(s)

What effect does animal endangerment and extinction have on our world and what can we do to stop it?
Question of the Day: In what way(s) are endangered animals similar and different?

Teacher Lesson Preparation

Prepare packet of information for each student

Activating Strategy

See, Think, Wonder: Students will use visual thinking strategy to look at pictures of the Indian River Lagoon and how the degradation of the area has affected wildlife and what can be done to repair the damage.

Instructional Sequence and Activities Including Use of Technology

1. The Mess: Students will read *The Effects of Oil on Wildlife and Habitat* by the US Fish and Wildlife service. <http://digitalmedia.fws.gov/cdm/ref/collection/document/id/1728> Students in groups of three will then complete Creative Problem Solving (CPS) Step 1: Fact Finding.
2. CPS Step 2: Problem Finding: Students will then find the problems associated with wildlife when habitats are exposed to oil and discuss why oil is currently an integral part of our society. Then discuss and define the four types of productive resources: land, human, capital and entrepreneurship. Assign each group one of the types of resources and have them create a problem statement based on the productive resource they were assigned.
3. CPS Step 3: Idea Finding: Student will think of ways to use three productive resource to avoid wildlife and habitats being exposed to oil.
4. CPS Step 4: Solution Finding: Students will create criteria to judge the potential solutions and rank each solution based on the criteria.
5. SCAMPER: Students will use SCAMPER to improve on their solution.
6. CPS Step 5: Acceptance Finding: Students develop an action plan for implementing your solution including background information about your solution, who should be involved, a timeline and a way to evaluate the success and appropriateness.

Assessment Strategies

Students will present their conclusions on a poster. Students will share their posters with the class.

Differentiation

Student groupings will vary throughout the lesson.

Materials/Links/Text References/Resources

https://worldwildlife.org/species/directory?direction=desc&sort=extinction_status
<http://www.earthsendangered.com/>
<http://www.kidsplanet.org/factsheets/map.html>
<http://www.enchantedlearning.com/coloring/endangered.shtml>
<http://www.fws.gov/endangered/>
http://www.konicaminolta.com/kids/endangered_animals/
<http://www.arkive.org/endangered-species/>
www.kidszoo.org
www.endangeredcreatures.net
www.redlist.org

Unit Name		Money Matters (Lessons 4 & 5)	
Lesson Name		Opportunity Costs (Cont'd.)	
Time Needed (Hours/Days)		2	
Grade	4	Subject	Social Studies
Standards/Elements CCGPS, GPS/GSE (where applicable) and TAG Standards			
<p>Science GSE SS4E2 Identify the elements of a personal budget (income, expenditures, and saving) and explain why personal spending and saving decisions are important.</p> <p>Advanced Communication Skills (ACS) Elements</p> <ol style="list-style-type: none"> 1. The student uses written, spoken, and technological media to convey new learning or challenge existing ideas. The student produces written and/or oral work that is complex, purposeful, and organized, includes relevant supporting examples and manipulation of language. 2. The student creates products and/or presentations that synthesize information from diverse sources and communicate expertise to a variety of authentic audiences. 3. The student uses a variety of multi-media and innovative technology to create illustrations, models, charts, tables, and graphs as tools for communication. 8. The student maintains a journal or log for self-reflection and/or self-evaluation. <p>Creative Thinking & Problem Solving Skills (CPS) Elements</p> <ol style="list-style-type: none"> 1. The student questions accepted practices, rules, and existing principles to discover new knowledge. 2. The student designs, applies, evaluates, and adapts a variety of innovative strategies to when problem solving (e.g., recognizes problems, defines problems, identifies possible solutions, selects optimal solution, implements solution, and evaluates solution). 3. The student incorporates brainstorming and other idea-generating techniques (synectics, SCAMPER, etc.) to solve problems or create new products. 4. The student demonstrates skills in fluency and flexibility to solve problems or create new products. 5. The student develops original ideas, presentations, or products through synthesis and evaluation. 6. The student, independently or through collaboration with classmates, clarifies, illustrates, or elaborates on an idea for product improvement. 9. The student recognizes and assumes risks as a necessary part of problem solving. 10. The student monitors and reflects on the creative process of problem solving for future applications. 			
Enduring Understanding			
<p>The student will:</p> <ul style="list-style-type: none"> • Explain how price incentives affect people's behavior and choices. • Explain how voluntary exchange helps both buyers and sellers. 			

- Describe how trade promotes economic activity.
- Give examples of technological advancements and their impact on business productivity during the development of the United States.

Essential Question(s)

Why is it important to understand economics?

Teacher Lesson Preparation

See, Think, Wonder; Flight PPT; Money Matters PPT; white paper; colored paper; paper clips; masking tape; scotch tape; glue stick; crayons; markers; watercolors; construction paper; technology; paper money

Vocabulary

producer, consumer, assembly line, factory, human resources, capital resources, natural resources, overhead, wages, profit, supply, demand, scarcity, importing, exporting

Complete Lesson 3

1. **Synthesis Activity:** Read *The Giving Tree* by Shell Silverstein. <https://www.youtube.com/watch?v=1TZCP6OgRIE>
Students will create interview questions for the Giving Tree about its current financial status and what lessons it has learned. Students will answer the questions as if they are the tree.
2. **Create a Political Cartoon or Create a Narrative about Opportunity Costs:** Show students the power point "Money Cartoons". Talk about idioms used, jokes made, etc. Display examples of idioms using <http://idiomsbykids.com>. Talk about how an idiom is a great way to make a joke and how they can relate it to money choices. Students can then create a cartoon online <http://www.readwritethink.org/classroom-resources/student-interactives/comic-creator-30021.html>

Activating Strategy

3. **See, Think, Wonder:** This routine encourages students to make careful observations and thoughtful interpretations. It helps stimulate curiosity and sets the stage for inquiry. Students will explore the longest airplane flight.
4. **Hook:** Students will view and discuss the flight PPT.

Instructional Sequence and Activities Including Use of Technology

5. Students will view and discuss the flight PPT.
6. View and discuss PPT slides 1-7.
7. Have students make an airplane as you go through PPT slides 8-14.
8. Give each student paper and have them make as many planes as possible in 4 minutes. Have students count the number of planes they completed.
9. Split the students into groups of six and assign each student a job. If your numbers are not divisible by six it is best to have groups with more than six and then add one of the following optional jobs (quality control-checks each stage and helps when needed, supply collector-starts out the line by getting pieces of paper and passing them to the first person in line).
 - a. Have students sit in a line on the floor in the order of their jobs.
 - b. Start out with a practice run of creating an airplane where each person tries out their job. Make any adjustments in job assignments as needed.
 - c. After the practice run, discuss how things went and answer any questions that may come up.
 - d. Give each group paper and have them attempt to assemble the paper into airplanes with each person completing only their job. Give each group 4 minutes to make planes. Have the groups count the number of planes they completed.

- e. After the planes are assembled discuss the different problems that arose while they were working.
- f. Discuss some possible solutions to the problems that were mentioned and if there is time you may even want to try out one of the solutions.

10. Complete PPT by continuing through slides 15-37. Have students write down the definitions in their journals.
11. Have students research paper airplanes and construct one that they think will fly the farthest.
12. Have a contest to determine the winners of the flight contest. (Students should not know whose plane is the winner, 2nd place, ...) Use this information in forming small groups. The winner can choose a plane to be on their team. This will allow groups to form that are not just friends.
13. Explain the task to students. Tell them that they will be making, marketing, and selling an airplane product. Explain that they will be given \$125.00 to start their business and they will be given \$100.00 to purchase planes from the other TAG class. Explain that the goal is to make the most profit in the class.
14. Explain the spreadsheet to the students.
15. Give students \$125 and allow them to work.

Assessment Strategies

16. Students will count their money and a winning team will be determined. Students will write in their journal a reflection to the activity.

Differentiation

Student groupings will vary throughout the lesson.
Students can choose an airplane model and how to decorate.
Students can choose their marketing strategy.

Materials/Links/Text References/Resources

Attached and Listed above.

Unit Name	Stock Market-Day 3		
Lesson Name	How are stock prices determined? (Mystery)		
Time Needed (Hours/Days)	1 Day		
Grade	5th	Subject	Social Studies
Standards/Elements CCGPS, GPS/GSE (where applicable) and TAG Standards			
Social Studies GSE			
SS5E1 Use the basic economic concepts of trade, opportunity cost, specialization, productivity, and price incentives to illustrate historical events.			
b. Explain how price incentives affect people's behavior and choices (e.g., decisions to participate in cattle trails because of increased beef prices).			
d. Describe how trade and voluntary exchange promotes economic activity (e.g., how the Panama Canal increases trade among countries).			
SS5E3 Describe how consumers and producers interact in the U. S. economy.			
a. Describe how competition, markets, and prices influence consumer behavior.			
SS5E4 Identify the elements of a personal budget (income, expenditures, and saving) and explain why personal spending and saving decisions are important.			
TAG			
<u>Higher Order Critical Thinking Skills Standard:</u> Gifted students will develop and practice higher order and critical thinking skills in an area of study.			
Higher Order Critical Thinking Skills (HO/CTS) Elements			
1. The student asks probing, insightful, and relevant questions.			
2. The student responds to questions with supporting information that reflects in-depth knowledge of a topic.			
5. The student predicts probable consequences of decisions.			
11. The student draws conclusions based upon relevant information while discarding irrelevant information.			
12. The student evaluates conclusions based upon relevance, depth, breadth, logic, and fairness.			
<u>Advanced Communication Skills Standard:</u> Gifted students will develop advanced communication skills that incorporate new techniques, materials, and formats in the development of products that will be shared with real audiences.			
Advanced Communication Skills (ACS) Elements			
1. The student uses written, spoken, and technological media to convey new learning or challenge existing ideas. The student produces written and/or oral work that is complex, purposeful, and organized, includes relevant supporting examples and manipulation of language.			
2. The student produces written and/or oral work that is complex, purposeful, and organized, includes relevant supporting examples and manipulation of language.			
9. The student maintains a journal or log for self-reflection and/or self-evaluation.			
Enduring Understanding			
The Student Should Know:			
<ul style="list-style-type: none"> • How prices are determined by the behavior of many individuals in the market. 			
The Student Should Be Able to Do:			
<ul style="list-style-type: none"> • Describe how changes in a stock's price influence the number of shares people want to buy. • Describe how changes in a stock's price influence the number of shares people want to sell. • Explain why buyers and sellers adjust their offering bids and prices to achieve the equilibrium price for a stock. • Determine the stock's equilibrium price when given a table showing demand and supply data. 			

Essential Question(s)

What is the value of understanding systems of finance?
Question of the Day: How are stock prices determined?

Teacher Lesson Preparation

See Materials Resources below

Vocabulary

Demand, Equilibrium Price, Supply

Activating Strategy

Poll the class on who would like to become a doctor or lawyer. What do these two professions have in common? How are both professionals like detectives? What common skills do both need to develop to solve mysteries within their profession? What other professions solve mysteries?

Instructional Sequence and Activities Including Use of Technology

1. Display *Stock Prices: Why Do They Change?*. Explain to students that price changes in the stock market are a **mystery** to many people and today they will solve that mystery. Students will work individually to **develop a list of tentative hypotheses**.

Divide the class into two groups: buyers and sellers. Each group will **develop a team hypothesis** for the changes in the stock market.

2. Distribute **clue #1** *The Highs and Lows of Washing Cars* (for buyers) and *The Highs and Lows of Washing Cars* (for sellers). Ask each student to read and complete the activity. While they are doing so, put the Summary Table on the Activeboard.

When students have made their estimates, and filled in the blanks on their Activity sheets, ask one of the buyers to collect all the buyers' sheets and one of the sellers to collect all the sellers' sheets. Then have a few of the buyers tally the buyers' sheets and a few of the sellers tally the sellers' sheets. Tell them they should add the number of car washing hours demanded or supplied at each price. Have the students put the totals in the appropriate columns in the summary table on the Activeboard. Each group will **refine its hypothesis and propose a solution to the mystery**.

Explain: The buyers' column in the summary table shows that people will buy more car washing hours at lower prices than at higher prices. Inform students that they have revealed *the law of demand*. Display *The Law of Demand* to stress this point.

Now direct students' attention to the sellers' column. Inform students that they have revealed *the law of supply*. Display *The Law of Supply* to stress this point.

3. **Clue #2**-Tell students they are now going to use this knowledge of supply and demand to participate in a market. Keeping the same teams, assign one-half of the students to the role of seller and one-half to the role of buyer by cutting out the *Buy and Sell Cards* and distributing them to the class, one per student.

Ask students to read their cards carefully. Assign one student to be keeper of the cards and record the transactions on *Classroom Summary*. Review *Sunscape Company Game* instructions with students and answer any questions they have about their roles. Also distribute *Student's Score Sheet* and review the directions for keeping the score sheet.

After five minutes, stop the first round of playing. Display the Summary Table (which the recorder has completed for the first round to show students a summary of their exchanges). Tell students that the summary contains information useful to them in the next round. (Do not explain the information.) The data should show a wide range of prices, but more of the prices will be near \$15 because that price balances the amounts of stock demanded and supplied. Students will discover that their total gain will probably be greatest by having more exchanges at \$15, even though each of those exchanges provides a smaller gain than they originally wanted. As students obtain more information about the equilibrium price, exchange prices will concentrate more closely around it.

Have students play the second and third rounds. After the last round, have students **categorize what they have done and determine cause and effect relationships. Students will further refine their hypothesis and propose a solution to the mystery.** Have students use the Summary Table to show students a summary of their exchanges. Ask students what, if anything, that information tells them. (*Answer: It should indicate that as trading progressed through each round, competition among players helped concentrate exchange prices more closely around the price of \$15.*)

4. Each Team will share its solution with the class.

Distribute *Nice Price*. Explain to students that it will help them understand why the exchanges prices in this game concentrated around \$15. Have them read and complete the activity. Discuss with students **making sure they understand the solution to the mystery.**

Answers for Table 2

TABLE 2		
Price Per Share	Number of Shares Sellers Want to Sell	Number of Shares Buyers Want to Buy
\$ 25	<u>22</u>	<u>12</u>
\$ 20	<u>18</u>	<u>18</u>
\$ 15	<u>10</u>	<u>26</u>
\$ 10	<u>2</u>	<u>34</u>
\$ 5	<u>0</u>	<u>38</u>

Assessment Strategies

Wraparounds

In a circle, each student will take a turn telling...

- Something I will use from what I learned today
- Something I will remember from today
- A significant AHA from today

OR

Journal

Consider the following comment made in a television news program editorial:

Stock prices are too high! The average person cannot afford to buy stocks as investments anymore. This situation is a threat to our economy. If people cannot afford to buy stocks anymore they will lose faith in the American Dream. Government regulators should require all sellers to make stocks available at \$30 or less so everyone can afford them. If low stock prices existed for good companies, everyone would have a chance to be rich.

Use the ideas of supply, demand, and equilibrium price to evaluate this statement.

(Answer: Setting a price on stocks will prevent the price from responding to changing conditions of supply and demand. If the price is set too low, many people wishing to buy stocks will not be able to purchase them because sellers will not make

enough available at that low price to satisfy every buyer. Moreover, if you can buy a stock at a low price but it cannot rise in the future, you will not make money or grow wealthy.)

Differentiation Lesson is clearly differentiated for gifted learners by use of one or more of the following: acceleration, extensions, enrichment, tiered activities. Lesson incorporates concepts, principles, cognitive skills, and methodologies that can be transferred across disciplines. Activities require students to analyze, synthesize, and/or evaluate.

- Students will have a choice of brainteaser activities if they complete their work ahead of others.
- Assessment Strategy

Materials/Text References/Resources

- How are Stock Prices Determined?
- Stock Prices: Why Do They Change?
- The Highs and Lows of Washing Cars (for Buyers)
- The Highs and Lows of Washing Cars (for Sellers)
- Summary Table
- The Law of Demand
- The Law of Supply
- Classroom Summary
- Buy and Sell Cards
- Sunscape Company Game Rules
- Student's Score Sheet
- Solution
- Nice Price
- Journal Prompt