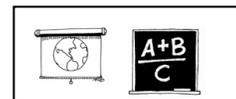




SS - The Young Apprentice



Background: In this lesson there are two choices for introducing the green chemistry crayon simulation. One is based upon the television show, The Apprentice. There are two scripts to use with this simulation. The other one is a game show in which the simulation is introduced. You may choose which way you introduce the simulation based upon your students and your teaching style. The crayon company simulation will test students' ability to be entrepreneurial, while applying the concepts of green chemistry.

Goal: Introduce students to the crayon company simulation.

Objectives: Students will ...

- Apply business goals and company mission to the simulation.
- Gain an introductory understanding of economics.
- Group into a company and take on business roles.

Materials (for a class of 32):

- 32 copies of The Young Apprentice Student Sheet
- 30 copies each of The Young Apprentice Accountant's Expense Ledger Sheet
- 8 Company Storage Bins for each group (a shoe box works well)
- 8 large zipper bags to act as the Company Waste Container for each group
- Optional: Donald Trump and Martha Stewart costumes
- Optional: Video clip of The Apprentice

Time Required: 45–60 minute class period

Standards Met: E1, E2, E3, E9, E11, E14, M1

Green Chemistry Principles Addressed: 1–12

Procedure:

IN CLASS

- Divide students into company teams with four members.
- Optional – show The Apprentice video clip.
- Donald Trump and Martha Stewart enter arguing (see The Young Apprentice Script). They are presenting the latest business challenge to your students: students need to work together to create a successful crayon company (see The Young Apprentice Script). If you don't have anyone willing to play the roles, you can say that you have received a letter from Mr. Trump and Ms. Stewart and give a copy to each student with The Young Apprentice Script.
- Pass out The Young Apprentice Student Sheet to each student.
- Explain the company, product, and student expectations.

- Review the job descriptions. Allow each group time to determine company roles.
- Pass out The Young Apprentice Accountant's Expense Ledger Sheets.
- Go over the steps for keeping their ledger.
- Pass out the Company Portfolio binder and explain that they will be adding information to this as they go.
- Explain the Green Chemistry Seal and that each worksheet with this logo on it must go in the binder and be initialed by each member of the company. They will receive a grade for this portfolio at the end of the unit.
- Hand out company storage bins (shoe boxes) and company waste container and ask students to put their name on everything and place it all inside.

Follow-Up:

- Have students come up with a name for their company for the next class period.

Assessment:

- Class participation



The Young Apprentice - Student Sheet

Your task is to create a successful crayon company and to bring color to the world by providing high-quality crayons.

Company Expectations	Product Expectations
Determine company vision	Integrate chemical processes into crayon development
Create company name and logo	Label each crayon
Keep accurate records of company expenditure and revenue. Consider budget constraints.	Designate a unique name for each color
Develop a marketing and advertising presentation	Design packaging for multiple crayons
External evaluation of crayons	External evaluation of crayons – based upon the Principles of Green Chemistry

Company Job Descriptions

Chief Executive Officer (CEO) – You are the spokesperson and arbitrator among members of the company. The CEO is the final decision-maker, but has a belief in encouraging the others to reach consensus. The CEO is not a specialist, but a manager trying to draw the best from the others. The CEO is not dictatorial, but will make difficult decisions if there is a dispute. The CEO is very sensitive about company image and is concerned with ensuring that the company is profitable. The CEO is ultimately responsible for company actions.

Qualities and skills of a CEO: fair, strong math skills, good communicator, well-balanced social skills, strong decision-maker, responsible.

Vice President, Environmental Affairs – This person is very conscientious about the company's effect on the environment. It is his/her job to keep track of any environmental laws and report environmental impacts to the CEO. This person is heavily involved in the crayon design and process, packaging, and waste management. This person should make sure that all the company waste gets into the company waste container. He/she should offer suggestions and do analysis of each step of the crayon production process.

Qualities and skills of a Vice President, Environmental Affairs: outspoken, strong record keeping capabilities, understand cause and effect, and understand environmental laws and chemical processes.

Vice President, Finance – This team member is a number cruncher. This person is very conscientious about economics. He/she is concerned about expenses and needs to keep track of all company expenses. It is his/her job to keep track of finances on The Young Apprentice Accountant's Expense Ledger Sheet and report budget updates to the CEO. This person is heavily involved in the crayon design and process, packaging, and waste. He/she should offer suggestions and do analysis of each step of the crayon production process.

Qualities and skills of a Vice President, Finance: strong math skills, logical thinker, record keeping and wise spending habits.

Vice President, Community Relations – This person needs to have an outgoing personality. He/she is a liaison between the community, consumers, and the company. This team member must balance community needs, such as jobs or health risks with business practices. It is his/her job to keep track of any human concerns and marketing potential throughout the crayon production. This person should offer advice on meeting community and consumer needs at each step. This person should record any potential impacts on humans and report to the CEO.

Qualities and skills of a Vice President, Community Relations: strong verbal and written communication skills, listening skills, understand chemicals and chemical processes, good grasp on laws, and good judge of character.



The Young Apprentice - Script



Costume: Donald Trump

- Comb your hair over to look like you are covering a bald spot
- Wear a business suit or tuxedo
- With make-up draw on bushy eyebrows

Costume: Martha Stewart

- Blonde wig
- Prison outfit

Script:

Say the following:

Enter arguing about Martha's TV show.

Donald: Your show just sucks Martha and everyone is overhearing your sob story about your time in white collar prison. Get over it—this is business!

Martha: Talk about things that suck, the comb over is so out Donald and people only watch your show to see Ivanka in a short skirt. And what is this about you asking her out, sleazebag!

Donald: Just shut your jailbird mouth, K-Mart queen! There are people here and I have a job to do. OK team members, I am here to assign you a task. Due to the success of MY NBC hit TV show The Apprentice, workers at my crayon factory have all quit in hopes of auditioning for the show and becoming a high-powered, suit-wearing, people-firing executive. They have taken with them all the knowledge and secrets of making a great crayon and we will go bankrupt if we don't do something about it.

Martha (while making an art project): You should just play the stock market instead; it is a great way to make easy money.

Donald: Your team's mission is to form a crayon company, set up business, purchase materials, experiment with production and design, and create a marketing plan. You will be in direct competition with the other teams to see who can behave ethically and make the crayon that adheres most closely to the Principles of Green Chemistry...

Martha: Chartreuse is so much more in this year.

Donald: ...while still being cost-effective. You will be engaging in various fun challenges along the way where you will have to make many important business decisions. Good Luck and I'll be back in the board room to give a Green Chemistry Award for the business that has followed the Principles of Green Chemistry most closely. Right now I have to go and fire some people and buy out some more companies. Martha, your show has been cancelled and you're fired!

Martha: I don't care. I just got a contract with MTV to be in their new show The REAL World: Prison Edition.

Donald: teacher and _____ will be my eyes and ears throughout this process and they will report back to me.

Sign some autographs even if the kids don't want them. If any of the students are not paying attention, tell them they are fired!



Alternate Script

D: I see there is another show you can't keep a job with huh Rosie? I guess one has to have a point of view to host the view!

R: And what point of view do you have Don? Except for the one out your penthouse window!

D: And the only thing you have close to a penthouse is pent-up anger. Really, you should lighten up a bit Ro.....Don't be a hater!

R: A Hater? What I hate is that you didn't lose that bet with McMahon and have to shave your head. We might have found the cure for all the world's diseases in there. Or at least a missing species!

D: Oh just zip it Ro...There are people here and I have a job to do. OK team members, I am here to assign you a task. Due to the success of MY hit TV show The Apprentice...

R: HIT? I heard you were in danger of being canceled

D: Like I was saying.....due to the success of my hit TV show the apprentice,

R: It should be called The Appendix.....uselessand a pain in my side

D: Can someone mute the motor mouth??....workers at my crayon factory have all quit in hopes of auditioning for The Apprentice and becoming a high powered, suit - wearing, people -firing executive. They have taken with them all the knowledge and secrets of making a great crayon and we will go bankrupt if we don't do something about it

R: Again with the Bankruptcy...how many times have you filed now Don?

D: (Frustrated but not responding to her comment) Your team's mission is to form a crayon company, set up business, purchase materials, experiment with production and design, and create a marketing plan. You will be in direct competition with the other teams to see who can behave ethically and make the crayon that adheres most closely to the Principles of Green Chemistry

R: Ethically? Trump Ethics 101. Again with the moral compassing, Donald? Didn't you learn your lesson with that Miss U.S.A. chick?

D: (still frustrated) While still being cost-effective.

R: Ah, I knew it would come back to money

D: You will be engaging in various fun challenges along the way where you will have to make many important business decisions. Good Luck and I'll be back in the board room to give a Green Chemistry Award for the business that has followed the Principles of Green Chemistry most closely. Right now I have to go and fire some people and buy out some more companies. Teams, your teacher will be following your work on this task closely and will be my eyes and ears throughout the process. And for you Rosie, you're fired.....oh wait.....you don't have a job!



SS – Is It Easy Being Green Game Show

Background: This introduction to the crayon company simulation is based upon a generic game show. The crayon company simulation will test students' ability to be entrepreneurial, while applying the concepts of green chemistry.

Goal: Introduce students to the crayon company simulation.

Objectives: Students will ...

- Apply business goals and company mission to the simulation.
- Gain an introductory understanding of economics.
- Group into a company and take on business roles.

Materials (for a class of 32):

- 32 copies of Is It Easy Being Green Student Sheet
- 30 copies each of Is It Easy Being Green Accountant's Expense Ledger Sheet
- 8 Company Storage Bins for each group (a shoe box works well)
- 8 large zipper bags to act as the Company Waste Container for each group
- Optional: game show host costume

Time Required: 45–60 minute class period

Standards Met: E1, E2, E3, E9, E11, E14, M1

Green Chemistry Principles Addressed: 1–12

Procedure:

PREP

- Make 3 transparencies of the answers for each of the questions
- Cover the words with small post-it notes
 - You may want to write the answer on the post-it note to make it easier to determine what is written underneath!

IN CLASS

- Divide students into 2 teams to compete on the game show.
- The host, Kelly Chartreuse (or any host name of your choice) enters and introduces the game show. It is similar to Family Feud.
- Place the first transparency on the overhead.
- Ask one student from each team to come up and stand next to the host. After you ask the question, the first student to squeeze your hand may answer the question.
- Read the first question. If the first student to squeeze your hand answers correctly, uncover that answer on the overhead.
 - That team now has control of the board. Ask each student one at a time to give an answer.

- If that team gets 3 strikes, the other team may answer. They get all of the points if the answer correctly.
- Repeat the process for questions 2 and 3.
- Tell the students that they are not entering into the final challenge.
- Read the Final Challenge card.
- Pass out Is It Easy Being Green Student Sheet to each student.
- Explain the company, product, and student expectations.
- Review the job descriptions. Allow each group time to determine company roles.
- Pass out Is It Easy Being Green Accountant's Expense Ledger Sheets.
- Go over the steps for keeping their ledger.
- Have students add their total number of points as dollars to the ledger. Each answer is worth 1 point.
- Pass out the Company Portfolio binder and explain that they will be adding information to this as they go.
- Explain the Green Chemistry Seal and that each worksheet with this logo on it must go in the binder and be initialed by each member of the company. They will receive a grade for this portfolio at the end of the unit.
- Hand out company storage bins (shoe boxes) and company waste container and ask students to put their name on everything and place it all inside.

Follow-Up:

- Have students come up with a name for their company for the next class period.

Assessment:

- Class participation



Is It Easy Being Green Game Show - Student Sheet

Your task is to create a successful crayon company and to bring color to the world by providing high-quality crayons.

Company Expectations	Product Expectations
Determine company vision	Integrate chemical processes into crayon development
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Vice President, Finance – This team member is a number cruncher. This person is very conscientious about economics. He/she is concerned about expenses and needs to keep track of all company expenses. It is his/her job to keep track of finances on Is It Easy Being Green Accountant's Expense Ledger Sheet and report budget updates to the CEO. This person is heavily involved in the crayon design and process, packaging, and waste. He/she should offer suggestions and do analysis of each step of the crayon production process.

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Is It Easy Being Green Game Show - Questions and Answer Key

The first box of Crayola crayons was sold in 1903. Name the 8 colors in that box.

- Black

- Brown

- Red

- Blue

- Yellow

- Green

- Violet

- Orange

8 things kids accidentally eat:

- Coins
- Marbles
- Gravel/dirt
- Crayons
- Their own feces
- Play-dough
- Glue
- toothpaste

8 ways people reduce energy use

- Turn off lights
- Adjust thermostat
- Shower together
- Energy efficient light bulbs
- Waste prevention or reduction
- Energy star appliances
- Gasoline reduction
- Alternate energy sources

FINAL CHALLENGE

For the final challenge you will now be reassigned to a team. Your team's mission is to form a crayon company, set up a business, purchase materials, experiment with production and design, and create a marketing plan. You will be in direct competition with the other teams to see who can behave ethically and make the most sustainable crayon which adheres to the Principles of Green Chemistry. You will be engaging in various fun challenges along the way where you will have to make many important business decisions. You will all return to our next show to demonstrate your product and vie for the coveted Green Chemistry Award.

For now this has been Kelly Chartreuse. See you next week on "Is It Easy Being Green". Keep it easy and keep it green...



Is It Easy Being Green - Name and Logo Grading Rubric

	5	4	3	2	1
Quality	Extremely Neat and colored	Good Quality and colored	Okay Quality, partially colored	Poor Quality no color	Very Poor Quality
Name	Extremely creative & related to Green Chemistry	Creative & related to Green Chemistry	Fairly creative & somewhat related to Green Chemistry	Either lacking in creativity or not clearly related to Green Chemistry	Lacking in creativity & not related to Green Chemistry
CUPS	0 grammar or spelling mistakes	1 grammar or spelling mistake	2 grammar or spelling mistakes	3 grammar or spelling mistakes	more than 4 grammar or spelling mistakes
Logo	Extremely creative, cleverly tied to your name, and related to Green Chemistry	Creative, tied to your name, and related to Green Chemistry	Fairly creative, somewhat tied to your name, and related to Green Chemistry u	Either lacking in creativity, not clearly tied to your name, or not clearly related to Green Chemistry	Lacking in creativity, not tied to your name, & not related to Green Chemistry