Science Experiment

Which Color Apple Will Rot Faster?

Complete Kit

SCIENCE

ReneeDAWN

Science Experiment

Which Color Apple Will Rot Faster?

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Science Experiment - Science Fair Project

Which Color Apple Will Rot Faster?

A science experiment for your science fair! This is a complete science fair project, including printables for every area of your tri-fold, photos of the apples in this science project, and possible student hypotheses. A science fair problem, hypotheses, materials, procedure, observations, results, and conclusion.

How to Present the Lesson, step-by-step. Cheat Sheet: 2-page overview of the science project, Tips and facts to support your project, outline of the scientific method, blank outline of a trifold project to help your kids present their own science projects. How to Make your Tri-Fold "Pop."

Just print out, add your class name, children's quotes (if you'd like), and glue onto a tri-fold, which you may purchase at an office, school or craft supply store for about $5.00.

The standard tri-fold, 48" w X 36 h" is ideal.

The writing is on borderless paper so you may customize and choose which pages to use, as well as the layout. The Tri-fold pages total 23.

It's a great way to teach kids how to create a science fair project using the scientific method.

All you need are red and green apples—two of each—to complete this experiment. The full experiment will take about 4 weeks to complete.

Common Core Aligned.

For a large, colorful view of these pages, simply open the PDF on your Smartboard.

I hope you enjoy this…and if you would kindly leave your rating and feedback at
https://www.teacherspayteachers.com/Product/Science-Fair-Project-Complete-Science-Experiment-Tri-Fold-Apple-Rot-1674570
it would be greatly appreciated!

Suggestions for Use

For the Tri-fold:

- Print out the tri-fold pages. You may print in color or grayscale.
- Print the photos of the apples in color for best results.
- PHOTOS: Many pharmacies and office supply stores can print a single photo from a page on this PDF file.
- Fold and cut off the excess paper on the bottom of each sheet, as necessary.
- Arrange in order on the tri-fold, as seen in the Completed Tri-fold Sample.
- Cut the photos of the apples and arrange in the center section of the tri-fold, next to the materials and procedure sheets. Use either two large photos or the single small photo.
- Add the number of children who guessed one way or the other in the Hypothesis section.
- Add your own class name.

Optional:

- Print onto various colored papers.
- Mount sheets onto colored paper before you glue to the tri-fold.
- Re-create the title out of decorative letters.
- Add children's hypotheses, observations, or results on typed sheets or hand-written by children.
- You may include a graph of children's hypotheses, or guesses. Cut paper tickets on which children write their names, draw an apple, and color it red or green. Line these up in two rows according to color.
- Add your own red and green apples to the display. Apples will take about 4 weeks to rot.
- *The Science Standard included may vary by State. You may use the writing standard, which is universal, instead.*

Apple Tips

- It will take approximately 4 weeks for apples to ripen and then rot, in typical room temperatures.
- To ripen apples faster…
  - Use organic apples with no wax coating.
  - Or, place soft or bruised apples in a small, warm box.
  - Or, place the apples in a brown paper bag. The naturally present enzymes that cause growth and decay, will emit ethylene oxide and the apples will be exposed to a concentrated dose in the bag.
- To ripen apples slower…
  - Refrigerate the apples.

Present the Lesson, part 1:

1) Buy two ripe apples, one red and one green, with similar shapes and sizes. They can be a sweet Red Delicious and a tart Green Granny Smith, or similar type.
2) Display your two apples to the children. Ask, "What do you notice or wonder about these apples?" You may write their down their observations and questions.

3) Say: We're going to do a science experiment together.
4) Scientists look at the world and then ask questions—just like we did.
5) Let's choose *one* question we want to answer: Which color apple will rot faster; red or green?
6) Next, a scientist will guess the answer. We call that a *hypothesis*.
7) We want to know what you *really* think will happen, so don't tell anyone. Just think: which apple do you imagine will rot faster—red or green?
8) You will write your name on this ticket—very neatly and very small—and then draw an apple with your pencil. (Demonstrate)
9) Color your apple red or green, and remember: don't show your friends!

10) Children will follow the directions.
11) You may have all the kids with red pictures hold up their tickets, then all the greens. Ask which is more, red or green? You may count the raised hands, or collect the tickets and glue them on to a bar-graph to show which is more.

Present the Lesson, part 2:

12) Say: Now we will *test* our guesses, or hypotheses. How should we do that? (Let the apples rot over time, and see which one will rot faster.)
13) After about 4 weeks, you may observe, touch, smell, and taste the apples the apples.

14) Remind kids that scientists use their five senses.
- What do you see? (The red apple is shrunken, smaller, pockmarked, holed. The green apple is large and shiny.)
- What do you smell? (The red apple smells sweet. The green apple smells tart.)
- What do you feel? (The red apple is soft, mushy, rough, and bumpy. The green apple is hard and smooth.)
- What do you hear? *Can* you hear an apple? (The red apple makes a squishy sound when you squeeze it. The green apple makes no sound.)
- What do you taste? (A fresh ripe red apple tastes sweet. A green apple tastes tart.)

[You may cut thin slices, enough for each child, and give them out on a napkin.]

15) Ask: Which apple rotted faster? (Red)
16) Did most of us guess correctly what would happen?
17) That's what a scientist does: guess, test and tell what happens.
18) A scientist is happy if the first guess is wrong, because that means that he or she has learned something new.
19) A scientist never stops wondering about the world.
20) What might you conclude? *Why* do you think the red apple rotted faster? (The red apple smelled and tasted sweeter. Maybe a bacteria that eats the sugar in the red apple also makes it rot faster.)

To Customize the Tri-Fold Writing:

If you would like to type and print some of your own sheets, for instance, to customize the student hypotheses, these are the fonts used:

- All print is Arial style font.
- Font size is 44. Title Page font is size 54. Hypothesis, Data/Observations and Results font is size 40.
- Page layouts are "landscape," on standard printing paper printed horizontally.

Tech Tip:

- For easy, paperless, and large-print access, open this PDF on a Smartboard.
- Simply place the PDF onto your Smartboard desktop.
- Click to open the file, and type your page number or click the down arrow to find your page.

How To

Make Your Tri-Fold "Pop"

Suggested Presentation

- Use a colorful tri-fold background: neon, pastel or classic-colored.
- Create a title using large craft-letters, with bright colors, glitter, multi-colors, or designs.
- Add a decorative border around the tri-fold.
- Mount some or all of the information, photos and objects on white, neon, pastel, or classic-colored paper or cardstock. Then glue it to your tri-fold.
- Add decorative arrows—straight, curved or squiggly—for instance, pointing from the materials list to the photos of materials. Arrows are included in this kit.
- Add a giant craft cutout of something from your experiment; e.g., a single large apple.
- Add a photo of your entire class studying an apple.
- Add 3-D elements in your display, for example, red and green apples.

The Scientific Method

1) Problem (Question)
   What do you want to find out?
   What problem do you want to solve?

2) Guess
   What do you think will happen?

3) Materials
   List everything you used. Be specific.

4) Procedure
   How did you test your guess? Write it out step by step.

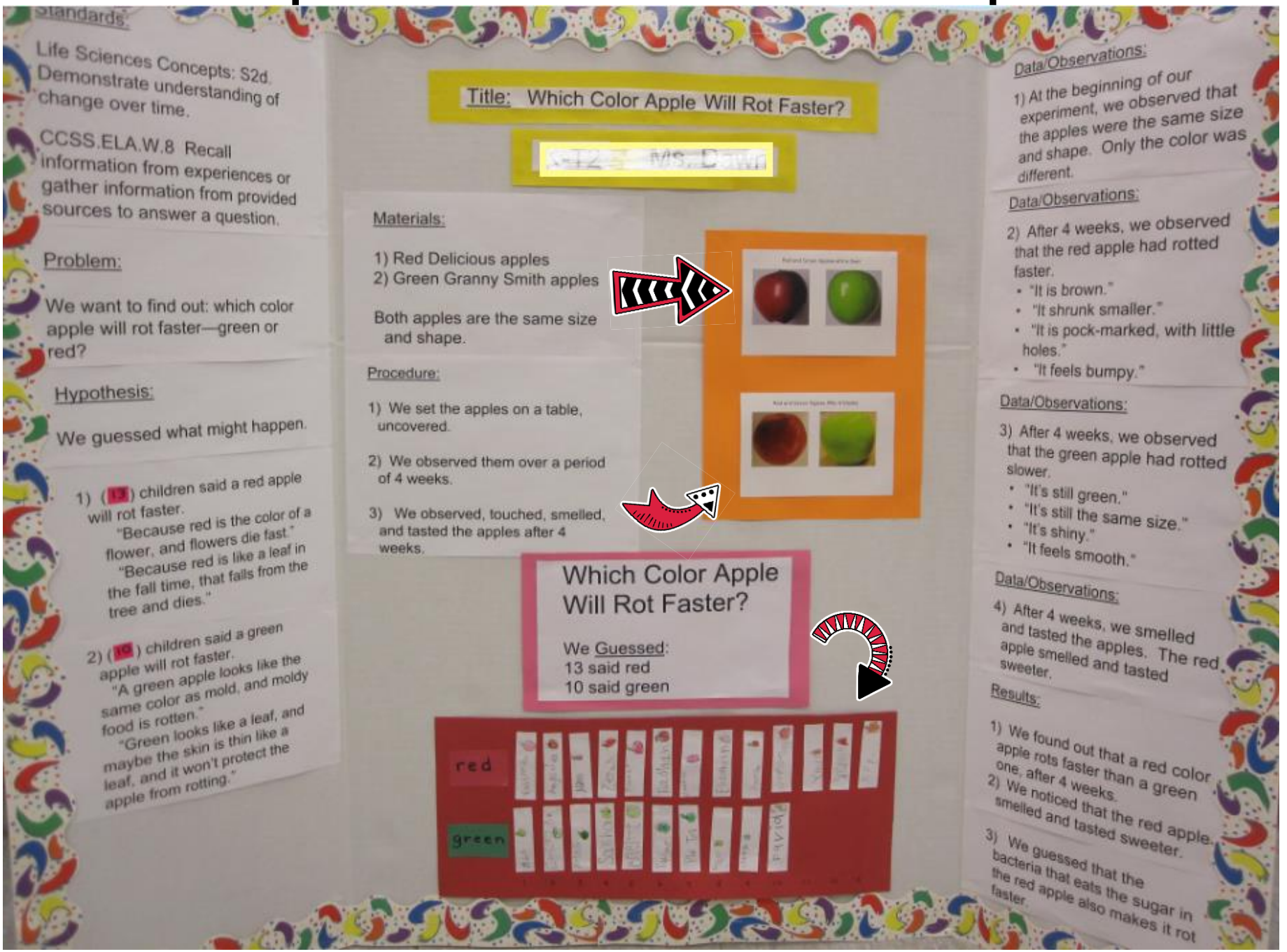
5) Observations & Data
   Write, draw, or use photos, graphs, tables, charts, diagrams.
   Use your 5 senses.

6) Results
   What happened? What did you see? What did you learn?
   What conclusions did you make?

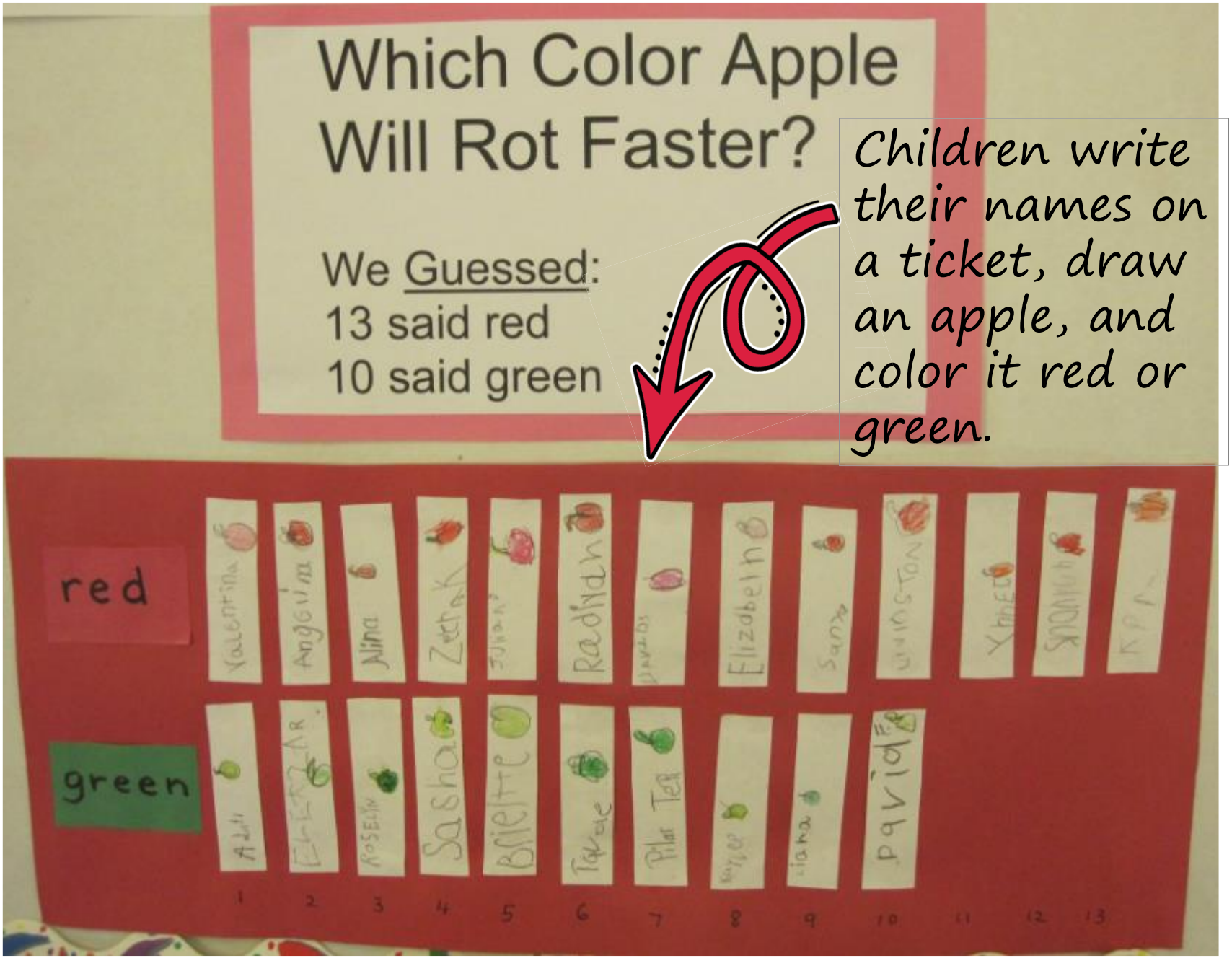
Tri-Fold Set-Up

<u>Standards</u> CCSS <u>Problem</u> What do you want to find out? <u>Guess</u> What do you think will happen?	<u>Title</u> May be the same as your problem. <u>Materials</u> List everything you used. <u>Procedure</u> Tell the steps in your experiment.	<u>Observations & Data</u> Write, Draw, add Photos, Graphs, Charts, Diagrams. <u>Results</u> What happened? What did you learn? Name Class

Completed Tri-Fold - Sample



Completed Tri-Fold – Hypothesis Graph – Sample



Children write their names on a ticket, draw an apple, and color it red or green.

Which Color Apple Will Rot Faster? Overview p. 1

Title: Which Color Apple Will Rot Faster?

Standards:

Life Sciences Concepts: S2d.
Demonstrates understanding of change over time.

CCSS.ELA.W.8 Recall information from experiences or gather information from provided sources to answer a question.

Problem:
We want to find out: which color apple will rot faster—green or red?

Hypothesis:
We guessed what might happen.

1) ( ) children said a red apple will rot faster.
"Because red is the color of a flower, and flowers die fast."
"Because red is like a leaf in the fall time, that falls from the tree and dies."
2) ( ) children said a green apple will rot faster.
"A green apple looks like the same color as mold, and moldy food is rotten."
"Green looks like a leaf, and maybe the skin is thin like a leaf, and it won't protect the apple from rotting."
3) ( ) children said a red and green apple will rot equally fast.
"Because they are the same inside."
"The red and the green skin look the same, except for the color. The apples might be the same under the skin."

Which Color Apple Will Rot Faster? Overview p. 2

Materials:

Red Delicious apples
Green Granny Smith apples
Both apples are the same size and shape.

Procedure:

1) We set the apples on a table, uncovered.
2) We observed them over a period of 4 weeks.
3) We observed, touched, smelled, and tasted the apples after 4 weeks.

Data/Observations:

1) At the beginning of our experiment, we observed that the apples were the same size and shape. Only the color was different.
2) After 4 weeks, we observed that the red apple had rotted faster.
   "It is brown."
   "It shrunk smaller."
   "It is pock-marked, with little holes."
   "It feels bumpy."
3) After 4 weeks, we observed that the green apple had rotted slower.
   "It's still green."
   "It's still the same size."
   "It's shiny."
   "It feels smooth."

4) After 4 weeks, we smelled and tasted the apples. The red apple smelled and tasted sweeter.

Results:

1) We found out that a red color apple rots faster than a green one, after 4 weeks.
2) We noticed that the ripe red apple smelled and tasted sweeter.
3) We guessed that a bacteria that eats the sugar in the red apple also makes it rot faster.

Title:

Which Color Apple Will Rot Faster?

Standards:

Life Sciences Concepts: S2d. Demonstrate understanding of change over time.

CCSS.ELA.W.8 Recall information from experiences or gather information from provided sources to answer a question.

Problem:

We want to find out: which color apple will rot faster—green or red?

Hypothesis:

We guessed what might happen.

[Optional: Include a graph of children's guesses. Cut paper tickets on which children write their names, and color over their names with red or green color. Line these up in two rows.]

1) ( ) children said a red apple will rot faster.

"Because red is the color of a flower, and flowers die fast."

"Because red is like a leaf in the fall time, that falls from the tree and dies."

2) ( ) children said a green apple will rot faster.

"A green apple looks like the same color as mold, and moldy food is rotten."

"Green looks like a leaf, and maybe the skin is thin like a leaf, and it won't protect the apple from rotting."

3) ( ) children said a red and green apple will rot equally fast.

"Because they are the same inside."

"The red and the green skin look the same, except for the color. The apples might be the same under the skin."

Which Color Apple Will Rot Faster?

We Guessed:

said red

said green

Print this page and add quantities showing how many children guessed red and how many guessed green. This will go in the center panel of your Tri-fold.
Optional: Create your own class hypothesis graph.

Materials:

1) Red Delicious apples
2) Green Granny Smith apples

Both apples are the same size and shape.

Procedure:

1) We set the apples on a table, uncovered.

2) We observed them over a period of 4 weeks.

3) We observed, touched, smelled, and tasted the apples after 4 weeks.

Data/Observations:

1) At the beginning of our experiment, we observed that the apples were the same size and shape. Only the color was different.

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- “It’s still green.”
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Results:

1) We found out that a red color apple rots faster than a green one, after 4 weeks.
2) We noticed that the red apple smelled and tasted sweeter.

3) We guessed that the bacteria that eats the sugar in the red apple also makes it rot faster.

Class:

Name:

Red Apple at the Start

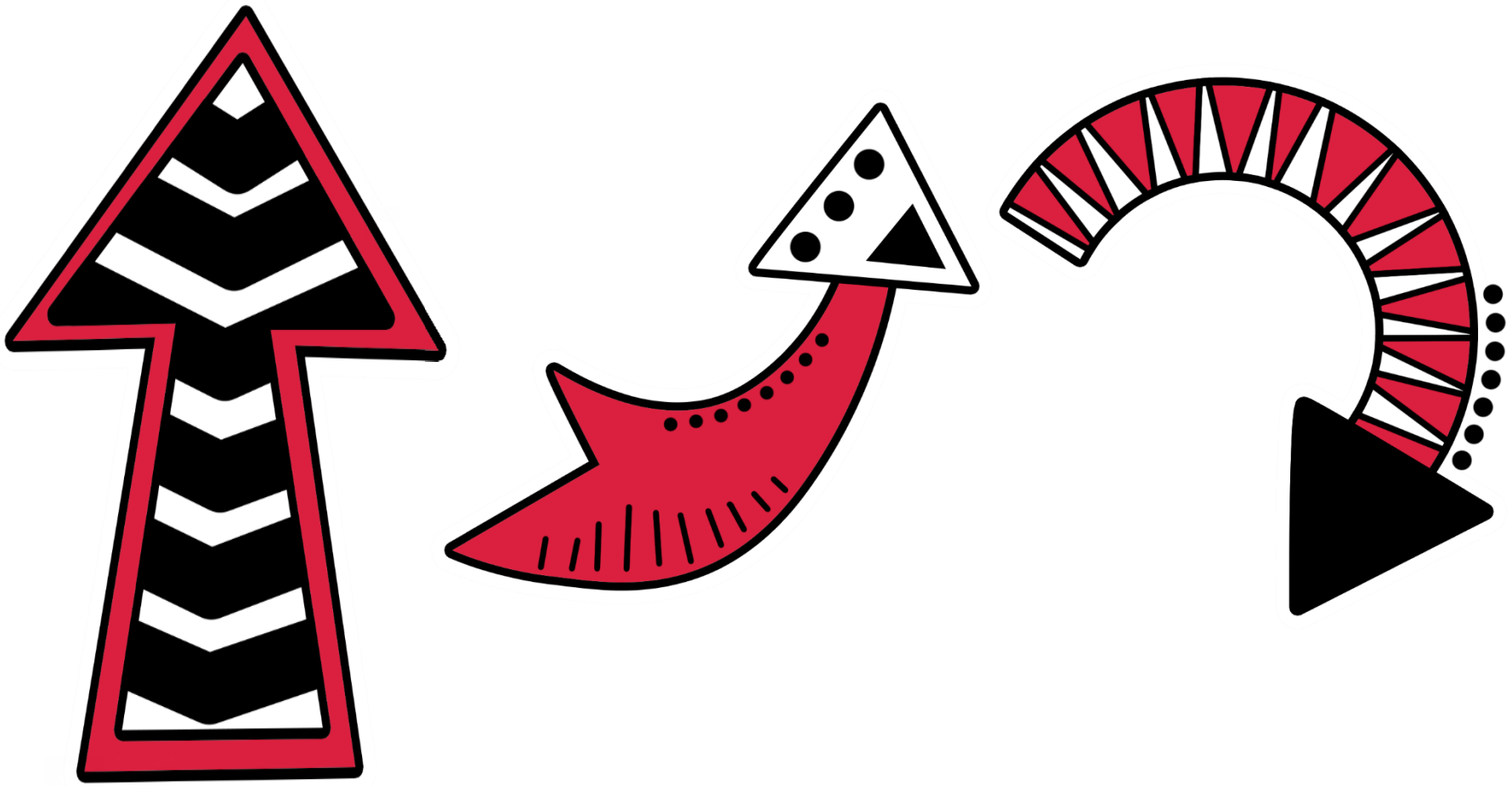
Green Apple at the Start

Red Apple After 4 Weeks

Green Apple After 4 Weeks

Red and Green Apples at the Start

Red and Green Apples After 4 Weeks



Add decorative arrows to your tri-fold; for instance, pointing from the materials list to the photos of materials. Print arrows in full color or gray scale; on neon, pastel, or classic-colored paper or cardstock. Cut out the arrows and glue to your tri-fold where desired. For a 3-D effect, put a dab of glue at the point and at the end of the arrow. Instead of laying the arrow flat, move the two ends slightly toward each other and hold down till the glue dries.

Thank you for your purchase !

I hope you enjoy using your Science Experiment.

If you would kindly leave your rating and feedback at
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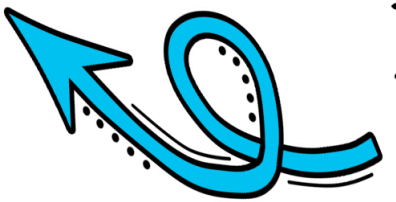

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Borders from Kimberly Geswein
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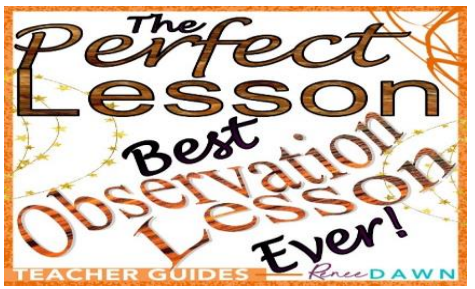
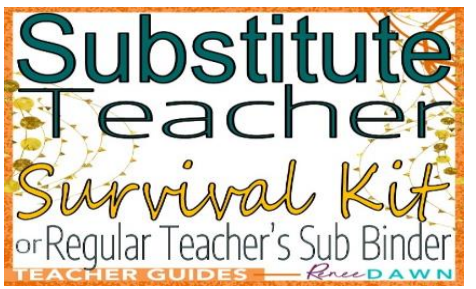
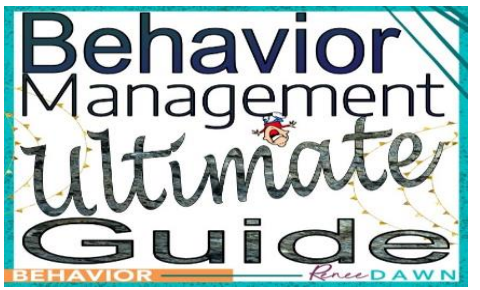
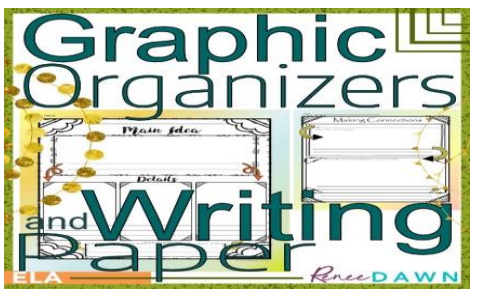
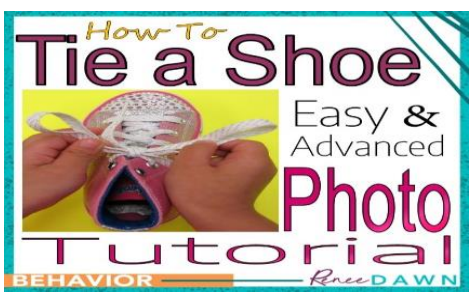
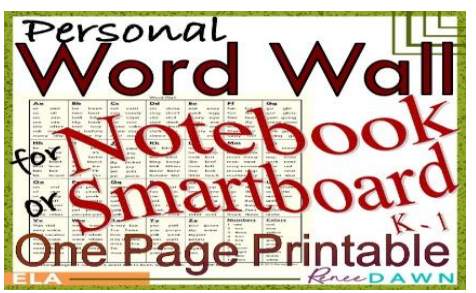


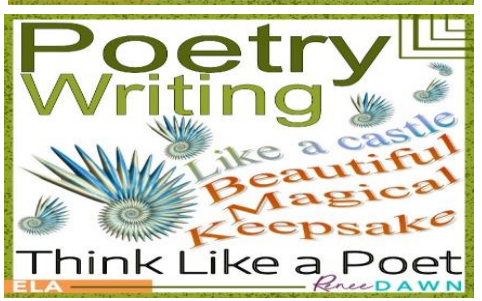


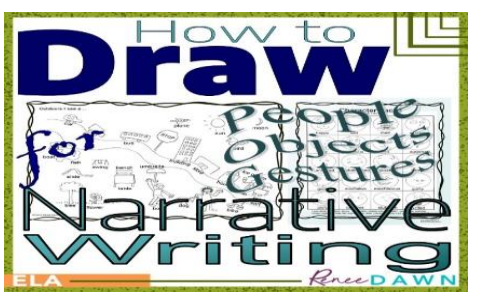




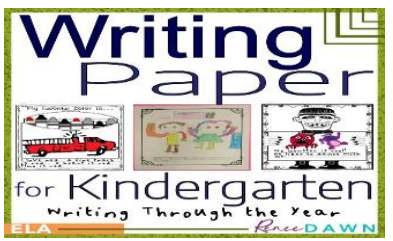


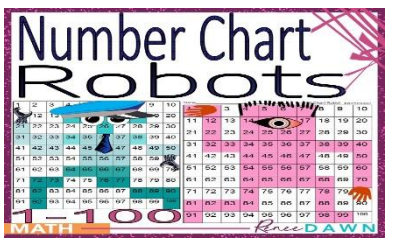


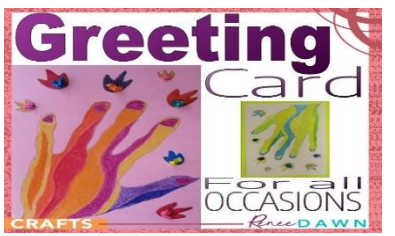


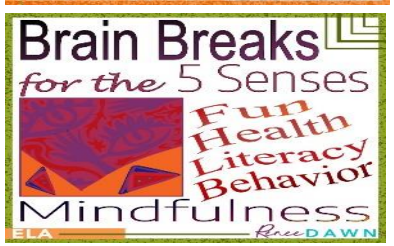


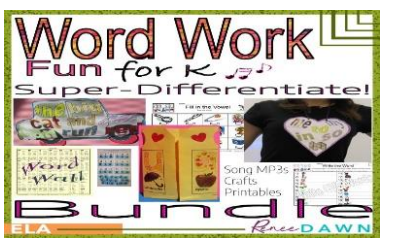
More Resources from Renee Dawn

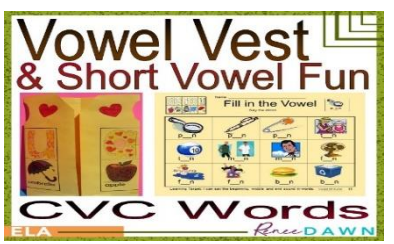


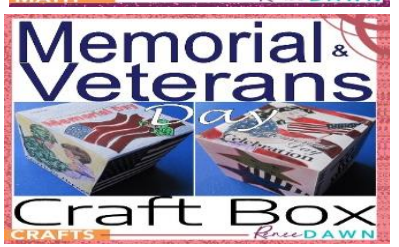


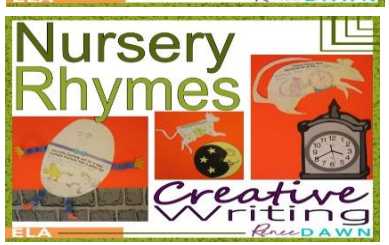


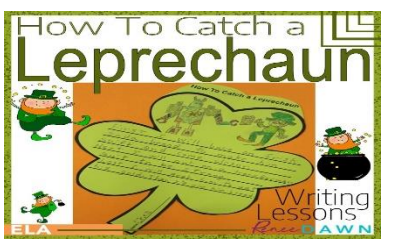












More Resources for

Behavior Management

[School Rules: Checklists and Discussions]

- How to teach rules so they "stick"
- Teacher scripts for teaching rules and routines
- Lesson and bulletin board display with a rubric:
  My Favorite Rule
- Feel CALM and CONFIDENT in the classroom

Also...