

ideas with IMPACT



idea packet

Sponsored by: **Raj Rawal and** Anne Marie Miller



The Science of Poetry: Finding Truth in Fiction



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Goals and Objectives — Florida Standards

Strand: Reading Standards for Literature

LAFS.910.RL.1.2 Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

LAFS.910.RL.2.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language evokes a sense of time and place; how it sets a formal or informal tone).

LAFS.1112.RL.2.4 Determine the meaning of words and phrases as they are used in the text, including figurative and connotative meanings; analyze the impact of specific word choices on meaning and tone, including words with multiple meanings or language that is particularly fresh, engaging, or beautiful. (Include Shakespeare as well as other authors.)

LAFS.1112.RL.3.7 Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text. (Include at least one play by Shakespeare and one play by an American dramatist.)

Strand: Writing Standards

LAFS.910.W.2.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

LAFS.1112.W.2.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

Goals and Objectives — Florida Standards

Strand: Writing Standards (continued)

LAFS.910.W.2.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 9–10 on page 54

LAFS.1112.W.2.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience. (Editing for conventions should demonstrate command of Language standards 1–3 up to and including grades 11–12 on page 54.)

LAFS.910.W.2.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

LAFS.1112.W.2.6 Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

Strand: Standards for Speaking and Listening

LAFS.910.SL.1.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.

LAFS.1112.SL.1.3 Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.

LAFS.910.SL.2.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

LAFS.1112.SL.2.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

Goals and Objectives - Florida Standards

Strand: Standards for Speaking and Listening

LAFS.910.SL.1.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9–10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.

b. Work with peers to set rules for collegial discussion and decisionmaking (e.g., informal consensus, taking votes on key issues, presentation of alternate views), clear goals and deadlines, and individual roles as needed.

c. Propel conversations by posing and responding to questions that relate the current discussion to broader themes or larger ideas; actively incorporate others into the discussion; and clarify, verify, or challenge ideas and conclusions.

d. Respond thoughtfully to diverse perspectives, summarize points of agreement and disagreement, and, when warranted, qualify or justify their own views and understanding and make new connections in light of the evidence and reasoning presented.

LAFS.1112.SL.1.1 Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.

a. Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well- reasoned exchange of ideas.

b. Work with peers to promote civil, democratic discussions set clear goals and deadlines, and establish individual roles as needed.

c. Propel reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

d. Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.

Lesson Overview

Combining poetry with science turns STEM into STEAM!

This project investigates scientific fields of study through



poetry and art, while leaving an online legacy through individual websites. Students are just one QR scan away from relating words and color to the world around them.

The Science of Poetry is an activity designed to combine literature analysis with real-world application, essentially serving as a visual text representation into the world of science. The two-part process begins with students choosing poetry that matches a STEM field of study of particular interest to them. After a classroom poetry slam, students proceed to explicate each work through language, tone, and thematic relationship, ultimately creating visual images and artwork around the actual text. Once each text is thoroughly analyzed, students create Weebly site blogs to serve as online references relating each poem to their scientific field. These sites are accessible through student-created QR codes placed on the actual poem; poems are framed and displayed throughout the school and/or community so that anyone can scan the QR codes and be taken to the student website as a final project relating text to scientific relationships.



Student-chosen poetry texts

(you may choose to supply poems, poets, or even actual text selections, however, I allow students to choose their own.)

- Supplies for poetry slam (approx. \$100 for a group of 125)
 - May include: cheese and crackers, grape juice, wine glasses, candles, jazz music in the background, etc.)
- art paper (cardstock/construction) to print or mount poems (\$10)
- markers/colored pencils for each student (or to be shared in groups) (\$30)
- computer access for websites
 - (Weebly is my site of choice, but Blogspot is another good, free option)
- printer access for websites and QR codes,
- Scissors to share to cut QR codes (\$10)
- Gluesticks to affix QR codes (\$10)
- Display frames to hang around the classroom and/or school (\$30)





Class one: Students research poems that they feel have particular meaning to a specific field of STEM they are interested or involved in (e.g. engineering, biomedical research, environmental sciences, zoology, biology, etc.) Students must select and retype/print out any poem that matches either a literal or abstract meaning to the field they chose. For example, a student who may be interested in medicine can choose a poem about life or death, just as a student interested in botany or zoology can choose a poem about an animal or nature. Poems do not literally have to be "about" engineering; encourage students to Google keywords that may be more abstract than titles of scientific fields (e.g. search "heart" for medicine instead of just "medicine").

I then have students retype their poems using an appropriate font that matches meaning, mostly to avoid boring Comic Sans or Arial fonts. Often, font can match meaning and at minimum, requires students to create another level of analysis using an idea as simple as font display. (I suggest <u>www.dafont.com</u> – it's easy, contains a ton of available font options, and it's free for personal use.)

Class two: Class begins the official poetry slam – move desks into circles, pass out optional plastic glasses and grape juice (maybe even cheese and crackers!) and softly play jazz music for background ambience. This poetry reading can be as magnificent or low key as you wish – the purpose is merely to share each student poem without pressure or intimidation.

Class three: Students will complete part one of the Poetry Analysis Draft worksheet. They will be close reading and annotating their poems to identify textual support of tone, images unique to their field, and circle any words and phrases (diction and detail) that prove scientific focus.

Once this initial analysis is completed, students will select one of the images they listed and literally draw it around the poem, leaving the circled words untouched. (For example, a poem about aeronautical engineering might have a picture of an orbiting space ship drawn around the words of the poem, leaving all circled words and phrases white – not colored.)



Class four: Website creation: now that the visual component of the analysis is complete, students will begin their website creation. To begin, students will complete part two of the Poetry Analysis Draft worksheet, completing a paragraph using topic sentence frames. (This text serves as the introductory text on their websites.) Students then follow the Assignment Sheet for step-by-step directions regarding their website creation through the free blogsite, Weebly.

Class five: Once students add their initial text component to their website (taken from their draft sheets), encourage them to add additional material to their blog sites. Suggestions include photos, youtube links, TED talks links, career possibilities, the relationship of their poem to scientific study, personal interest, etc. I do not allow them to provide personal information – including school or last names – because it's still the big bad internet world regardless of how helpful this project appears.

As the final step, students will be creating, printing, and pasting QR codes (those funny-looking patterned boxes) onto the fronts of their poetry visuals (following the steps in the assignment sheet). This code will allow classmates, parents, teachers, passers by, etc. to scan their poem with a smartphone and immediately be taken to the student's Weebly site for developed information. (Optional: hang framed poems with QR codes around school or the local community to provide awareness for STEM careers and fields of study.)



This student sample demonstrates the chosen typed poem, analyzed language, visual image, and QR code (blurred for identity) which, if scanned by a smartphone, would take the scanner directly to the related website. This student expressed interest in environmental studies.

The Science of Poetry: finding truth in fiction assignment sheet

The mission

Based on your selected poem, you will be creating a visual and online blog submission relating poetic text to your scientific field of interest. Your final product will be creative, colorful, informative, and allow others to link your poetry visual with Weebly blog posts through QR coding.

- I. Research and choose any poem relating (literal/abstract) to your scientific interest. We will be presenting these poems through a class poetry slam.
- II. Retype as a black-and-white poem, double-or triple spaced, on a hard copy of paper with any kind of appropriate font, due next class.
 (Suggested site: <u>www.dafont.com</u> search under unique fields, such as Fancy/Decorative or Script/Brush.)
- III. After the class poetry presentations, on the attached Poetry Analysis Draft worksheet, list:
 - A. three image ideas unique to your scientific field interest
 - B. three tone adjectives unique to your poem
- IV. On your newly typed poem, <u>circle</u> (with colored pencils) 8-12 words or phrases that best represent the three tones you brainstormed in step 3B on your Poetry Analysis Draft.
- V. Select and draw one of the three brainstormed images from step 3A throughout the entirety of the poem text, leaving the circled words untouched, and leaving room at the bottom right-hand side of your page.
- VI. Once your visual is complete, on your Poetry Analysis Draft, write five sentences about your chosen STEM field as follows:

Sentence 1: introduce the field of study and its missions/goals
Sentences 2-3: explain life-long goals/purpose of field, activities, career possibilities, etc.
Sentence 4: explain the relationship of poem/image to STEM field
Sentence 5: choose one line from the poem to end with

The Science of Poetry: finding truth in fiction assignment sheet (continued)

VII. Create an online profile at www.weebly.com – you will need a username and password. Remember them so you can continually update your site with information.

A. Choose any template you like.

B. Choose your webpage title – <u>Do **not pay**</u> for any premium versions when asked. Just go with the default (\$0) free one. Make sure your webpage title is appropriate for school use. Suggestions include: JakeBiomed.weebly.com or THSRoboticsPoem.weebly.com or AlvarosPoemforEnglish.weebly.com.

C. Click on any of the boxes within your chosen template and type your five sentences from the Poetry Analysis Draft within. When complete, click "post"/"update"/ and/or "publish" at the top right of the Weebly site to make it official. (These options will change depending on how many times you log on.) You do not have to drag any other elements or change text and title yet unless you want to.

D. If your template includes a headline, profile or info. box, complete that, too, as you like. No text elements on your template can be blank; if your template includes it, you must fill it. (Never use last names or the school name in order to maintain privacy.)

E. After your initial site is published, drag and drop elements from the Weebly control panel (on the left side of your blog page) to include elements such as photos, links to youtube videos displaying career choices, etc. <u>You must include at least one more text box explaining how your chosen poem connects to your STEM field.</u>

VIII. Go to www.qrstuff.com

A. Under Number 1, click on 'Website URL'

B. Under Number 2, type in your weebly website, for example, www.vivianenglish12.weebly.com

C. Under Number 3, choose color, if preferred (black is default).

D. Click 'download QR code' at far right and save to your

desktop/flashdrive.

IX. Print out your QR code image, and then cut and paste it to the bottom righthand side of your poem hard copy.

X. Be proud of yourself. You've just allowed anyone reading your poem the ability to scan your work and be transported to your online blog explanations. You are now a part of internet history – congratulations!

The Science of Poetry: finding truth in fiction Weebly (blog) examples



When logging on to <u>www.weebly.com</u>, this initial screen requires you to create a quick, easy, (and free!) account.



Choose a Theme

You can easily change this later



After your account creation, you can choose from a number of basic themes for background design.

The Science of Poetry: finding truth in fiction Weebly (blog) examples



Once a theme is chosen, you commit to your (free!) website name. Make sure students choose names that represent their project without divulging any personal information, like name or school.



After theme and website name selection, your first screen displays a simple box with options on the left-hand side. These options include adding a text box, an image, changing fonts, etc. Begin by selecting the "New Post" button at the bottom of the page, and then customize by dragging any additional elements over to the middle.

The Science of Poetry: finding truth in fiction Weebly (blog) examples



You can begin typing or adding information into your selected items (dragged and dropped to the screen in the middle. This is where students should begin typing their poems and their written analysis.



When finished, click on the orange "POST" button at the top right to publish your page and go live to the internet!

The Science of Poetry: finding truth in fiction assignment sheet checklist

I.	Poem choice	Date completed:
II.	Retype with appropriate font	Date completed:
III.	Poetry Analysis Draft worksheet	Date completed:
IV.	Circled words or phrases on poem hard copy	Date completed:
V.	Illustrated image	Date completed:
VI.	Written explanations	Date completed:
VII.	Weebly.com site publishing	Date completed:
VIII	QR code creation	Date completed:
IX.	Final creation – poem, blog, QR code	Date completed:

ame:	Date:	Per.:
The Science of	of Poetry: finding	truth in fiction
	FUELI y Alialysis Diall	
STEM field:		
Poem title:		
Poem author:		
Publicati	ion date:	
Part One A. List three image ideas unique	ue to your scientific field of inter	:est.
	1	
:	2	
	3	
B. List three tone adjectives u	inique to your poem.	
	1	
	2	

3. _____

Part Two

On the back of this worksheet, write five sentences about your scientific field/poem as follows:

Sentence 1: Introduce the field of study and its missions/goals.

Sentences 2-3: Explain life-long goals/purpose of field, activities, career possibilities, etc.

Sentence 4: Explain the relationship of poem/image to STEM field.

Sentence 5: Choose one line from the poem to end with.

The Science of Poetry: finding truth in fiction Poetry Possibilities (Teacher guide)

STEM field: Biomedical Sciences Kipling's "If" Service's "Each Day A Life" Hughes's "Life Is Fine" Gibran's "Buying and Selling" Service's "My Cancer Cure" Henley's "Invictus"

STEM field: Environmental Sciences Frost's "A Boundless Moment" Dickinson's "Aurora: Of Bronze and Blaze" Plath's "A Southern Sunrise" Scovell's "The Half-Mown Meadow" Wordsworth's "I Wandered Lonely As A Cloud"

STEM field: Engineering/Robotics Whitman's "Song of the Broad Axe" (long – use excerpts) Stevenson's "The Swing" Longfellow's "The Building of the Ship" Sandburg's "Chicago" McKay's "America"

> STEM field: Zoology Holmes's "The Chambered Nautilus" Dickinson's "A Narrow Fellow in the Grass" Clare's "The Badger" Drinkwater's "Deer" Monro's "Milk for the Cat"

Good Timber

Does not grow with ease: The Aronger wind. The Aronger the trees: The further the sky. The greater length: The more the strength.









GREAT EXPERIENCES SHOULD

BE VALUED LIKE SILVER,

EVERY DAY IS AS PRECIOUS AS A BOX OF GOLD.

IF WE ONLY LIVED IN THIS MOMENT AND MADE THE MOST OF

WE WOULD EXPERIENCE JOY, PEACE AND LOVE UNTOLD.



When You're Not Here When you joy that everything seems in shadow when you're not here. When you aren't feeling well, we feel the lack of your glowing energy. and contagious vitality. . Helen When you are sick we feel incomplete. like a jigsaw puzzle with a missing piece: Please rest. take good care of yourself. and feel better. We miss you want you back. Get well soon. TISSUES



"PROMISE YOURSELF

10 BE SO STRONG THAT NOTHING CAN DISTURB YOUR PLACE OF MIND. TO THINK ONLY THE BEST, TO WORK ONLY FOR THE BEST, AND TO EXPECT ONLY THE BEST. TO FORGET THE MISTAKES OF THE PAST AND PRESS ON TO THE GREATER ACHIEVEMENTS OF THE FUTURE. TO WEAR A CHEERFUL COUNTENANCE AT ALL TIMES AND GIVE EVERY LIVING CREATURE YOU MEET A SUILE. TO GIVE SO MUCH TIME TO THE IMPROVEMENT OF YOURSELF THAT YOU HAVE NO TIME TO CRITICIZE OTHERS. TO BE TOO LARGE FOR WORRY, TOO NOBLE FOR ANGER, TOO STRONG FOR FEAR, AND TOO HAPPY TO PERMIT THE PRESENCE OF TROUBLE. TO LIVE IN FAITH THAT THE WHOLE WORLD IS ON YOUR SIDE SO LONG AS YOU ARE TRUE TO THE BEST THAT IS IN YOU.

-CHRISTIAN D. LARSON, YOUR FORCES AND HOW TO USE THEM















Your grade will be based on:

A - meeting/exceeding all minimum requirements:

Poem: appropriately selected poem/relationship to STEM field, 8-12 circled words and phrases, visual image drawn professionally and colorfully, QR code placed neatly in corner **Poetry Analysis Draft**: 3 tones and 3 images detailed, 5 thorough explanatory sentences according to directions that clearly analyze poem

Website: all typed components completed thoroughly and accurately with no spelling or fact errors in correct syntactical structure and including all points of Poetry Analysis Draft, QR code correctly linked to website

B - meeting all minimum requirements:

Poem: appropriately selected poem/relationship to STEM field, 8-12 circled words and phrases, visual image drawn neatly, QR code placed in corner

Poetry Analysis Draft: 3 tones and 3 images detailed, 5 sentences according to directions

Website: all typed components completed with few spelling or fact errors in correct syntactical structure and including all points of Poetry Analysis Draft, QR code correctly linked to website

C - meeting most minimum requirements:

Poem: appropriately selected poem/relationship to STEM field, circled words and phrases, visual image drawn, QR code placed in corner

Poetry Analysis Draft: most of the 3 tones and 3 images included, 5 sentences according to directions

Website: most typed components completed with minor spelling or fact errors in correct syntactical structure and including most points of Poetry Analysis Draft, QR code correctly linked to website

D - meeting some minimum requirements:

Poem: vague or unclear selected poem/relationship to STEM field, few or incomplete circled words and phrases, visual image poorly or hastily drawn, QR code placed in corner **Poetry Analysis Draft**: tones and images lacking detail, missing or incomplete sentences **Website:** missing or incorrect typed components completed with spelling or fact errors in correct syntactical structure and missing or incomplete points of Poetry Analysis Draft, QR code incorrectly linked to website

F - not meeting most minimum requirements:

Poem: inappropriate selected poem/relationship to STEM field, missing or grossly incomplete circled words and phrases, visual image poorly or hastily drawn, missing QR code

Poetry Analysis Draft: tones and images lacking detail, missing or incomplete sentences **Website:** missing or incorrect typed components completed with spelling or fact errors in correct syntactical structure and missing or incomplete points of Poetry Analysis Draft, QR code, if present, incorrectly linked to website



APPLY FOR AN IMPACT II ADAPTER GRANT!

M-DCPS teachers, media specialists, counselors or assistant principals may request funds to implement an IMPACT II idea, teaching strategy or project from the Idea EXPO workshops and/or curriculum ideas profiled annually in the *Ideas with IMPACT* catalogs from 1990 to the current year, 2015-16. Most catalogs can be viewed at The Education Fund website at www.educationfund.org under the heading, "Publications."

- Open to all K-12 M-DCPS teachers, counselors, media specialists
- Quick and easy reporting requirements
- Grants range from \$150 \$400
- Grant recipients recognized at an Awards Reception

To apply, you must contact the teacher who developed the idea before submitting your application. Contact can be made by attending a workshop given by the disseminator, communicating via email or telephone, by visiting the disseminator in their classroom, or by having the disseminator visit your classroom.

Project funds are to be spent within the current school year or an extension may be requested. An expense report with receipts is required by May 2, 2016.

APPLICATION DEADLINE: December 11, 2015

Apply online at www.educationfund.org

For more information, contact:

Edwina Lau, Program Director 305.558.4544, ext. 113 elau@educationfund.org

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