



A Little Goes a Long Way

STEAM Challenge

Due: April 7, 2023

Designed for Middle and High School Students

[This Meridian Stories Challenge was developed by Erin Quirk, a student at Colby College.]

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Range of Activities

- Research of Relevant Environmental Issues Related to Climate Change
- Observation and Analysis of Daily Choices
- Creation of Action Plan
- Personal Storytelling
- Digital Literacy Skills - Video - Pre-production, Production and Post-production
- Human Skills: Creativity, Collaboration, Critical Thinking, Presentational Skills

The Challenge

Don't litter! Recycle that! Turn off the lights when you leave the room! How many times do you hear these phrases? Probably quite often. There is a wide array of problems concerning our environment, many of which can feel overwhelming and impossible to solve. However, small actions such as throwing away trash in an appropriate manner, recycling, and conserving energy, when possible, can add up to make a significant difference.

Over the course of a day, think about how many of these actions you do take (probably more than you realize) that are environmentally motivated. Your task is to create a vlog-style video taking your audience through a day in your life where you emphasize the environmentally friendly actions you take. But let's push the boundaries a little. Find three *new* environmentally friendly actions to take that you would not normally think of over the course of your day and implement those as well. Here's a way to help you organize this. The Environmental Protection Agency (EPA) has designated categories for action called Climate Connections. The categories are: air, transportation, energy, waste, and water. Use these categories to help you categorize the actions you already take, as well as the new actions that you are going to promote in your vlog. Try to aim for a total of six to eight actionable steps, with a minimum of one in each of the five categories. You can do more if there is room. Label in your video which action applies to which category and be sure to research how these actions impact the environment and find creative ways to communicate this inside of your vlog.

A vlog is a type of video designed to take viewers on a journey. Soooooooo, take us on the journey throughout your team's day and show us how the little things really do add up when it comes to saving the environment.

Deliverables include:

- The Vlog (this is the only Meridian Stories deliverable)
- Journal Notes (at teacher's discretion)
- Vlog Rundown (at teacher's discretion)

Assumptions and Logistics

Time Frame - We recommend that this digital storytelling project takes place inside of a three to four-week time frame.

Length - All Meridian Stories submissions should be under 4 minutes in length, unless otherwise specified.

Slate - **All digital storytelling projects must begin with a slate that provides:**

- a) the title of the piece;
- b) the name of the school submitting;
- c) the wording 'Permission Granted' which gives Meridian Stories the right to a) publicly display the submission in question on, as linked from, related to or in support of Meridian Stories digital media; and b) use or reference it for educational purposes only, in any and all media; and
- d) We strongly recommend that students do **not** put their last names on the piece either at the start or finish, during the credits.

Submissions - Keep in mind that each school can only submit three submissions per Competition (so while the entire class can participate in any given Challenge, only three can be submitted to Meridian Stories for Mentor review and scoring).

Teacher Reviews - All reviews by the teacher are at the discretion of the teacher and all suggested paper deliverables are due only to the teacher. The only deliverable to Meridian Stories is the digital storytelling project.

Teacher's Role and Technology Integrator - While it is helpful to have a Technology Integrator involved, they are not usually necessary: the students already know how to produce the digital storytelling project. And if they don't, part of their challenge is to figure it out. They will! ***The teacher's primary function in these Challenges is to guide the students as they engage with the content.*** You don't need to know editing, sound design, shooting or storyboarding; you just need to know your content area, while assisting them with time management issues. See the [Teachers Role](#) section of the site for further ideas about classroom guidance.

Digital Rules/Literacy - We strongly recommend that all students follow the rules of Digital Citizenry in their proper usage and/or citation of images, music and text taken from other sources. This recommendation includes producing a citations page at the end of your entry, if applicable. See the [Digital Rules](#) area in the [Meridian Stories Digital Resource Center](#) section of the site for guidance.

Location – Try not to shoot in a classroom at your school. The classroom, no matter how you dress it up, looks like a classroom and can negatively impact the digital story you are trying to tell.

Collaboration - We strongly recommend that students work in teams of 3-4: part of the educational value is around building collaborative skill sets. But students may work individually.

Process

Below is a suggested breakdown for the students' work.

During Phase I student teams will:

- Individually walk through a normal day in your lives and notice opportunities for environmentally friendly actions. Do this before you begin your formal research into the wide range of actions you can take. Create a journal of these actions.
 - ***Teacher's Option: Journal Notes*** – Teachers may require that their teams hand in a journal entry of notes keeping track of the different opportunities they find for action throughout the day, for feedback and review.
- As a team, compare your journal notes and make a list of all the actions that you take. Using the EPA site as one of your foundational research bases, cross reference your actions with the five categories: air, transportation, energy, waste, and water. Analyze where your team is strong and weak.
- Focusing in on your team's weaker areas, research the basic environmental issues at stake and generate a list of new activities that a person can do to address climate change in your daily routine.
- In your research, you will want to break down each action into three parts: the environmental need; the action; and the ramifications of the action.
 - For example, if the action is turning off the faucet for two minutes while brushing your teeth, you need to frame that action in terms of a) what is the problem that that action is addressing and b) what are the actual ramifications of those two minutes?
- Create a rundown of your proposed vlog in terms of the actions that your team has been doing, plus the new actions that you will be promoting to your audience.
 - ***Teacher's Option: Vlog Rundown***– The teacher may require teams to hand in an organized rundown of their proposed day, including a summary, on a per action basis, of the problem being addressed going into the action and the positive ramifications coming out of their action.

- By the end of Phase I, student teams should have a clear sense of the activities that they will include in their day, as well as the impact of these actions on the specific climate change issues confronting the world.

During Phase II student teams will:

- Explore what you want your vlog to feel, look and sound like as a story designed to entertain, engage, and influence. To do this, the vlogging narrative format needs to be unpacked. This is a storytelling format still in its infancy, relatively speaking, and its structure is fluid.
 - Student Teams: should brainstorm about their understanding of what characterizes a successful vlog and write up a brief summary.
 - Teachers: please look at the analysis of the Vlog storytelling format at the end of this Challenge, as taken from the book, *Expanding Literacy*. This will help you to collaborate with the students about the shape and flow of this digital story.
- Finalize the overall tone and visual shape of your story, as well as the lead voice(s) of your vlog.
 - This style video is typically done by an individual, but as a team you can take it any direction you want. You may choose to follow the life of one person, with someone else filming and working behind the scenes. Or maybe each person will be in the video showing their actions. Either way, be sure to credit everyone on your team for their work.
 - In the first bullet above we mention the word ‘influence.’ That is often an objective in a vlog: to influence the participants to, say, purchase a product or think about themselves in a new way. This vlog is no different. Your teams want to model environmentally positive behavior so that you can influence your viewing audience into adopting these behaviors. Keep that in mind as you move into scripting.
- Scripting. We don’t recommend writing a full script that could make your story sound like a documentary. Vlogs are a format that are designed to come across as spontaneous and unscripted. This is a challenging thing to accomplish, but such an important skill to master! We recommend outlining the main points that will be said in each shot and speak on the spot during filming. This can be adapted from your Phase I Vlog Rundown.
- Rehearse a walk-through of your vlog on location, noting where you will be shooting each activity that you are modeling for you viewing audience. It may be helpful to create a storyboard of the shots you will need to capture during the filming process. The storyboard will help you indicate where you are shooting, who or what is in the shot, and the framing or camera angles.

- The rehearsal process should kick out places where a) you may need voice over and b) you may want to add text and graphics on screen.
 - Like TikTok and Instagram stories, Vlogs are ripe for the layering of text and graphics over the live video. And the use of this visual media layer can be particularly potent in emphasizing important moments in your vlog. Play around with a few key moments by adding this extra graphic layer to your story.

During Phase III student teams will:

- Finalize the Script/Outline/Storyboard
- Shoot the video.
- Record additional voice over as needed.
- Edit the video, adding text, graphics, music, and sound effects as desired.
 - There has not been an emphasis on sound and music in this Challenge because this naturalistic style of storytelling doesn't shout out for a highly post-produced sound design plan. It is still worthwhile for the team to have a creative brainstorming session about the overall sound of this vlog. There is no absolute rule against integrating additional sound and music into this story.

Meridian Support Resource Center

Meridian Stories provides two forms of support for the student teams.

1. Media Innovators and Artists – This is a series of three to four-minute videos featuring artists and innovative professionals who offer important advice, specifically for Meridian Stories, in the areas of creativity and production.
2. Meridian Guides – These are short documents that offer student teams key tips in the areas of creativity and production.

Recommended review, as a team, for this Challenge include:

Meridian Innovators and Artists	Media Resource Collection
<i>Non-Fiction Writing</i> – Margaret Heffernan	Video Editing Basics
<i>Memoir and Non-Fiction Writing</i> – Liza Bakewell	Sound Recording Basics
<i>Editing</i> – Tom Pierce	Producing: Time Management
<i>Video Production</i> – Tom Pierce	Digital Rules: The Starting Line

Presentation of Learning

Meridian Stories is a proud partner of the non-profit *Share Your Learning*, which is spearheading the movement of over **five million** students to publicly share their work as a meaningful part of their educational experience.

The workforce considers Presentational Skills to be a key asset and we encourage you to allow students to practice this skill set as often as possible. These digital storytelling projects provide a great opportunity for kids to practice their public presentational skills. ***This can be achieved in a remote learning environment by inviting parents to a Zoom/Google/Skype screening of the student's digital stories.***

According to *Share Your Learning*, Presentations of Learning (POL) promote...

- **Student Ownership, Responsibility & Engagement.** POLs can serve as a powerful *rite of passage* at the end of [a project]. By reflecting on their growth over time in relation to academic and character goals, grounded in evidence from their work, students are encouraged to take ownership of their learning. Just as an artist wants their portfolio to represent their best work, POLs encourage students to care deeply about the work they will share.
- **Community Pride & Involvement.** When peers, teachers and community members come together to engage with student work and provide authentic feedback, they become invested in students' growth and serve as active contributors to the school community.
- **Equity.** POLs ensure that all students are seen and provide insight into what learning experiences students find most meaningful and relevant to their lives.

Meridian Stories' own research indicates this to be a really useful exercise for one additional reason: Students actually learn from their peers' presentations – it is useful to hear a perspective that is not just the teacher's.

It is with this in mind that we encourage you to plan an event – it could be just an end-of-the-week class or an event where parents, teachers and student peers are invited – to allow the students to showcase their Meridian Stories' digital storytelling projects. For more free resources that will support this planning, visit [Share Your Learning](#).

Evaluation Rubric – *A Little Goes a Long Way*

CONTENT COMMAND	
Criteria	1-10
Scientific Understanding	The video demonstrates a thorough understanding of the chosen environmental problems, as seen through the lens of the daily actions taken
Utilizing Research	New, impactful actions are chosen because of research conducted inside of the EPA’s five categories of Climate Connections
Ramifications	The ramifications of the actions, old and new, are explained with clear scientific data
STORYTELLING COMMAND	
Criteria	1-10
Narrative Clarity	The vlog has a clear and consistent tone that is well organized, lively, and delivers an engaging narrative
Integration of Content	Scientific concepts are integrated into the story and do not detract from, but instead enhance, the pacing of the narrative
Connection with Viewers	The storyteller(a) establishes a direct and comfortable relationship with the camera and ultimately the viewers
MEDIA COMMAND	
Criteria	1-10
Visual Shot Selection	The visual shots effectively communicate the content
Editing	The vlog is edited cleanly and effectively, resulting in an engaging digital storytelling experience
Text and Graphics	The use of graphics and text successfully reinforce the content of your story and the audience’s engagement
HUMAN SKILLS COMMAND (teachers only)	
Criteria	1-10
Collaborative Thinking	The group demonstrated flexibility in making compromises and valued the contributions of each group member
Creativity and Innovation	The group brainstormed many inventive ideas and was able to evaluate, refine and implement them effectively
Initiative and Self-Direction	The group set attainable goals, worked independently, and managed their time effectively, demonstrating a disciplined commitment to the project

Essential Questions

1. What are the critical climate change issues that are regionally and globally pressing right now?
2. Is it possible to make a difference in the climate change crisis through our small, daily gestures? If so, how much?
 - a. What has walking through a day in your life and paying close attention to your actions made you realize regarding your individual impact on the environment?
3. How does one take important research and information, and present it in a casual format, such as a vlog, with the intention of influencing behavior?
4. How has the concept of the story on paper taken on a new and vital life when translated to audio or video?
5. How has immersion in the creation of original content and the production of digital media—exercising one’s creativity, critical thinking, and digital literacy skills—deepened the overall educational experience?
6. How has working on a team—practicing one’s collaborative skills—changed the learning experience?

Student Proficiencies

1. The student will have a renewed and deeper understanding of some critical environmental issues that are affecting climate change.
2. The student will have a greater understanding, appreciation of, and commitment to making environmentally friendly choices.
3. The student will have a visceral understanding of how to organize content clearly in a way that communicates to their viewers in a direct, informal, and engaging way designed to influence behavior.
4. The student will become more aware of the powers, joys, and possibilities of digital storytelling with all its layers of narrative potency.
5. The student will utilize key Human Skills, with a focus on creativity, critical thinking, and digital literacy, in their process of translating scientific content into a new narrative format.
6. The student will have an increased awareness of the challenges and rewards of team collaboration. Collaboration – the ability to work with others – is considered one of the most important 21st century skills to develop in students as they prepare for life after secondary school.

Curricular Correlations

The *A Little Goes a Long Way* Challenge addresses a range of curricular objectives that have been articulated by two nationally recognized sources:

1. The **Next Generation Science Standards**
2. The **Common Core Curricular Standards – English Language Arts**

Below please find the standards that are being addressed, either wholly or in part.

Next Generation Science Standards

HS-ETS1-2	Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.
MS - ESS3-3 Earth and Human Activity	Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
MS - ESS3-5 Earth and Human Activity	Ask questions to clarify evidence of the factors that have caused the rise in global temperatures over the past century
HS - ESS3-4 Earth and Human Activity	Evaluate or refine a technological solution that reduces impacts of human activities on natural systems.
HS – ESS2-4 Earth and Human Activity	Use a model to describe how variations in the flow of energy into and out of Earth’s systems result in changes in climate.
HS-LS2-7 Interdependent Relationships in Ecosystems	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

Common Core – English Language Arts & History/Social Studies

	5th Grade	8th Grade	9th - 10th Grade	11th - 12th Grade
W1	Write opinion pieces on topics or texts, supporting a point of view with reasons and information.	Write arguments to support claims with clear reasons and relevant evidence	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and

			relevant and sufficient evidence.	relevant and sufficient evidence.
W3	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
W4	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.	Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
W7	Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.	Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
RI1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	Cite the textual evidence that most strongly supports	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where

				the text leaves matters uncertain.
SL1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on <i>grade 5 topics and texts</i> , building on others' ideas and expressing their own clearly.	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.	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.	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.

SL5	Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.	Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.	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.	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.
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Addendum – An Introduction to and Analysis of The Vlog

Excerpted from [Expanding Literacy: Bringing Digital Storytelling into Your Classroom](#), by Heinemann and written by Brett Pierce, Executive Director and Founder of *Meridian Stories*.

Vlogging (blogging with video: vlogging) is a narrative format that, let’s face it, doesn’t feel like it meets any of the criteria of ‘genre’ or ‘storytelling’. In fact, to an outsider (perhaps you, definitely me), vlogging is a self-indulgent format that has the ambition of glamourizing oneself with the express purpose of winning enough followers to engorge self-esteem and make some money.

I am dancing around the truth, there. But upon deeper reflection, the format is fascinating and is, in many ways, a novel extension of narrative to meet the digital age. Here are four essential characteristics of vlogging which make it a seismic digital storytelling format for your students because of its capacity to carry significant content and intuitively engage their interests.

1. Story - Take I

Here is what a vlog is not: a non-stop talking documentary of the vlogger making a smoothie; flossing ‘just so’; dirt bike racing; or cleaning the garage. A good vlog has a theme. That theme can certainly be about cleaning the garage, but the story being told needs to take the viewer on a journey with the vlogger in that activity. The goal is to get your viewers to go on a journey with you; not watch you during your daily activities.

This all suggests that a good vlog requires planning. What’s the theme? A walk in the woods? Discovery of the best ice cream in town? Looking for all of the plugs in your house to gauge possible energy usage? A cemetery tour? And then, what’s the journey or story you are telling? And it shouldn’t be what they – the audience – want to know. It’s about what you, the vlogger want to know. Here’s why.

2. Character – Take I

The driving force behind successful vlogging is character. This format leads with personality. The story that is being told begins and ends with the vlogger – your student. The vlogger needs to matter; needs to give the audience a reason to care about them. Needs to find a way to attract an audience to them. The format is driven by viewers who emotionally identify with the vlogger. Once that bond is established, the interests of the vlogger become the interests of the viewer.

And this is where it gets interesting for you, the educator. Vlogging is a form of self-exploration. Vlogging requires the student to put themselves out there. That is not for everyone, of course. But for some, this format can be the chance they have been waiting for to open up their universe. Or, less dramatically, a small, healthy push toward confidence.

Another angle. For kids who don’t think that they matter - have never been asked to articulate why they matter - there is an opportunity in this popular format. Vlogging asks you to turn the camera on yourself, in a setting of your choosing, and, essentially talk, unscripted. The opportunity here: to give permission to kids to be like the vloggers that they watch and follow and see if the shoe fits.

3. Story – Take II

As with most storytelling formats, the next level beyond theme and journey are the details of the story itself. The beginning, middle, and end; the obstacles and the climaxes. Vlogging is no different and is in fact, perhaps, harder. Because vlogging

asks your student to find the micro story in their daily activities: putting on make-up, working out, making an omelet, walking the dog around the neighborhood...and making up stories about your neighbors. This is tricky.

Two points. This is a good activity to get the students to dig into the very nature of storytelling and what makes a good and engaging story.

And here's the other super important thing about vlogs: they are designed for the student's selves and their peers. Vlogs are not designed for you, the teacher, or a general audience. This is, essentially, a peer-to-peer storytelling format. What other storytelling format out there can meet *that* criteria?? Vlogs make the work less abstract and more relevant. That makes students more accountable for their work. That makes the learning deeper. Create a vlog about their favorite book and why they connect. Create a vlog about that strange statue of Lord Hugh What's-His-Name in the center of town. Create a vlog about the most extraordinary spider web that they found in their backyard. Ready? Go.

4. Character Take II

Here is perhaps the most attractive part about vlogging, for the audience: the behind-the-scenes aspect. There are two important elements to this intimacy. Vlogging features supposedly real people in the recesses of their homes where only a few intimate friends are ever allowed. The bedroom. The basement. The kitchen. The backyard. Even the bathroom. The visual intimacy of a vlog is important: you learn about the person just by seeing the pillows on their bed and the posters on their walls.

The second is that vlogs are unscripted. Natural. Just shooting the breeze. Saying whatever is in your head. This unvarnished quality communicates vulnerability, intimacy, trust, and honesty. Of course, much of all this is actually staged. But only to a certain extent: the audience will see right through too much artifice.

The point is that the deep attraction to this form of storytelling is its connection with our daily truths, all of which further reinforces the audience's emotional connection to the vlogger. It's powerful. And it's risky. As educators, I wouldn't recommend forcing students to vlog. There's too much possible personal exposure. But as a digital storytelling option, it is a uniquely engaging choice that can deliver on a) increased self-awareness and confidence; b) curricular content; and c) storytelling and digital literacy skills.