Distance Learning Programs in the National Park Service

Team Members

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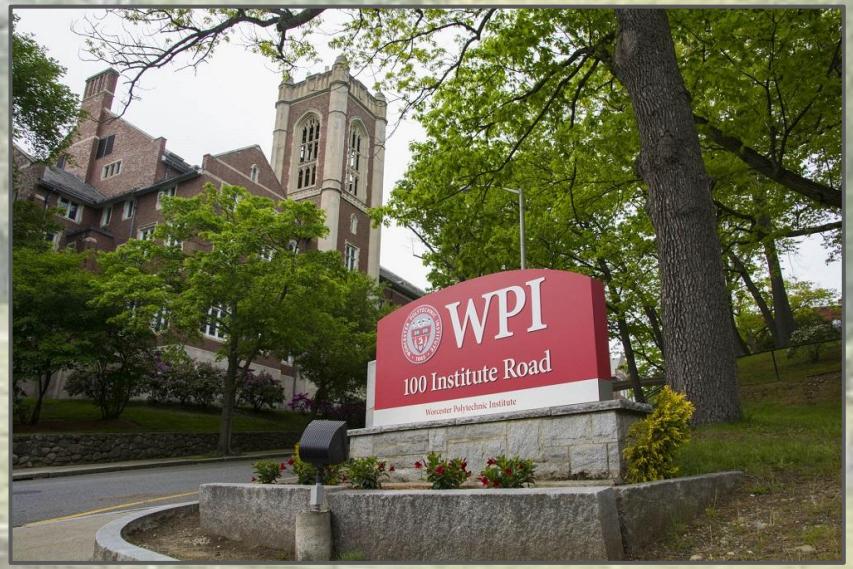
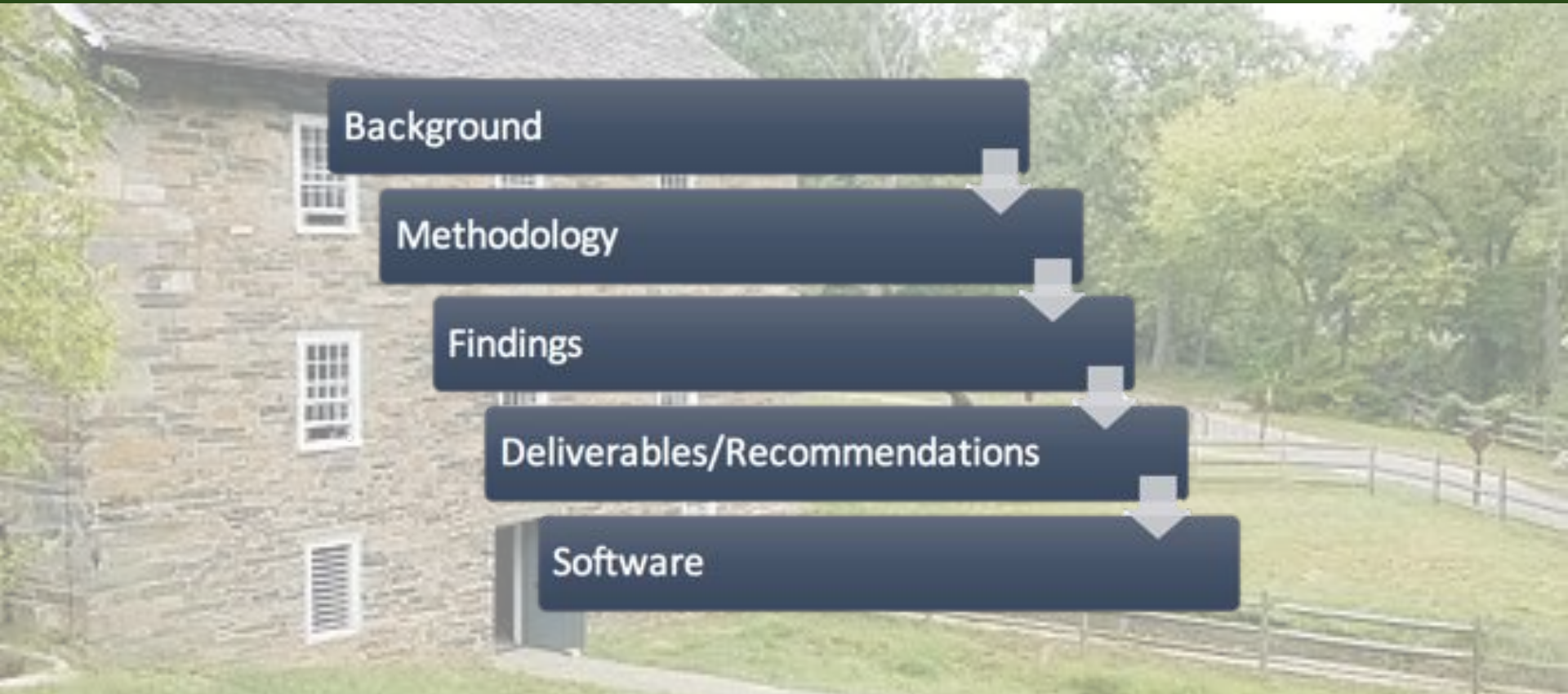
Interactive Qualifying Project

- Working on an interdisciplinary team to solve a problem or need.
- Social science aspect of the engineering degrees.



Overview


Background
Methodology
Findings
Deliverables/Recommendations
Software

Background

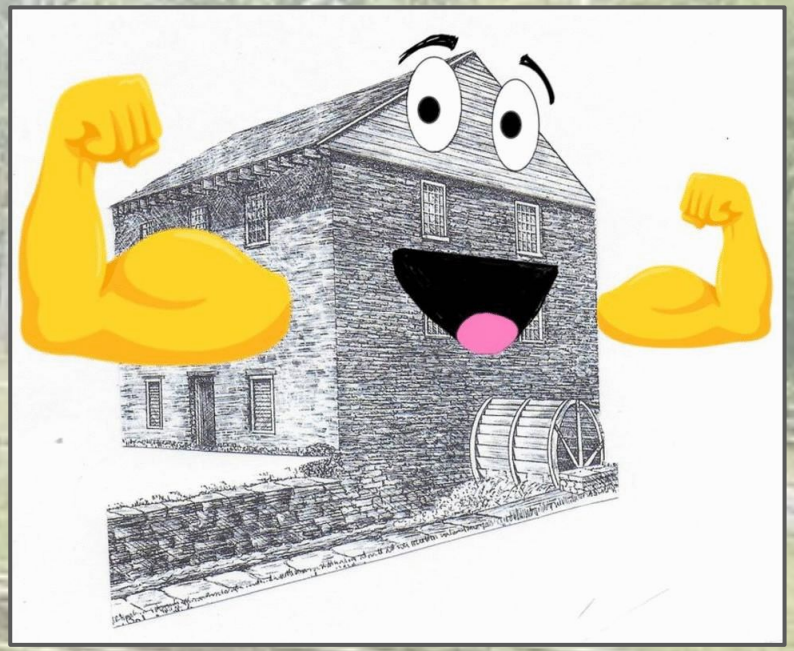
Rock Creek Park

Educational Mission

- Astronomy
- Environment
- D.C. History and Peirce Mill
  - Washington as It Was Program

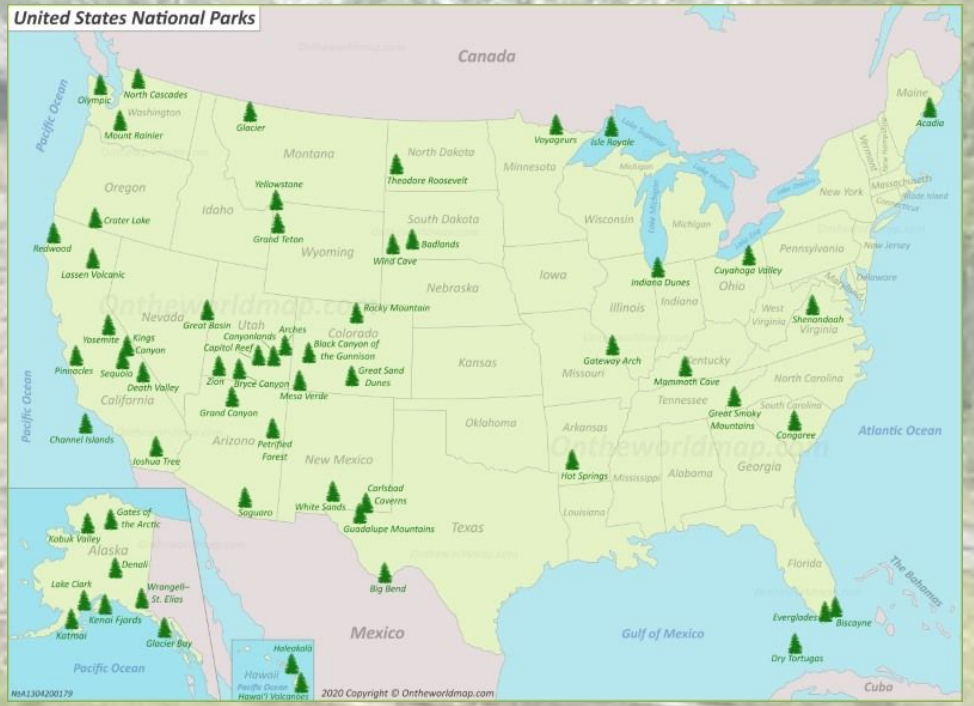
Peirce Mill

- Built by Isaac Peirce in 1829.
- Last functional grist mill in D.C.
- Focus of Washington as It Was
    - Part of the 3rd grade local history requirement

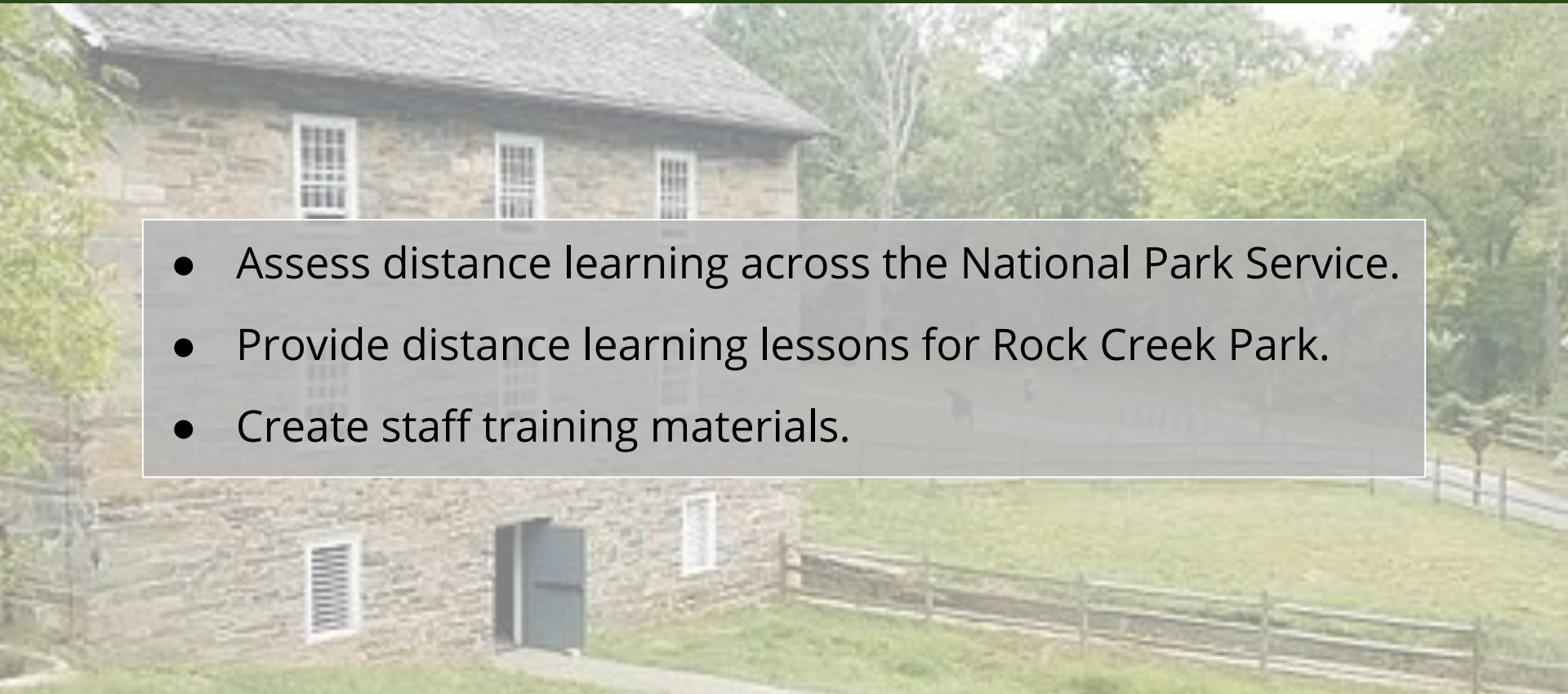


The Problem

National Park Service (NPS), and Rock Creek Park, wants to educate the next generation of national park supporters; however, not every elementary schooler is able to visit a national park.

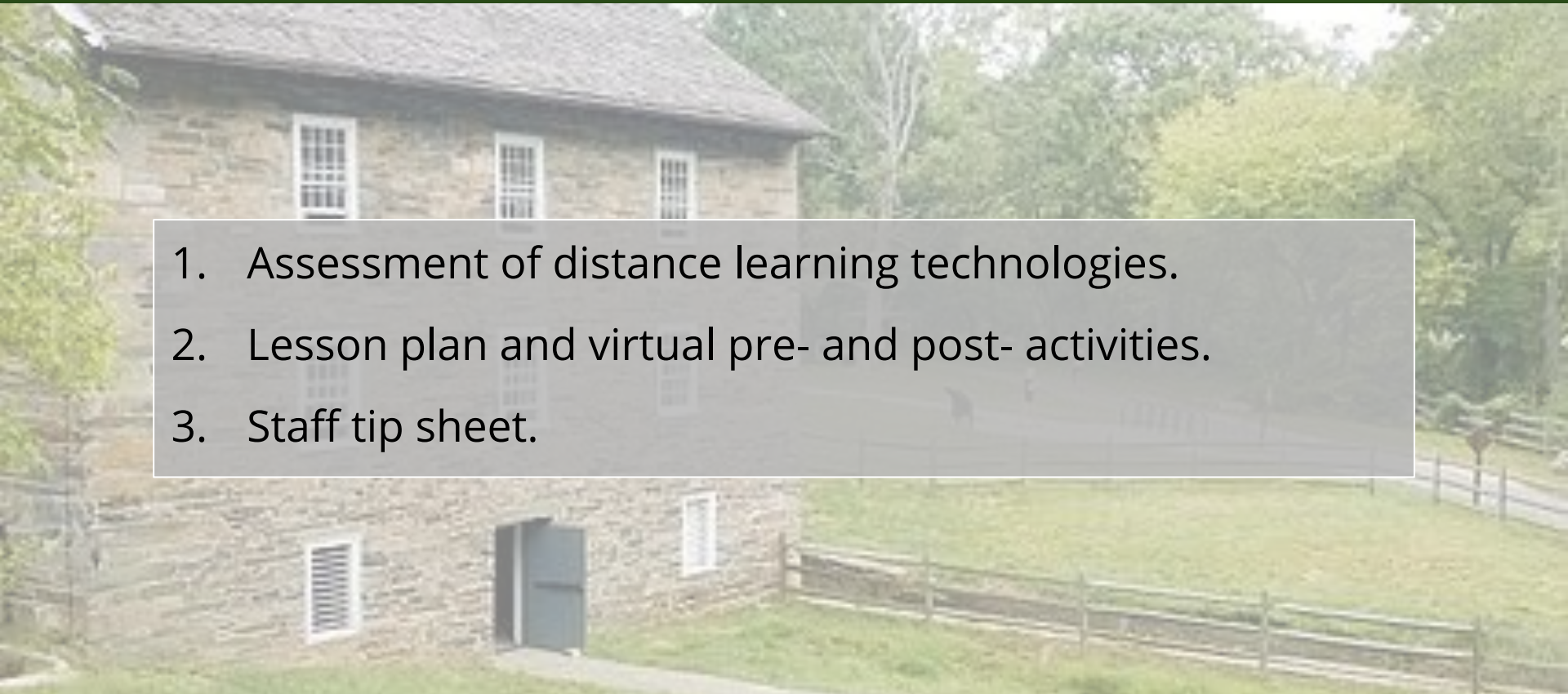


Purpose



- Assess distance learning across the National Park Service.
- Provide distance learning lessons for Rock Creek Park.
- Create staff training materials.

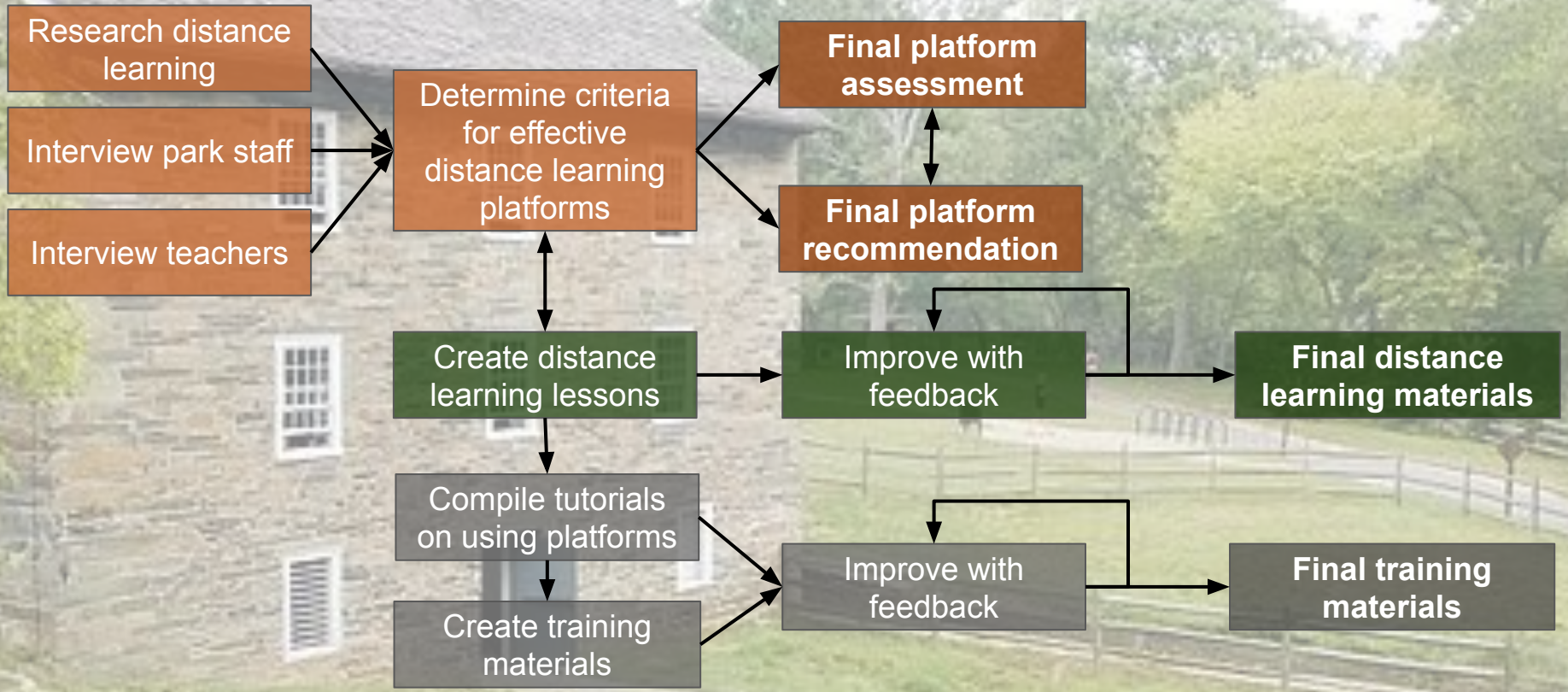
Deliverables



1. Assessment of distance learning technologies.
2. Lesson plan and virtual pre- and post- activities.
3. Staff tip sheet.

Methodology

Flowchart


Research distance learning
Interview park staff
Interview teachers
Determine criteria for effective distance learning platforms
Final platform assessment
Final platform recommendation
Create distance learning lessons
Improve with feedback
Final distance learning materials
Compile tutorials on using platforms
Create training materials
Improve with feedback
Final training materials

Phase 1: Platform Assessment

Interviews:

- Educators at 20 national parks and organizations
- 3 teachers

Research:

- Scholarly articles about distance learning
- Software websites

Phase 2:
Lesson Plan and Activities

Research:

- Rock Creek Park's lesson plans
- 3rd grade history lesson plans

Create:

- Lesson plan based on DCPS 3rd grade standards
- 3 Pre-visit activities
- 3 Post-visit activities

Phase 3:
Staff Training Materials

Potential Formats:

- Training manual
- Video tutorial
- Tip Sheet
    - Compiled tips and training materials from all parks

Findings & Conclusions

Distance Learning Interview Data

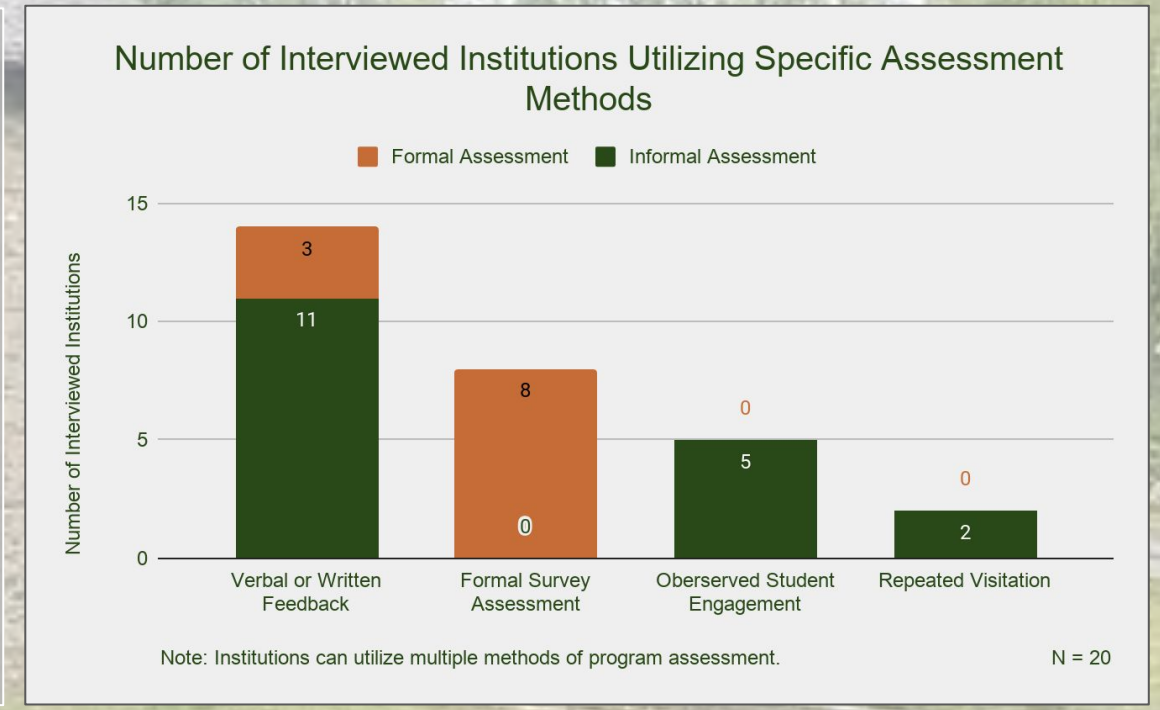
	How long has your distance learning program existed?	Target grade levels	Are DL lessons adapted from previous material	Setting	Disability accessed by	School district relationship	Interactive features	Host activities	Evaluation tools	Tips	Platforms	Future platforms	recurring equipment	Features	tech support	Additional staffing	Staff adjustment and new learning	Successes w everyone remote	Challenges w everyone remote	Time needed	other paths with DL	Primary contact
Acadia	~10 years	K-8	Depends on state of adapting	WEB - no connectivity in the park Discounted backpacks	Audio-described Captioned ASL interpreters Work with teachers/assist by user	Standards: NGSS, Maine Size: Relationship: Phenomenal Collaboration: Host teacher Relationship: Building trusts with teacher/feedback	• Study environment • Acting • Thumbs up/down • What is your opinion? • Ask a question (Acting) • Talking to more (visible to team)	• Costumes (even as simple as a hat) • Dance breaks	• Informal feedback from teachers	• Do away from classroom • Acting (Walk things ground plan) • Study note by camera to maintain eye contact • Practice with coworkers (pretend to walk someone live, screenshotting) • Practice practice • Account yourself for self-evaluation • Watch circling and spacing • Have fun! Be yourself! Have participant • Use physical objects and puppets/costumes. • Make sure kids are engaged every few lines in the lesson plan (constantly think about what engagement tools they	Video Conferencing: Teams, mirror school, google meet/zoom Content Development: PowerPoint, google slides Video: Teams, WeVideo Video Editing: iMovie (no editing)	• Something to get them outside (Acting)	• Video conferencing Perfect zoom, teams, google meet	• Chat • Screen to speak • To breakout rooms • Only see features that teachers are comfortable with	No tech support Troubleshoot webcam issue	Do not have additional staff	• Make staff lists and top duties • Staff training (NR compliance)			• High school age kids don't like to use camera • Young Kids aren't old enough to use by self	Grand Canyon Denali Glacier Parks Denali	Kate Petrie (Education Coordinator, Team Driving) kate_petrie@nps.gov
Gettysburg	20 years	5th/8th grade - until war unit/schools 4th grade - local history unit/classes Field trips - for K-12, college, and senior centers	Depends Both - virtual and in person programs, teachers created the main focus questions	WEB/Offline with a dramatically related program Field - for program dates	Audio-described Closed captioning For physical disabilities, virtual programs are more accessible due to ring walk-in or road accessible due to distance	Standards: Local history Relationship: Partnered on new curriculum	• Ask questions • Physical movement (ex: tails do part of thinking that activities would do) • Quick poll: Status • Ask students to ask neighbor during pt. discussion (ex. pregnant)	Students write an essay/response to a focus question	• Informal feedback from teachers • Informal feedback from teachers on how your favorite/least favorite part of the program	Video Conferencing: Perfect zoom, teams, google meet	• Something to get them outside (Acting) • Recording studio	• Breakout rooms (tentatively) because of issues with (w/bing) • Chat • Annotation tools (making room, focus participants)	• Reserved general/financial support for trips to building • Tech support • Computer specialist opened once	Do not have additional staff	• Staff does not have the interest to learn the new technologies • More staff training			• Create 2 years for a fully developed program (develop focus questions, draw flow, and create/develop activities, and then implementation, so it takes 2 years, have staff, promote new program, see how well it works)	Grand Canyon Glacier Parks Denali	Barbara Stricker (Education Specialist) barbara_stricker@nps.gov
Yellowstone	11 years	Target: 4th-8th We'll run programs for K-12	Yes The resources are all the same Adjusted some activities such as the sorting things up	Free studies w/ backdrop Outdoor portions of programs that will require visitors to come to the office	Closed captioning Only on teachers to help provide context	Standards: Common Core, NGSS, Relationship: Wyoming/Montana/Idaho state standards	• Ask questions • Have kids respond to images • Encourage kids to make varied noises • When talking about wolfs, have Kids touch their ears • Have kids challenge students to explain their local environment	• Survey/monkey • GLEC survey - first-interested education organization • Resources use		Video Conferencing: Mirror school Content Development: Microsoft products (approved by NPS)	• Flagstaff, Park videos and get student responses • Ability to host zoom meetings	• Bag screens w/ images • Green screen/don't use) • Pod with tripod • Exposure for framework	• Chat • Ability to speak • Breakout rooms	• Staff in the hill, 4 in the spring • Technical support for zoom and field trips, and getting to industry • One person runs each program • Staffing depends on when program is being run (usually 8-10 months a year)	• Did not have additional staff • A staff in the hill, 4 in the spring • Technical support for zoom and field trips, and getting to industry • One person runs each program • Staffing depends on when program is being run (usually 8-10 months a year)	• Outstanding so people who can't travel to the park • People are engaged without impacting the land	Years: 20-30 minutes	Homestead Grand Teton Glacier Glacier Grand Teton Thomas Jefferson Memorials	Beth Taylor (Track) Education Program Manager beth_taylor@nps.gov
Great Smoky Mountains	1 year Launched at the start of COVID	K-5 We're open to programs for K-12 and up to college	Depends Both - virtual and in person programs, teachers created the main focus questions	Offers with a backdrop Outdoor portions of programs that will require visitors to come to the park and the NPS logo	Closed captioning Training on audio description Work with teachers, go until they assist they haven't had any students with disabilities	Standards: Common Core, NGSS, Relationship: Wyoming/Montana/Idaho state standards		Kids find something outside in the park to observe (nature is a location to learn)	• Informal feedback from teachers • Informal feedback from teachers on how your favorite/least favorite part of the program									
Channel Islands	10 years We were early in the mix 20 years Because the islands are so remote	General public, K-8	Yes Programs were solely created for online platform	Field - Underwater, hiking on the islands Studio with green screen	Captioning Work with teachers individually on accessibility and take care of accomodations	Standards: NGSS, common core, Size: Collaboration: Teacher Relationship: Professional development, plan their programs with local schools	• Use different levels of questioning • Journal time! "what is this" • Embedded Historical questions • Ask kids to check for comprehension and interest		• Teacher feedback is letters and verbally • Informal feedback from teachers • Informal feedback from teachers	Video Conferencing: Mirror schools, K20 (IOS 10.3) Content Development: Google slides Video Editing: doing cuts on WeVideo (special trailer from Jurassic videos)	• Some labs used for students to "research" and use different resources		• Chat • Raise hand • No share screen (Accelerator) TV screen or audio issues) • To breakout rooms (isn't monitor)	• A lot of tech support is needed • AV specialist • Ranger • Speakers from Ventura	• Understaffed - but staff are capable and creative • Have positive counsel for the live show programs	• Need time to develop programs (6 months to a year to develop) • Adapting due to student skill level	• Something with the students especially interest up having a game of get done & ASL	• Keeping programs unique • Adapting due to student skill level	Grand Canyon Ft. Sam Park	Monique Navarro (Education Specialist) & Wendy Stewart (Chief of Interpretation & Public Information) monique_navarro@nps.gov wendy_stewart@nps.gov
Dinosaur National Monument	9 years	2nd-8th - dinosaur connection Can target all grades and levels	Yes We had a live virtual field trip that is now recorded	Quarry Exhibit Hall Have only a short primary field trip location)	Not much, rely on teachers to help them and their students.	Standards: Utah core standards Relationship: Lots of virtual field trips, not many schools - difficult enough to go in person	• Q&A		• Survey teachers (ask if program hit all teacher expectations and desired topics)	Video Conferencing: mirror schools		• Wall and iPad	• Chat: Help for distancing	• Ellumpse programs require him tech support • IT specialist	Could use more staff to offer more programs but they don't need them	• Not familiar with technology • Now staff student at least two programs		• Keeping them engaged • Orchestrate each program and utilizing • Making it engaging can be difficult • Distant students rely on teachers	Joshua Tree Grand Canyon Grand Teton Shenandoah	Amanda Wilson (Interpretation Specialist) amanda_n_wilson@nps.gov
Sleeping Bear	6 Years	3rd-8th	Yes Only talent adjustments	Offline w/ green screen	Closed captioning Work with teachers Pre-adequate resources to place in once needed, schools already provide services as well	Standards: NGSS, Common Relationship: Good	• Good timing • Movement	• Food work • Drawing/coloring	• Participation in Q&As at the end of lessons • Informal feedback from teachers • Informal feedback from teachers	Video Conferencing: Mirror schools Content Development: PowerPoint											Emily Scaffidi(Education Specialist) ellie_schuneman@nps.gov
Joshua Tree	4 years	Early Elementary	Yes Very needed to adapt for younger audience and remote programs to reach remotely	Field	Teachers are responsible for accommodations.	Standards: Yes	• Q&A • Directed drawing program	Directed drawing	• Informal survey to teachers • Teacher feedback • Self assessment	Video Conferencing: Teams (we swap/fly in/out) Content Development: PowerPoint				Yes • Very little tech support • Problem solve themselves		Only 3 Rangers				Program: 8 X 8 hours to plan Run: ~45 minutes - 1 hr (two streams at the end with two sessions and improvements with teachers		Alison Waugh (Education Specialist) Alison_Waugh@nps.gov
Glacier National Park	4 Years	3rd-4th grade Offer programs from K - 12	Yes All lessons are designed for kids in the classroom (not kids at home)	Offline/studio (partner-friendly w/ green screen Xpriry - have computers distributed throughout studio	No accommodations for students with disabilities as of yet	Standards: State standards, NGSS Relationship: Programs originally tailored specifically to local schools	• Ask questions • Quiz & Titles • Used motions & presenter movements	Program where staff run interviews on scenes	• Informal feedback from teachers • Survey for teachers	Video Conferencing: Mirror schools Content Development: PowerPoint, google slides Video Editing: Adobe Premiere			• Teachers moderate platform and tokens • Breakout rooms (varies to try to do Zoom)	• Park IT department • Distance learning staff handles troubleshooting • Ellumpse - AV partner helps (Glacier National Park Conservancy)	• Additional staff member would help • Only one person needed to operate program, but has to preferred	• Only one way discussions • Students can be engaged to have their cameras on (targets for engagement) • Camera programs are difficult to make interactive	Program: 1 minute to learn on computer and set up Run: 45 minutes Prep/post activities: Take a long time to create	Rocky Mountain Grand Canyon Yellowstone Glacier Channel Islands Everglades Gulf Coast	Sarah Sweeney (Lead Education Technician) sarah_sweeney@nps.gov
Grand Canyon National Park	10 years	3rd-8th grade Offer programs for K-12 Only can program for K-1 from adult centered programs	Somewhat Some can be the same, different designs for delivery method. Themes mirror what they do in classroom (geology, ecology, human history)	Studio (hosted by non-profit partner)	Live captioning feature is soon	Standards: State standards, NGSS Relationship: Long standing park connection K-12 school within it, specific curriculum designed for local teachers	• World clouds	• Drawing on gas and prism • Green eggs	• Observing for audience	• World cloud - not sure what program to use for it • Writes has a lot of upcoming features • Facebook Live	• Construction (provided green staff) • Shopify (software to connect to Facebook) • Mac with classic e3 - confidence monitor • Green screen (Lowes) • Mac mini • Internet to control green screen	• Good mics • Many participants • Having/spotlight • Chat - simplify it for 3rd graders (type 'hi from Arizona') • To breakout rooms (don't know any of	• Google • Ex: Ranger had them set up recording studio and troubleshoot low camera quality issue • Partner organization	• 1 is ideal • You can use a program with 1	• Technology limits • Can't see all students (must use may Zoom • The tone became aren't sure how to get the corresponding technology	• Interesting so people who can't travel to the park • Live questions • Teacher are you in the sky?? • Give many resources from then it take 45 MINUTE	Program: 2 minutes to turn on computer and set up Run: 45 minutes Prep/post activities: Take a long time to create	Rocky Mountain Glacier Glacier Channel Islands Everglades Gulf Coast	Tanya Ramkay (Resource Education Staff) tanya_ramkay@nps.gov
Zion	5 Years	K-5th grade Offer programs to 12	Depends Most were created from scratch, some were recreated.	Studio	Audio-described (if requested) Live/closed captioning (zoom)	Relationship: Strong	• Direct • Song • Movement • Q&A	• Virtual climbing activities	• CEAC has a feedback Survey	Video Conferencing: Perfect zoom, mirror schools Content Development: PowerPoint Content Advertising: CEAC	• Disaster • Adventure software in science NGS	• Green screen - Xpiki	• Muting • Chat (for sister kids) • NPS Breakout Rooms	• Strong IT department • Partner organization	• 3 Permanent • 4 IT Seasonal • Seasonal times COVID)	• Intense staff training needed		• Keeping personal connection to kids	Grand Canyon Glacier Channel Islands	Cadence Cook (Youth Program Expert) cadence_cook@nps.gov
Homestead	20 Years	4th Grade Offer programs 4th-12 and adult	Yes Created videos from existing content	Studio	Audio descriptions (only on the Fly) Live captioning Rely on students	Standards: State standards, Size: 1 school Relationship: Close with local school but also furnished to neighboring state schools	• Have Kids stay off seats while time • Easy on student length	• 3-way conversation	• CEAC has a feedback Survey	Video Conferencing: Mirror schools, zoom, google meet Content Development: PowerPoint Content Advertising: CEAC		• New lights, camera, and speakers	• Green screen - epic	Yes	• AV specialist (not NPS)	2 Staff	• Need to practice		• Student and teacher competency with by technology	Program: 30 minutes Run: 45 minutes to 1 hour	Rocky Mountain Glacier	Anne Reilly Everson (Management Specialist) Anne_Reilly@nps.gov
Tallassee	1-2 Years	3rd-8th grade Offer programs K-12 and adult	Yes We included hands-on activities and combined programs to use Zoom or the park	Field	Can hire ASL interpreter Work with teachers	Standards: National Size: 1 school Relationship: Close with local school but also furnished to neighboring state schools	• Q&A • Partner solving challenges	• Historical music program	• Verbal/written feedback • Evaluate audience engagement	Video Conferencing: Mirror schools, skype, google meet, teams, zoom Content Development: PowerPoint Content Advertising: CEAC		• Adobe Premiere Pro	• Dial	• Screenshots	• Performed a DL program and a vid from the class came to visit the park shortly after	• Never learning on video editing and viewing DL platforms	Program: 15 minutes Run: 30 minutes	Statue of Liberty Grand Canyon Olympic Grand Teton Glacier Channel Islands Grand Canyon Mt. Vernon	Karen Sisco-Hunt karen_sisco-hunt@nps.gov
National Mall	A few years (Officially) since COVID	3rd-8th grade Offer programs K-12	Yes Shared similar programs online but we prioritize instead of physical objects	WEB/Offline	Rely on teachers/schools	Standards: General DC Size: 1 school Relationship: Main vision they are with what they are learning about	• Ask questions (respond in chat or zoomed) • Q&A • Anything hands on • Talk with them	• Anything hands on • Talk with them	• Informal teacher feedback • Talk to clusters during their Band program • See if kids ask questions	NA	Video Conferencing: Mirror school's Content Development: PowerPoint			• Many participants • NEEDS to see other participants' cameras when sharing	• IT doesn't provide support • Ranger/Any Gen platforms provided • Rely on regional IT	• Need tech training • Need to be more familiar w/ the program • Need to make projects for students homes	• Students accessed the program and asked to come back • Students to feel the target of their own program (have students' project) • Live questions for special education students who enjoyed and asked questions	• Running out of time for free but it's content is one program	Years: 30-60 minutes	Grand Canyon, Yellowstone, Grand Teton, Golden Gate, Everglades	jennifer.kubicki (Distance Learning Staff Member) jennifer_ajani@nps.gov
Alcatraz Ferguson	A few months (since March)	K-12 Offer programs prek-college	Yes Same	Studio Field (only sometimes)	Closed captioning Work with teachers, ask when signing up for programs	Standards: State for districts in DC, VA, WV, and MD	• Bulletboards monitor and in-ordinance	• Fish distraction • Anything activities	• Teacher survey after performance	Video Conferencing: Mirror schools, zoom, google meet Content Development: PowerPoint, Prezi		Look to new technologies, but active in area for	• Zoom • Laptop • Wall	• Hand raise • Many participants	None enough staff		• Never tracking		• Learning how things can go wrong and how to fix them quickly	Program: 1 hour setup, 1 hour clean up Run: 30 minutes to 1 hour, 2 hours	AC Adaptive and near	Heather Dubbert (Program Manager of Education) heather_dubbert@partnershipsfoundation.org
Glacier Bay	Elementary level Offer programs K-12 and pre-school	Yes They have very few in person programs due to remote location	Studio/Office	Video will turn (transcript) Have books - no requests as of yet	Closed captioning Work with teachers individually on accessibility and take care of accomodations	Standards: AK standards, Size: 1 school/district Relationship: Not as strong due to lack of schools nearby, focus on schools throughout the country	• Q&A • Each town/ dot hands • Short quizzes on screen • Pre-Quiz choice questions	Become a junior ranger program (they get a badge)	• CEAC has a feedback Survey • Informal feedback from teachers	Video Conferencing: Zoom (schools haven't used for anything else) Content Development: PowerPoint	• Employee rooms • Mac • Book pulling	• Green Screen • Webcam 1080 • Digital mic cam	• Teachers moderate platform and features	• IT department w/ 2 IT specialists	• Depends on number of programs offered (2 rangers and one intern required to run each program	• Requires training • Can't do this as quickly • Need to acquire tech staff • Need a ranger setup • Other responsibilities remain adjusting difficult	• Hold moves with a house • Scavenger hunt program	• Difficulties with larger classes	Program: 2-3 hours Run: 45 minute 1 hour Pre/Post activities: A couple of days to design	Denali Zion Kenai Fjords Yellowstone Klondike Gold Rush	Emma Johnson (Education & Outreach Staff) ejohn_education@nps.gov
Grant Teton	11 years	K-5th grade Original program was for 4th grade	Depends Give programs have not been changed Adaptations have been through the teacher feedback Trying to make environment and engaging visuals	Field - Snow Desk Virtual Center WEB - is for programs	Closed captioning Long-standing relationship with local school, have relationship with local tribal school	Standards: Common core, Size: Relationship: Long-standing relationship with local school, have relationship with local tribal school	• Engage partners for developing group questions • Vocabulary approaches • Q&A	Snowshoe program (slapstick where is fish)	• Survey monkey • Informal teacher feedback • Standard questions to ask teachers	Video Conferencing: Zoom, skype, google meet			• Teachers moderate platform and tokens	• Very little help from IT department • Have a network tasked from organizing sessions • One staff member is knowledgeable about technology	• Adjustment based on answers • Ex: Ranger Jeff • Only need 1 staff member to run live tech programs	• Biggest issue is with limited time to develop programs • Need to be more familiar w/ information especially in regards to video conferencing platforms			Jewel Zion Kenai Fjords Yellowstone Klondike Gold Rush	Jennifer Aquilera (Education & Community Engagement Staff) jenn_education@nps.gov
Sequoia	10 years (partnered with King's county schools) Started in 2020 as there was	K-6th grade	Depends Ranger in the classroom program were adapted to virtual platform Some programs were created from scratch	WEB Interested in creating a studio	Aids teachers if they need accommodations and provide as needed	Standards: Common core, NGSS	• Good about an animal then talk about it • Songs and chants for kids to repeat	• Virtual backgrounds • Talking about the biology of an animal • Encouraging movement during calls and fun facts	• Teacher feedback • Retention rate	Video Conferencing: Give schools the option of zoom, google train, and skype Content Development: PowerPoint, Prezi	• Lost programs on the field through zoom with a rabbit			• Use at/fork, just different • Teachers moderate the platform is important • No more sticking because the platform is participated in distance learning	• IT staff	• Underutilized this year • Education specialist position is vacant • Usually a team of 5, now 3 • 2 seasonal employees	• Teachers are really grateful • Teachers are really excited to take platform is important • No more sticking because the platform is participated in distance learning		Program: Presentations are ready to go, no custom preparation time 15 minutes to go through teacher's form Run: 45 minutes to an hour	Everglades, golden gate, grand canyon	Laura Sisco (Educational Team Staff Member) laura_Sisco@nps.gov
Mt Vernon	4-5 years	K-12th grade	Yes Analyzed lessons and carried some of the same activities, but primary sources, virtual tours, and "Fat Washington" activity	Office/Home Digital programs are provided	Closed captioning Work with the platform if it has better accomodations	Standards: Maryland State Relationship: Common Core, US Framework	• Back and forth • Polls • Ask kid to questions in chat • Thumbs up/down • Yard/hand dialogue	• Sharing/interesting questions • Video having short input videos	• Survey with 10 questions for students and 10 for teachers • Platforms: google forms and studio	• Practice each component for smaller shooting • Students make connections when they relate to the 10th they live today	Video Conferencing: Mirror school's, webex Content Development: Google Colab	• Pre-recorded videos		• 10 people trained on lead three programs • Mix of historical components and youth programs staff • Ranger Jeff and Ranger Dan • Have three programs they will grow staff	• An opportunity to build connections with students who may not be able to travel to the park • Can't do as much in-person interaction		• Setting up the equipment level is difficult • Can't do just shoot in small groups • Can't play games virtually • Participation and setting up is tradition	Program: 2 hours work of format training and 5 hours of content creation (study in program for distance learning Run: 45 minutes to 1 hour, and an effort to split up content and connect activities afterward, max for 1 hour Pre/Post activities: Take a long time to create	Thomas Jefferson's Monticello Monticello's Historical society	Sadie Troy (Student Learning Specialist) troy@monticello.org

Teacher Interview Data

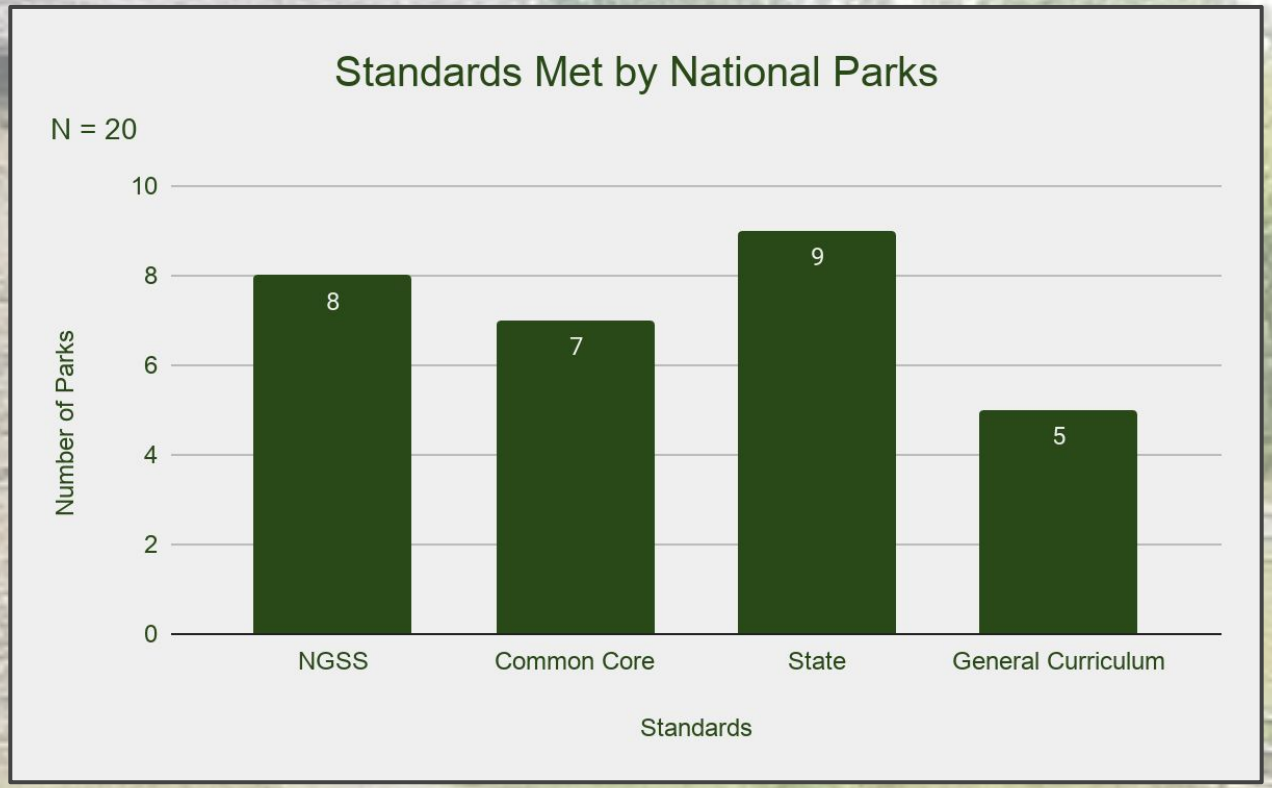
Current Grade	9-12	2	1
Grades Taught	K-4 6-8	2	Pre-K K 5-6
# of Years	12	4	16
Prior Experience with DL	Limited Experience Before March	Since March	Since March
Platforms	Microsoft Teams Google Classroom	Google Meet Google Classroom Google Suite Nearpod Google Jamboard	Microsoft Teams
Future Platforms	Clever.com Nearpod	Nearpod SMARTSuite	Zoom Google Products
Features	All (Screen Share explicitly)	Breakout Rooms Muting	Mutine
Interactivity	Meetings Questioning Resorces Kahoot/Nearpod	Nonverbal Ques Chat Voice Gestures Hand Movements Poll Features	Mostly Verbal Thumbs Up/Down Write on White Board
Best Activities	Stuff Students can do Independently Low/No Cost Modifiable for Anyone	Interacting Among Themselves Breakout Rooms Really Good	Easier to do Science Projects at Home
Teacher Adjustments	Sitting for Long Times Student Participation Expectations and Consequences Steep Learning Curve	Family Doing Work for Students Tech Issues	Very Hard to Teach Writing
Student Adjustments	Feel Isolated Hard to Adhere to Schedule Afraid to Ask Questions	Being Around Family Members Being Responsible for Younger Siblings School, Work, and Home not Separate	Missing Social/Emotional Piece Kids Really Miss Seeing Each Other
Advice for National Parks	Start with Catching Interest Use Games Cohesive Lessons with Pre/Post Activities Use Pre/Post Activities for Vocab	Have Base Program then Tailor to School Email or Meeting with Teacher Prior to Program Schools can be Very Different from Each Other	Design Material for Specific Ages Be Enthusiastic Give 2 Week Notice for Materials Keep Programs Short and Sweet Use Games in Program Billingual Would Be Nice
Disabilities	Computer Considered 1:1 Accomedation Things can be Read to Students Customizable Screen Magnification IEP has All Accomedations Students Need	IEP and 504 still Complient Voice Recording Instead of Typing Closed Caption	Small Groups Use Visuals and Explain What's Happening Plan with Teachers Beforehand Move Around Take Breaks
Ranger Role	Interactive Speaker Keep Students Engaged Manage Time Wisely	Provide Content, Energy, and Engagement Just Presenting Information	Presenter Would Appreciate if Ranger Calls on Kids Make Program Feel Personal
Reason for Field Trips	Must Tie Into Curriculum and Be Engaging Must Justify Classroom Time A Good Oppertunity for Students who Can't Travel	Brings What Students are Learning to Life Supports Curriculum Takes Students Places They Can't Go Normally	Normalize School Year Content-Related Field Trips Animal Center Programs in Rock Creek Park
Pre/Post	Would Utilize Pre/Post Activities Video Introducing Students to Topic Assessment of Material Retention Afterwards	Would Utilize Pre/Post Activities Anything to Get Minds Working Help Inspire Questions A Reading	Would Not Utilize Pre/Post Activities No Time to Squeeze Into Schedule Will Send Them Home as Strictly Optional Material Videos are Nice Because Students can Watch on Own Time

Assessment Methodology for Determining Program Effectiveness

- Federal Restrictions: NPS cannot administer surveys to more than 9 people.
- Must rely on a 3rd party for formal assessment.
    - Usually use CILC, Survey Monkey, or EE21 survey form.



Programs Must Fulfill the Needs of the Teachers



Video Usage in DL Programs

Uses of Videos

- Pre-visit activities.
- Embedded videos in programs.

Benefits of Videos

- Areas with no internet.
- Show events that are time/nature dependant.

Accessibility Accommodations

Accommodations

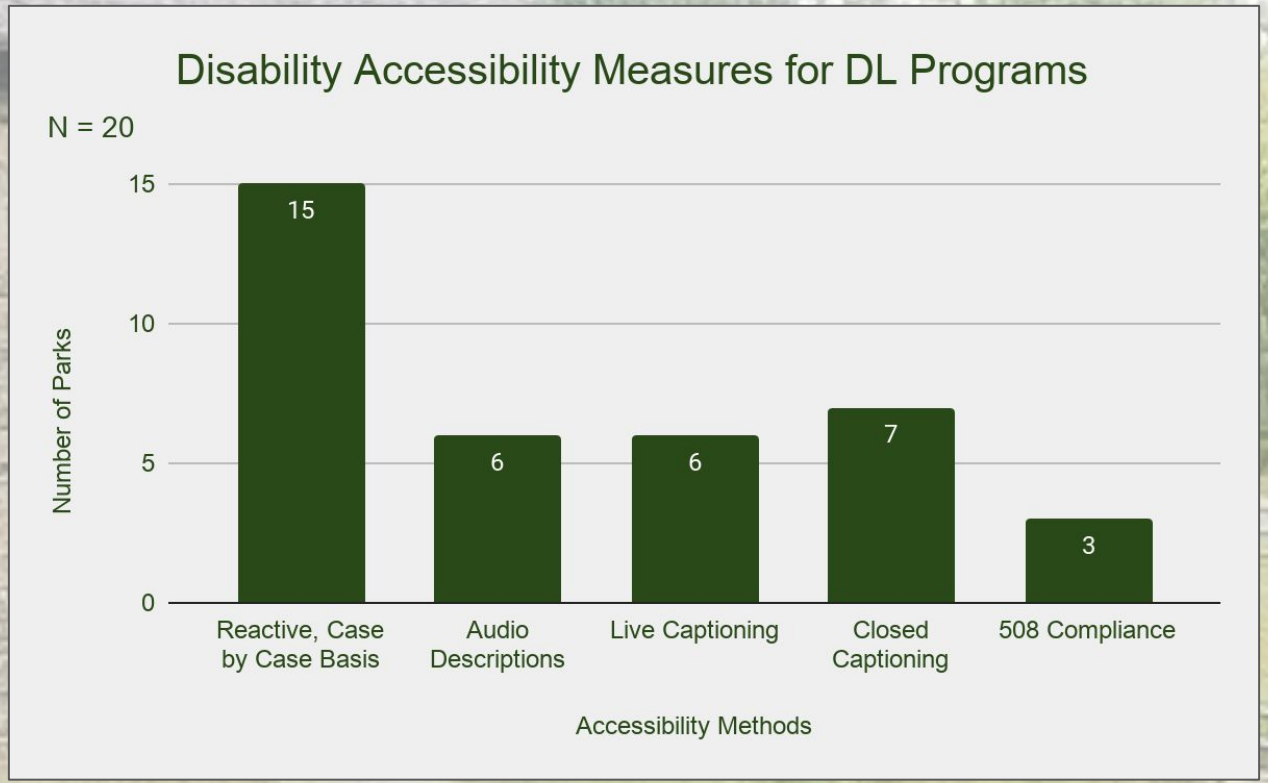
1. 508 Compliance
2. Live/Closed Captioning
3. Audio Descriptions

Work with the teachers individually.

Tips

- Join teacher's regular video conferencing platform.
- NPS has 508 compliance guidelines.
- Use audio description training through the NCA.

Accessibility Accommodations



Video Conferencing

Zoom

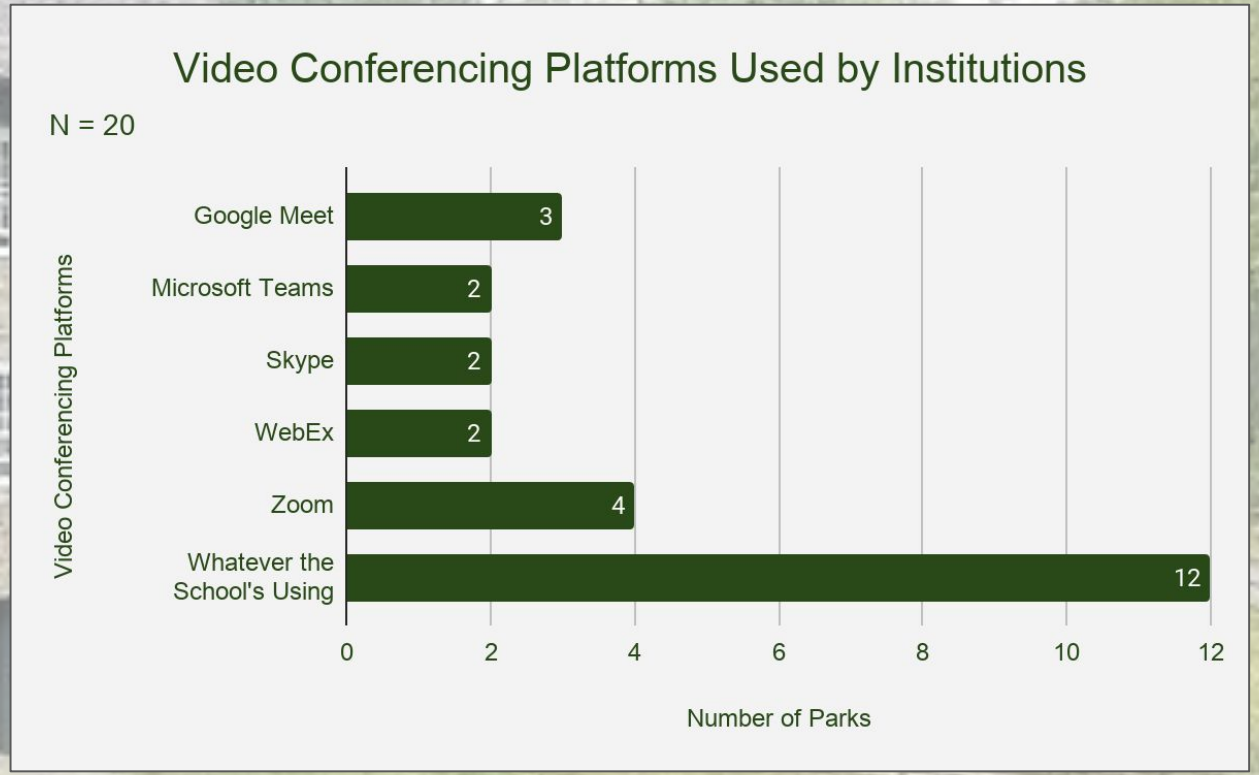
Live & Closed Captioning
Breakout rooms

Google Meet

Live & Closed Captioning
Google Classroom Interface

Microsoft Teams

Approved by NPS
Superior Virtual Background

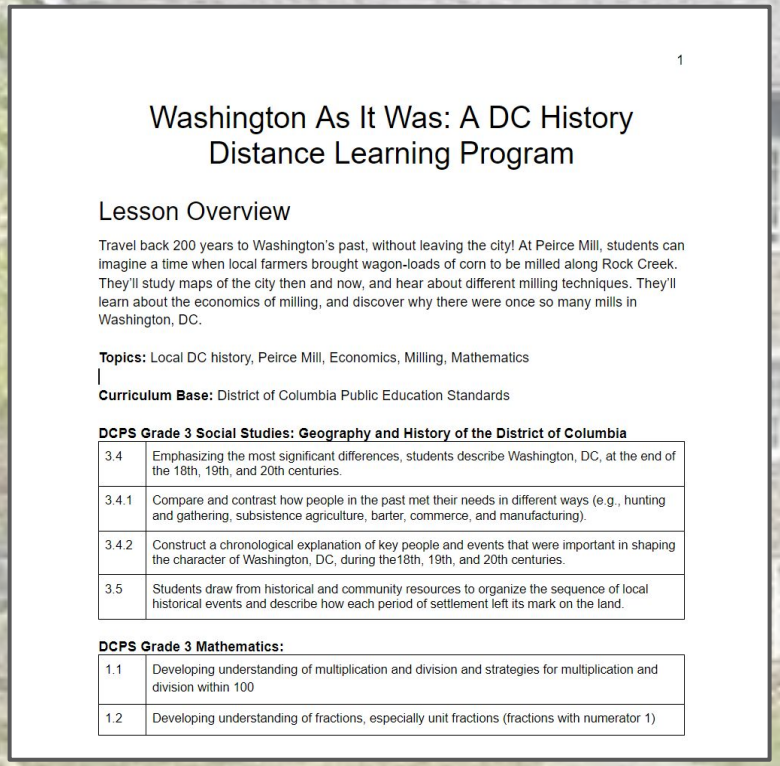


Most Popular Tips

1. Be engaging and energetic! (10/20)
2. Change pace (8/20)
3. Allow teachers to moderate (6/20)
4. Use props and costumes (6/20)
5. Know the tech and have a backup plan (5/20)

Deliverables

Lesson Plan



1

Washington As It Was: A DC History Distance Learning Program

Lesson Overview

Travel back 200 years to Washington's past, without leaving the city! At Peirce Mill, students can imagine a time when local farmers brought wagon-loads of corn to be milled along Rock Creek. They'll study maps of the city then and now, and hear about different milling techniques. They'll learn about the economics of milling, and discover why there were once so many mills in Washington, DC.

Topics: Local DC history, Peirce Mill, Economics, Milling, Mathematics

Curriculum Base: District of Columbia Public Education Standards

DCPS Grade 3 Social Studies: Geography and History of the District of Columbia

3.4	Emphasizing the most significant differences, students describe Washington, DC, at the end of the 18th, 19th, and 20th centuries.
3.4.1	Compare and contrast how people in the past met their needs in different ways (e.g., hunting and gathering, subsistence agriculture, barter, commerce, and manufacturing).
3.4.2	Construct a chronological explanation of key people and events that were important in shaping the character of Washington, DC, during the18th, 19th, and 20th centuries.
3.5	Students draw from historical and community resources to organize the sequence of local historical events and describe how each period of settlement left its mark on the land.

DCPS Grade 3 Mathematics:

1.1	Developing understanding of multiplication and division and strategies for multiplication and division within 100
1.2	Developing understanding of fractions, especially unit fractions (fractions with numerator 1)

- Lesson overview
- Follow DC Public school 3rd grade standards
- We created the pre-visit and post-visit activities
- Sponsor will create video and live program

Pre- and Post- Visit Activities

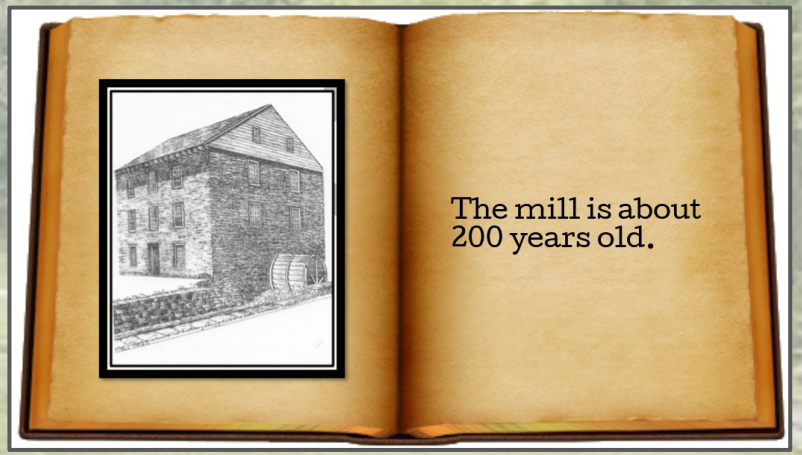
- Teachers can choose from 3 pre-visit activities and 3 post-visit activities.
- Pre-visit materials create excitement.
- Post-visit materials act as review.
- Pre-visit and post-visit activities are optional.

Then and Now

- Pre-visit activity
- Synchronous PowerPoint
- Compare objects from the 19th century to things people use today

A Tiny History of Peirce Mill

- Pre-visit activity
- PowerPoint that resembles storybook
- Discussion questions



Peirce Mill Vocabulary

Craftsman Fill in the Blank 1:

The iron tool was broken but the _____ managed to repair it.

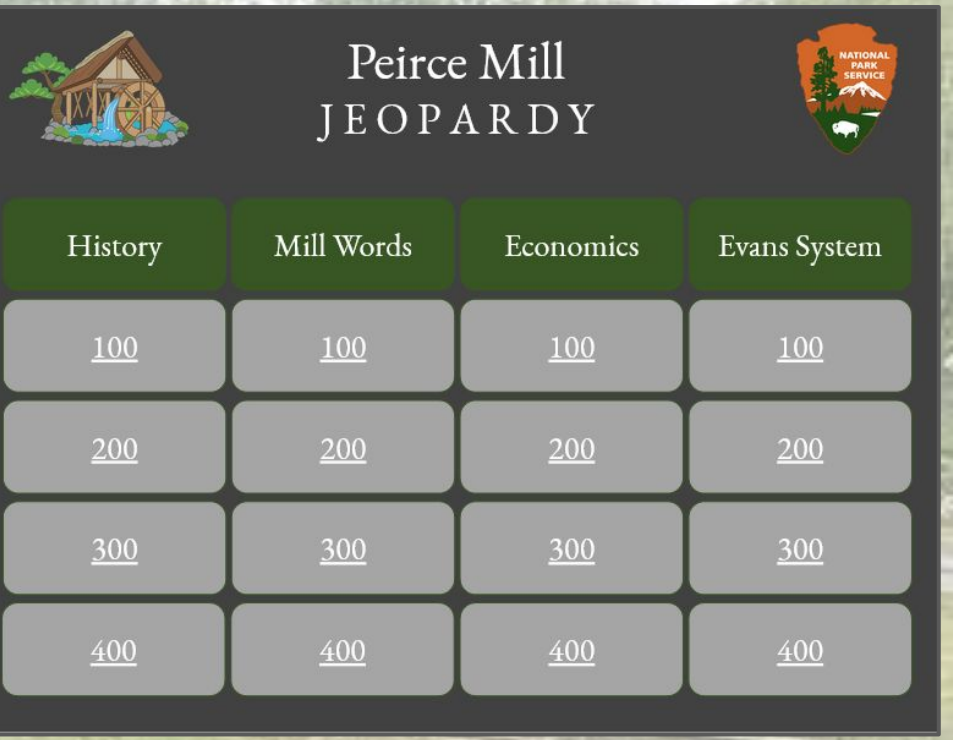
Word Bank:

- Blacksmith
- Cooper
- Mason
- Millwright
- Wainwright

- Pre-visit activity
- Synchronous PowerPoint
- Students learn vocabulary words relating to Peirce Mill and then fill-in-the-blank

Peirce Mill Jeopardy

- Post-visit activity
- Synchronous PowerPoint
  - Moderated by teacher or ranger
- Intended to reinforce topics covered during the virtual field trip



At-Home Scavenger Hunt

Peirce Mill Home Scavenger Hunt

Find something in your house that the question describes! Draw and write the name of it. If you can't find it, you can draw something you think of. How many were you able to find at your house?

- ❑ A smith makes things out of metal. Can you find something made of metal?

- ❑ A chandler makes candles. Can you find a candle?

- ❑ A cooper makes buckets and barrels. Can you find an object that holds things?

- ❑ A mason builds stone walls. Can you find something made of stone?

- ❑ Can you find something in your house made of corn?

- ❑ Is there anything at your house that grinds food?

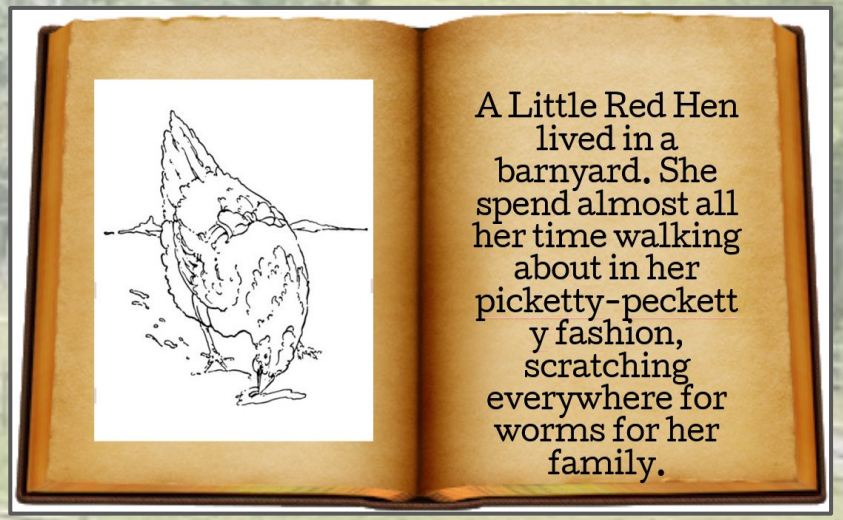
- ❑ Peirce Mill is made of wood. Can you find something made of wood?

- Post-visit activity
- Synchronous or Asynchronous Worksheet
- Compare and contrast objects
- Provides prompts

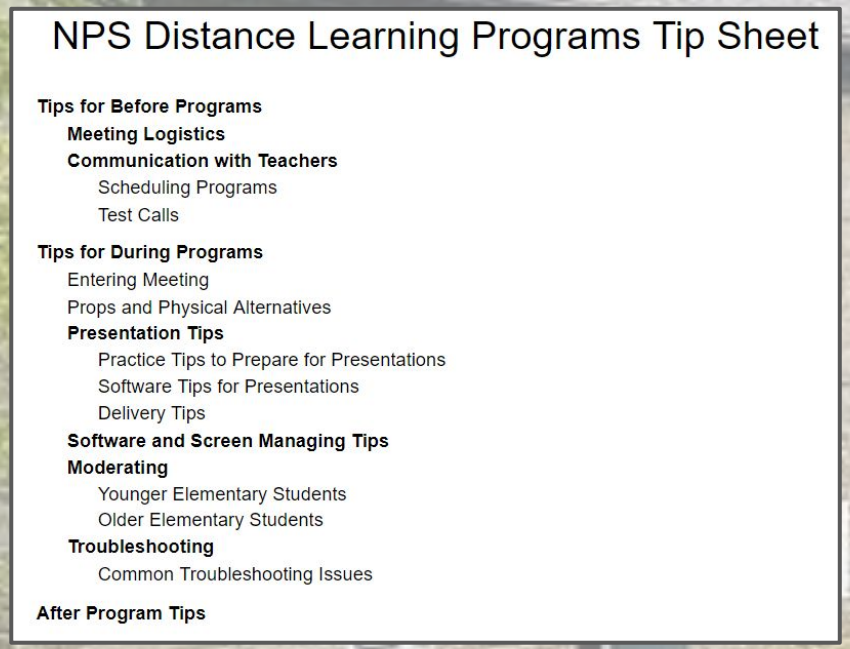
The Little Red Hen

- Post-visit activity
- Synchronous or Asynchronous

  PowerPoint, storybook format
- Has discussion questions
- Fulfills fable requirement



Staff Tip Sheet



NPS Distance Learning Programs Tip Sheet

Tips for Before Programs
- **Meeting Logistics**
- **Communication with Teachers**
  - Scheduling Programs
  - Test Calls

Tips for During Programs
- Entering Meeting
- Props and Physical Alternatives
- **Presentation Tips**
  - Practice Tips to Prepare for Presentations
  - Software Tips for Presentations
  - Delivery Tips
- **Software and Screen Managing Tips**
- **Moderating**
  - Younger Elementary Students
  - Older Elementary Students
- **Troubleshooting**
  - Common Troubleshooting Issues

After Program Tips

- Compiled tips from interviewees training materials sent by materials
- Received distance learning materials from Grand Teton, Acadia, and Glacier National Park

Recommendations

Programs Must be Engaging and Interactive

Engagement

- Use of costumes and props
- Embed videos and images into PowerPoints to change pace

Interactivity

- Question and Answer
- Chat (for older students)
- Chants, songs, and dances

Allow the Teacher to be the Moderator

1. Teachers should moderate programs.
2. Rangers act as guest speakers.
3. Rangers should be flexible.

Pre- and Post- Visit Materials Should be Supplementary

- Activities enrich the live programs.
- Teachers decide what works best.
- Students may not always complete pre-visit material.

Keep the Technology Simple

- Let the content drive the program.
- Build interactivity into program itself.
- Avoid multiple logins for students.
- Have a backup plan.

Run Programs with Two Rangers

- Ranger A: Present in front of camera
- Ranger B: Work behind the scenes

Programs can be run with one ranger; however, there are more pauses while they work with the technology.

A ranger at Acadia National Park leading a distance learning program.

Software and Technology NPS Should Consider for Adoption

Green Screen Technology

Benefits:

- Standing presenter can be expressive & energetic
- Can physically reference green screen
- Less reliance on screen share
- Can better utilize props
- More options for activities

Implementation:

- Software has a huge upfront learning curve
- Park staff has to devote lots of time to learning software
- Requires physical space and proper lighting
- Requires at least two computers or monitors

What is Xsplit Broadcaster?

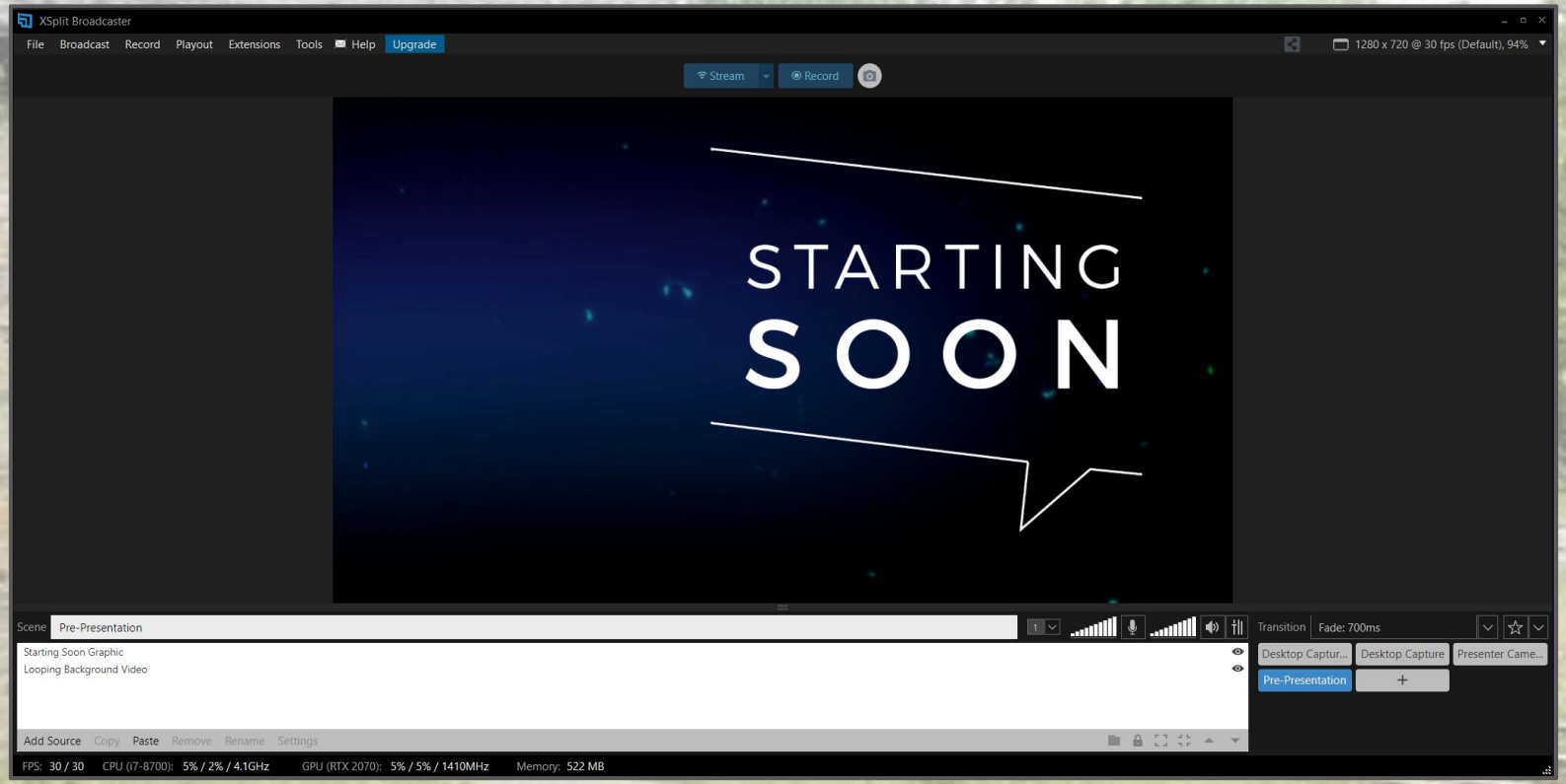
Xsplit Broadcaster

- Live streaming and recording software
- Green screen capabilities
- Approved for use by NPS

Features:

- Compatible with other video conferencing software
- Chroma Key (Green Screen management)
- Stream Management features
- Video recording and editing

Xsplit Broadcaster UI

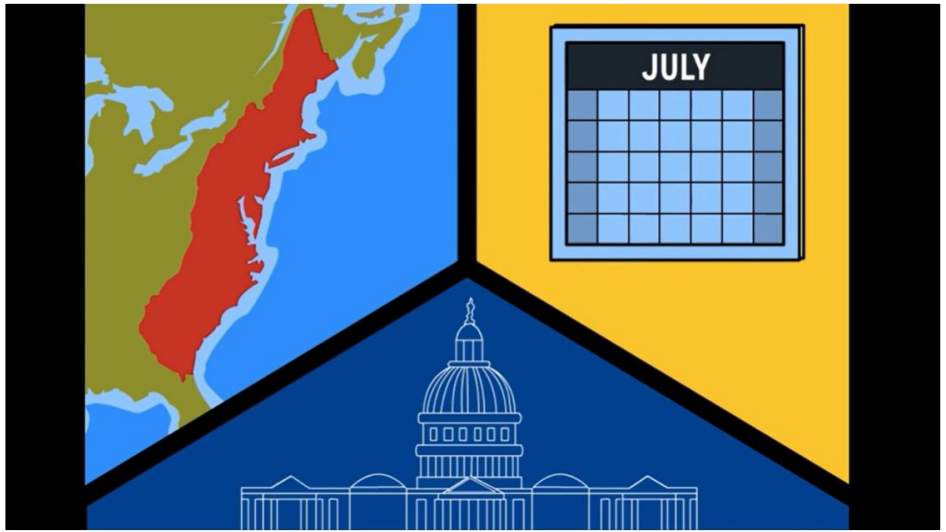


Edpuzzle

edpuzzle Search content... Content Gradebook My

Unit 4 Constitution Reteach (OL)

RACHEL ACOSTA



MULTIPLE CHOICE QUESTION

Which is the best description of the Constitution?

- It is the blueprint (plan) for our government.
- It unified the original 13 states.
- It has lasted over 200 years.

Kahoot!

How many global trends in ice cream are we focusing on for 2018?

30 sec

Image reveal

Original

3x3

5x5

8x8

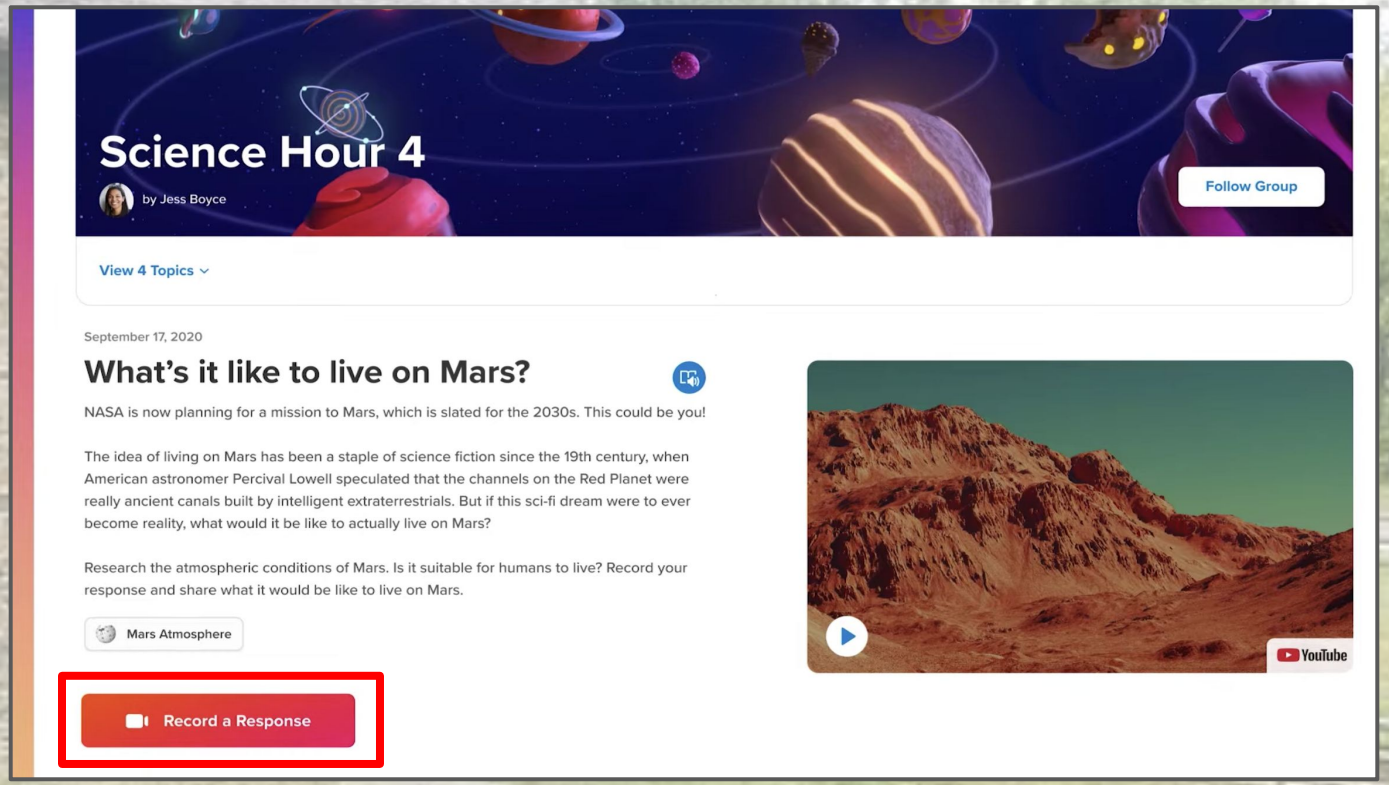
2

3

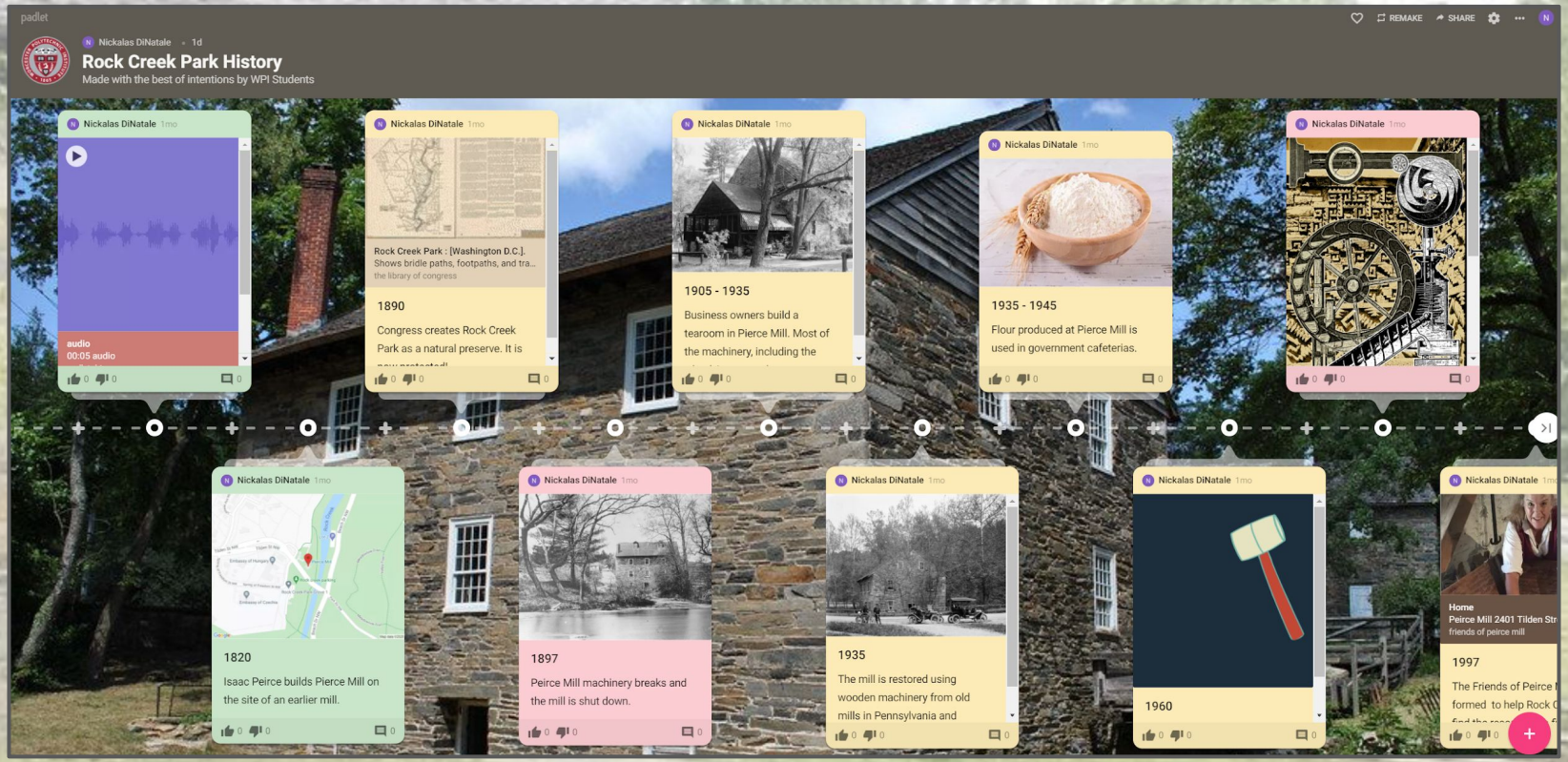
5

1

Flipgrid


Science Hour 4
by Jess Boyce
Follow Group
View 4 Topics
September 17, 2020
What's it like to live on Mars?
NASA is now planning for a mission to Mars, which is slated for the 2030s. This could be you!
The idea of living on Mars has been a staple of science fiction since the 19th century, when American astronomer Percival Lowell speculated that the channels on the Red Planet were really ancient canals built by intelligent extraterrestrials. But if this sci-fi dream were to ever become reality, what would it be like to actually live on Mars?
Research the atmospheric conditions of Mars. Is it suitable for humans to live? Record your response and share what it would be like to live on Mars.
Mars Atmosphere
YouTube
Record a Response

Padlet


padlet
REMAKE
SHARE
Nickalas DiNatale · 1d
Rock Creek Park History
Made with the best of intentions by WPI Students
Nickalas DiNatale 1mo
audio
00:05 audio
Nickalas DiNatale 1mo
Rock Creek Park : [Washington D.C.].
Shows bridle paths, footpaths, and tra...
the library of congress
1890
Congress creates Rock Creek Park as a natural preserve. It is
Nickalas DiNatale 1mo
1905 - 1935
Business owners build a tearoom in Pierce Mill. Most of the machinery, including the
Nickalas DiNatale 1mo
1935 - 1945
Flour produced at Pierce Mill is used in government cafeterias.
Nickalas DiNatale 1mo
Nickalas DiNatale 1mo
1820
Isaac Peirce builds Pierce Mill on the site of an earlier mill.
Nickalas DiNatale 1mo
1897
Peirce Mill machinery breaks and the mill is shut down.
Nickalas DiNatale 1mo
1935
The mill is restored using wooden machinery from old mills in Pennsylvania and
Nickalas DiNatale 1mo
1960
Nickalas DiNatale 1mo
Home
Peirce Mill 2401 Tilden Str
friends of peirce mill
1997
The Friends of Peirce M
formed to help Rock C

Acknowledgements

Rock Creek Park
Dana Dierkes

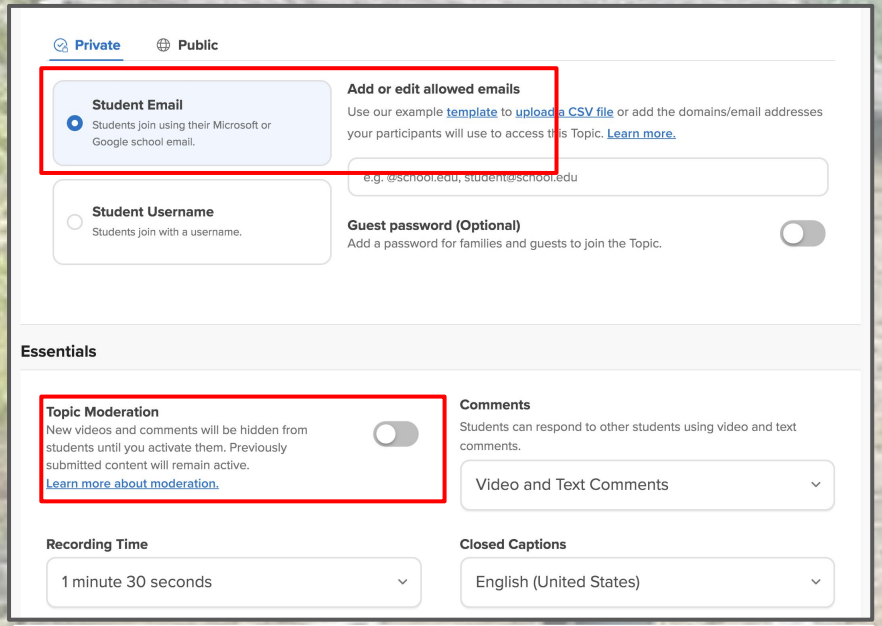
Friends of Peirce Mill
Angela Kramer

WPI
Professor Traver
Professor Hanlan
Professor Ault

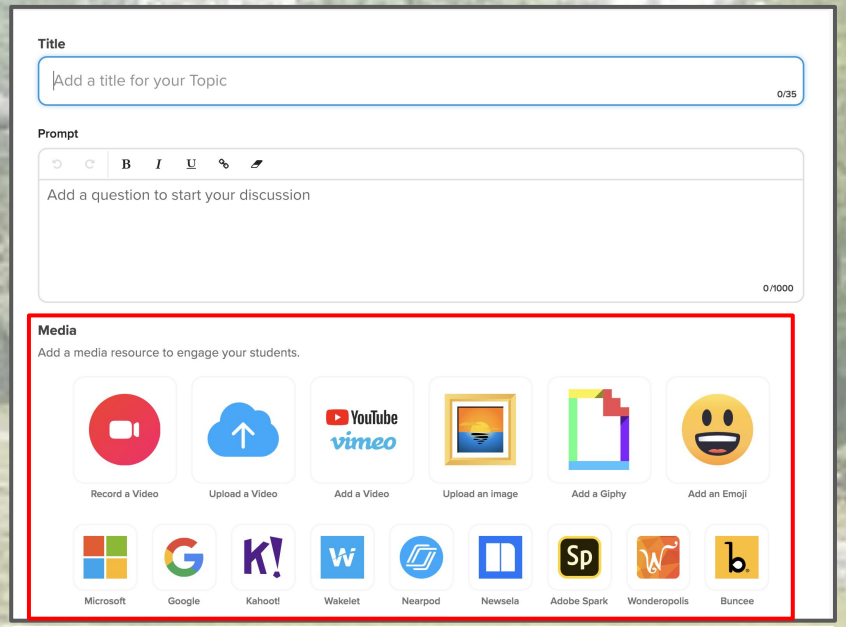
We also thank all interviewees and attendees.

Any Questions?

Flipgrid



Security features: must be invited to see the board, teachers must approve responses for them to become visible to other students.



Media types that can be added to a flipgrid post.