



<http://bit.ly/1JWOKP8>

Time Travel App for Middle School Students

Hands-on Learning Through Time and Space



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BACKGROUND

Smartphone App Design Challenge

A business known as Global-Corp has recently taken a charitable initiative to help more children learn history. To accomplish this goal Global-Corp has donated a smartphone to every child within a given school, and equipped the smartphone with a time traveling app.

Design an app to facilitate hands-on learning for children aged 10-12 by allowing them to travel through time and space.



AUDIENCE RESEARCH

Early adolescence (10-12 years old)

- **Developmental Milestones**
 - ▶ **Physical:** becoming an adult
 - ▶ **Emotional/Social:** interact with peers
 - ▶ **Intellectual/Cognitive:** extend thinking beyond personal experience to understand the world

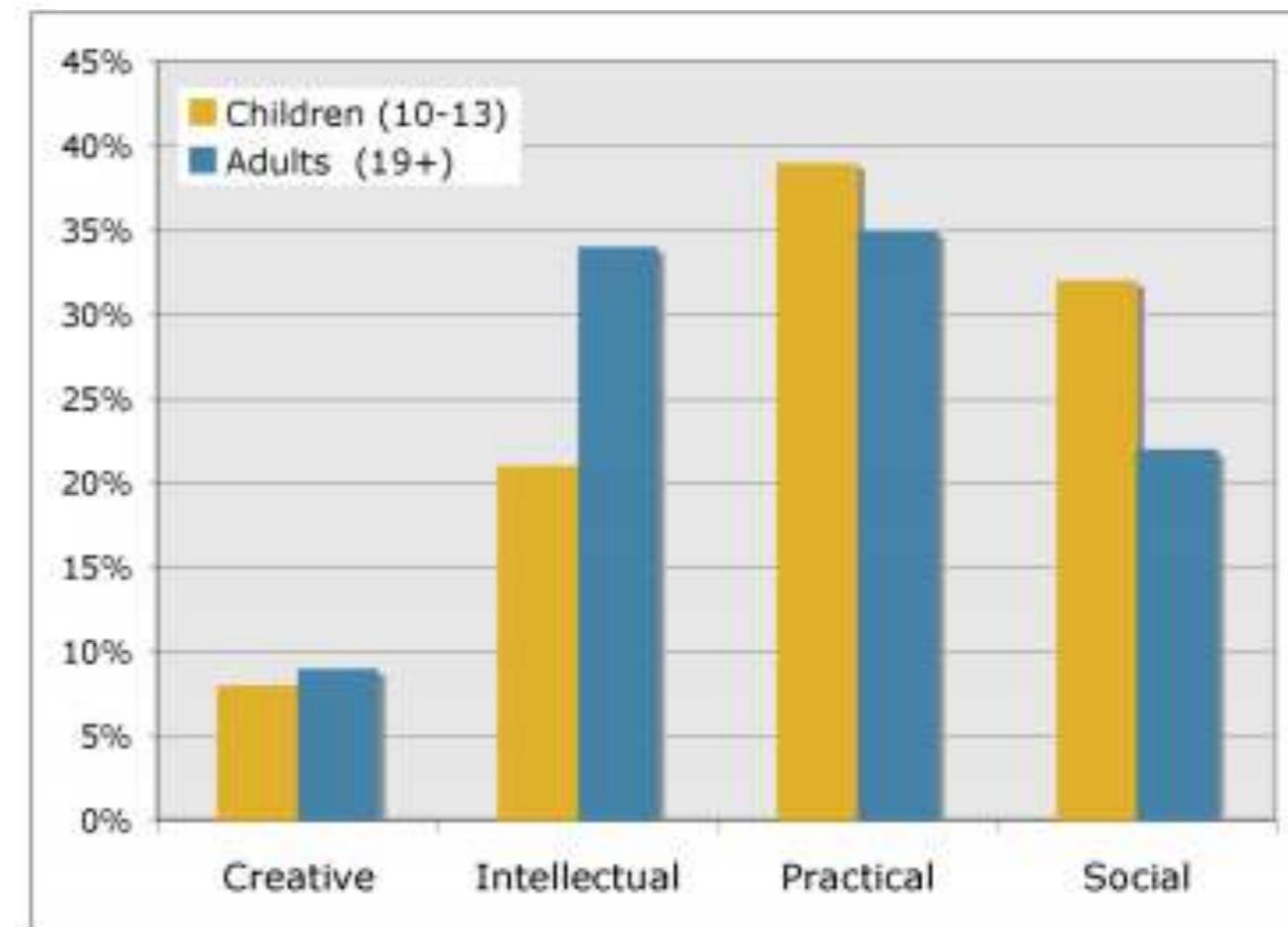
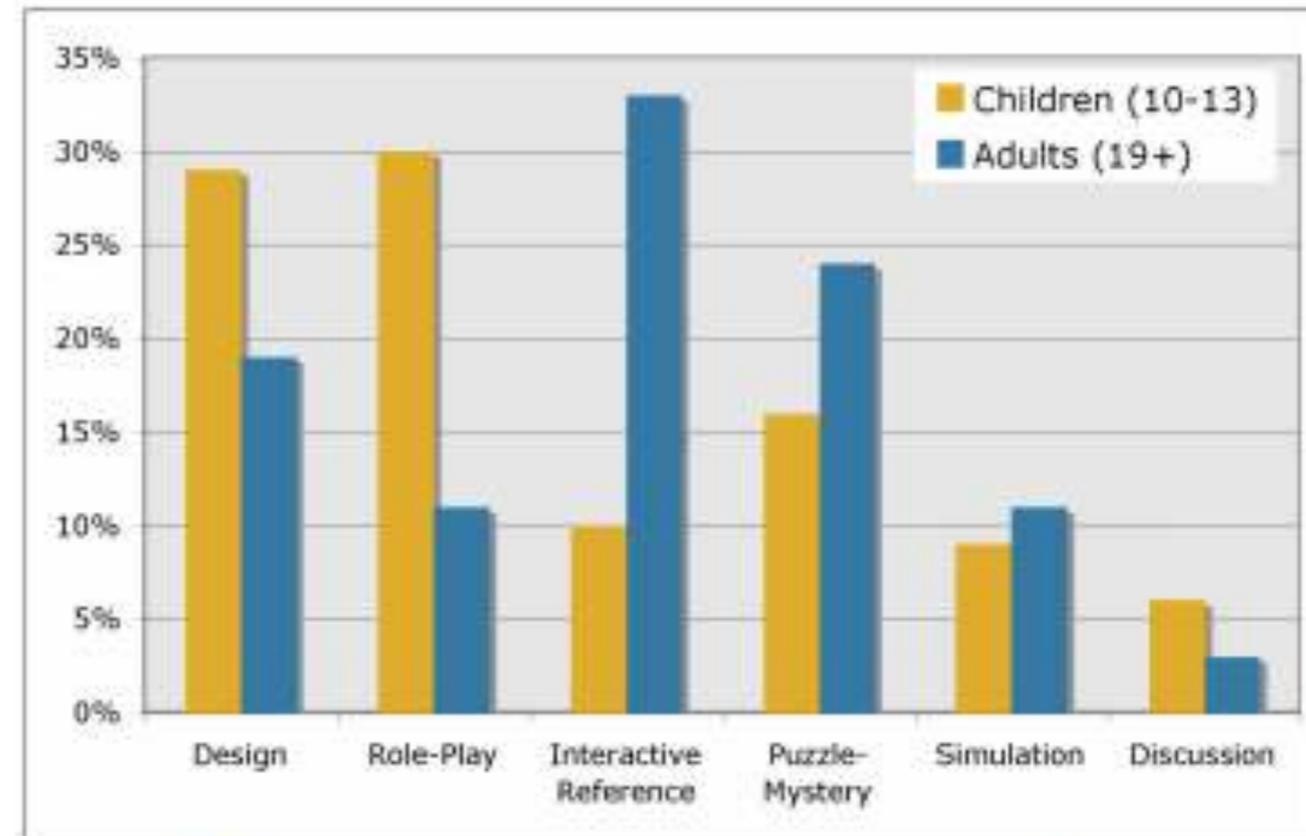
<http://www.hunter.cuny.edu/socwork/nrcfcpp/pass/learning-circles/four/Early%20adolescence.pdf>



How do children age 10-12 learn?

- **Play:** design and role play
- **Activity and Interaction**
 - ▶ **Practical:** investigate and solve puzzles and mysteries
 - ▶ **Social:** discussion, ask for help

One Size Does Not Fit All: Learning Style, Play, and Online Interactives David T. Schaller (eduweb) Minda Borun (The Franklin Institute) Steven Allison-Bunnell (eduweb) Margaret Chambers (Consultant)



COMPETITIVE LANDSCAPE

EXPLORE HISTORY Thursday | 1.14.2016

BORN TODAY IN HISTORY | DIED TODAY IN HISTORY | FIRST-PERSON HISTORY | VETERANS

BORN TODAY IN HISTORY
Born January 14
 By: Legacy.com Staff



Andy Rooney was one of the world's favorite curmudgeons...

11 hours ago

DIED TODAY IN HISTORY
Died January 13
 By: Legacy.com Staff



Humphrey Bogart may best be remembered for a line in the movie "Casablanca," "Play it, Sam." Bogie was a cultural icon, appearing in other classic films includi...

11 hours ago

BORN TODAY IN HISTORY
Born January 13
 By: Legacy.com Staff



Charles Nelson Reilly was an icon of game shows during their heyday in the 1970s and '80s...

1 day ago

DIED TODAY IN HISTORY
Died January 12
 By: Legacy.com Staff

<http://www.legacy.com/news/explore-history>

Watch th



0:20 / 11:10

[You Tube "Crash Course: World History"](#)

KHANACADEMY Subject: History About Donate Search for subjects, skills, and videos Log in Sign up

HISTORY

Crash Course: World History

John Green teaches you the history of the world in 42 episodes of Crash Course. Learn, study and understand all the important civilizations, empires, wars, and revolutions the world has seen so far.

Community Questions

ALL CONTENT IN "CRASH COURSE: WORLD HISTORY"

What happens when you stay put (the Neolithic revolution & early River Valley civilizations)

- The Agricultural Revolution
- Indus Valley civilization
- Ancient Mesopotamia
- Ancient Egypt

Oh, so that's where that comes from! (the ancient Greeks, Persians, Indians, Chinese & the trade between them. Oh, and also the Romans)

- Greeks and Persians
- Buddha and Ashoka
- 2000 Years of Chinese History! The Mandate of Heaven and Confucius
- The Silk Road and ancient trade
- The Roman Empire. Or Republic. Or... which was it?

[Khan Academy "Crash Course: World History"](#)

MACROHISTORY : WORLDHISTORY

about | praise | links | bibliography | contact

Google Custom Search Search

Timeline Index

THE BIG STORY

Before 1000 BCE | 1000 BCE to 500 CE

6th-15th Centuries | 16-17th Centuries

18-19th Centuries | 1901 to World War II

1945 to 21st Century

map indexes | book summaries | definitions | documents

bits of history | macrohistories | movies and history | inside a few heads

MORE

countries of the world

commentary: methodology; histories from ancient to modern; mistakes; clash of civilizations; war; Syria; population; miscellany

<http://www.fsmitha.com/>

Take Aways

- There are many ways to explore history:
 - ▶ People and Culture
 - ▶ Photos and Videos
 - ▶ Timeline(s) and Eras
 - ▶ Topics
 - ▶ Maps
 - ▶ Empires and Technologies



SOLUTION BRAINSTORM

How to allow students to travel through time and space?

- **Imagination:** “choose your own adventure” style narrative
- **Video Game:** explore virtual world as proscribed
- **Group Role Play:** less proscriptive and more interactive
- **Virtual Reality:** explore virtual world on your own terms
- **Physical-Temporal Teleportation:** physically traverse the time/space continuum

2-AXIS PRIORITIZATION



TOP PRIORITY



STRETCH GOAL

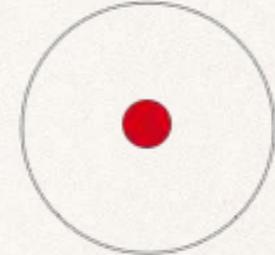


NON-MVP

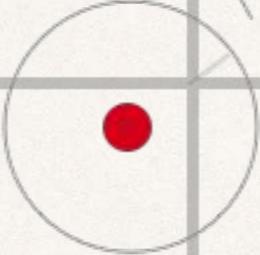
IDEAL

PRACTICAL

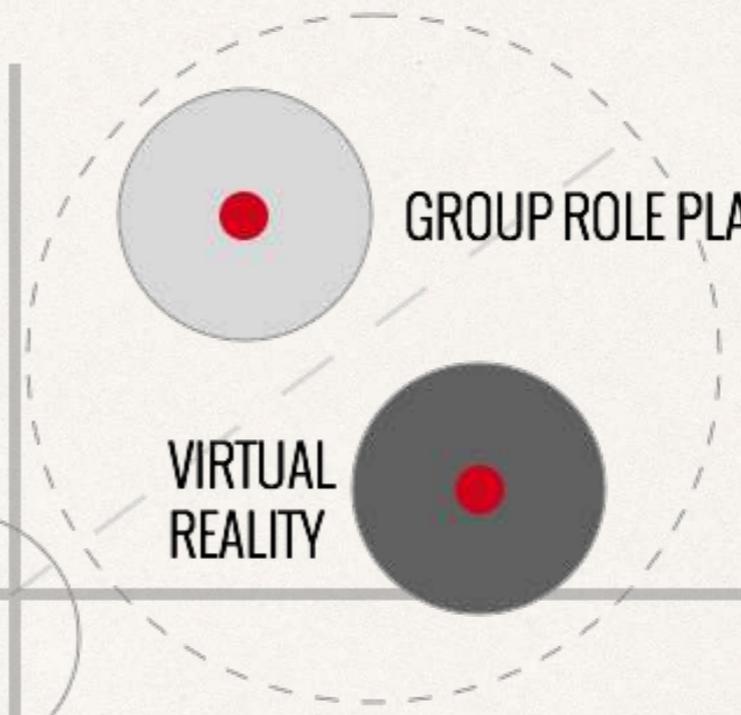
NOT FEASIBLE



CHOOSE YOUR OWN ADVENTURE

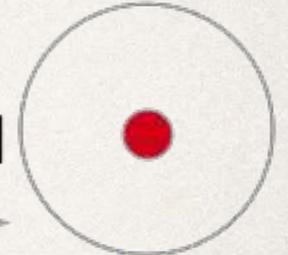


VIDEO GAME



GROUP ROLE PLAY

VIRTUAL REALITY



PHYSICAL-TEMPORAL TELEPORTATION

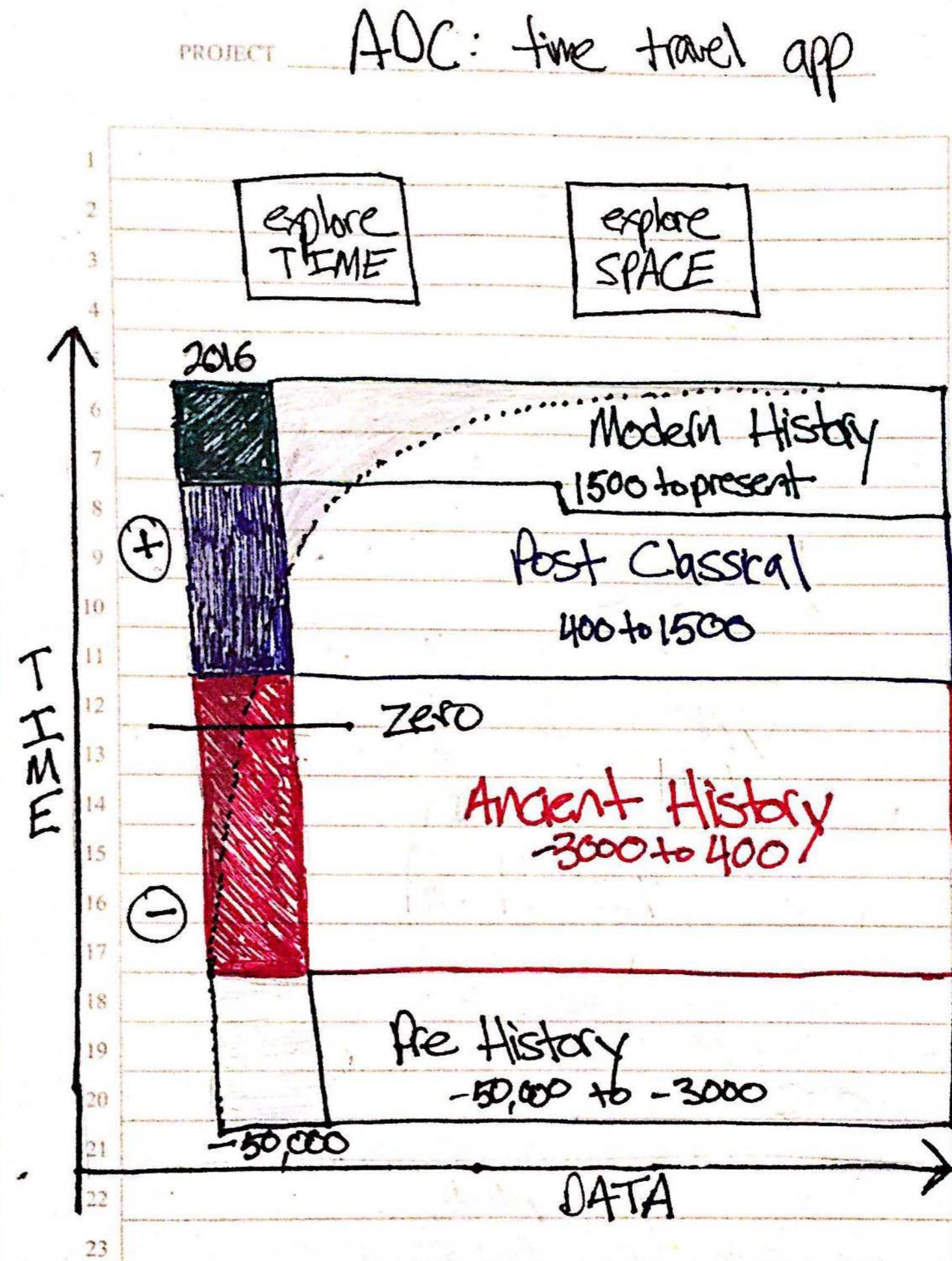
KIND OF FUN

TOTALLY AWESOME

PRIMARY SKETCHES

Timeline (Home)

- Explore time via an interactive time line
- Broken down to eras



Lesson Set Overview

- Explore a region
- Percentage complete / Begin
- Each item has a visual cue for what's been done or is available
- # of quizzes / group assignments

1 Explore the indigenous cultures
2 of the Americas
3
4 Empires
5 Meso America: Olmec, Toltec
6 Teotihuacano, Zapotec, Mixtec,
7 Aztec and Maya
8
9 Andes: Inca, Moche, Chibcha,
10 Cañaris
11
12 13,500 to 40,000 years ago, humans
13 migrated from North Asia across
14 a land bridge spanning the
15 Bering Strait to settle the
16 Americas and spread throughout
17
18 Cultures
19 Arctic: Subarctic
20 NW coast
21 Plateau
22 California
23 Great Basin
24 Southwest
25 Plains
26 NE
27 SE
28 Caribbean

Stats and Explorer Status

My account or "leaderboard"

- Eras explored
- Avg quiz score
- Group projects completed
- Favorite regions / Times
- Interests

		NOTES
% Eras explored	24%	Group Size 2, 3 or 4
% Quizzes	B+	1 Group Project required per topic
# Group Projects	6	
Favorite Regions / Favorite Times		
• Middle East	• 1300's	
• China	• 1600's	
• Americas	• 2000's	
Interests		
• music		
• sports		
• science : technology		

MEDIUM FIDELITY

Primary Menu*

Explore time in a variety of manners:

- Timeline
- Maps
- Topics
- Media
- People



*This is a conceptual information architecture, not really a proposed design. Drop downs are possible but typically not the best choice for a native mobile app (due both to the chance of clumsy interactions and the size of the viewport). Off canvas navigation would be the likely candidate, as the accepted best practice.

Timeline View

Explore time via an interactive time line

- Broken down to eras
- Timeline explains “negative time” without using BC/AD
- Customizable welcome message each time (“Pick up where you left off” or “The lesson plan for this week is: MesoAmerica (-1200 to 1519)”



Lesson Overview

- Orienting message shows percent explored and milestones completed
- Breadcrumbs and back button explain where they are and how to get back
- Get started on a lesson is primary CTA
- Can also explore topics outside the current scope of space and time
- Quick links to view media

← Mali Empire

Mali Empire

Percent Explored: 20%

Quizzes Taken: 0/2

Group Exercises Completed: 0/1

PLACE: [Africa](#) > [West Africa](#)

TIME: [Post-Classical Era](#) > 1200 to 1430

TOPICS:

- [Government](#) > [Monarchy](#)
- [Commerce](#) > [Gold](#)
- [Religion](#) > [Islam](#)
- [Geography](#) > [Niger River](#)
- [Agriculture](#) > [Horses](#)

LESSONS:

- Lesson 1: Pre-Imperial Manden ✓
- Lesson 2: Imperial Mali
- Lesson 3: The Emperors of Mali
- Lesson 4: Late Imperial Mali
- Lesson 5: Collapse

MEDIA: VIDEOS AUDIO PHOTOS GAMES

PEOPLE

MEDIA

VIDEOS

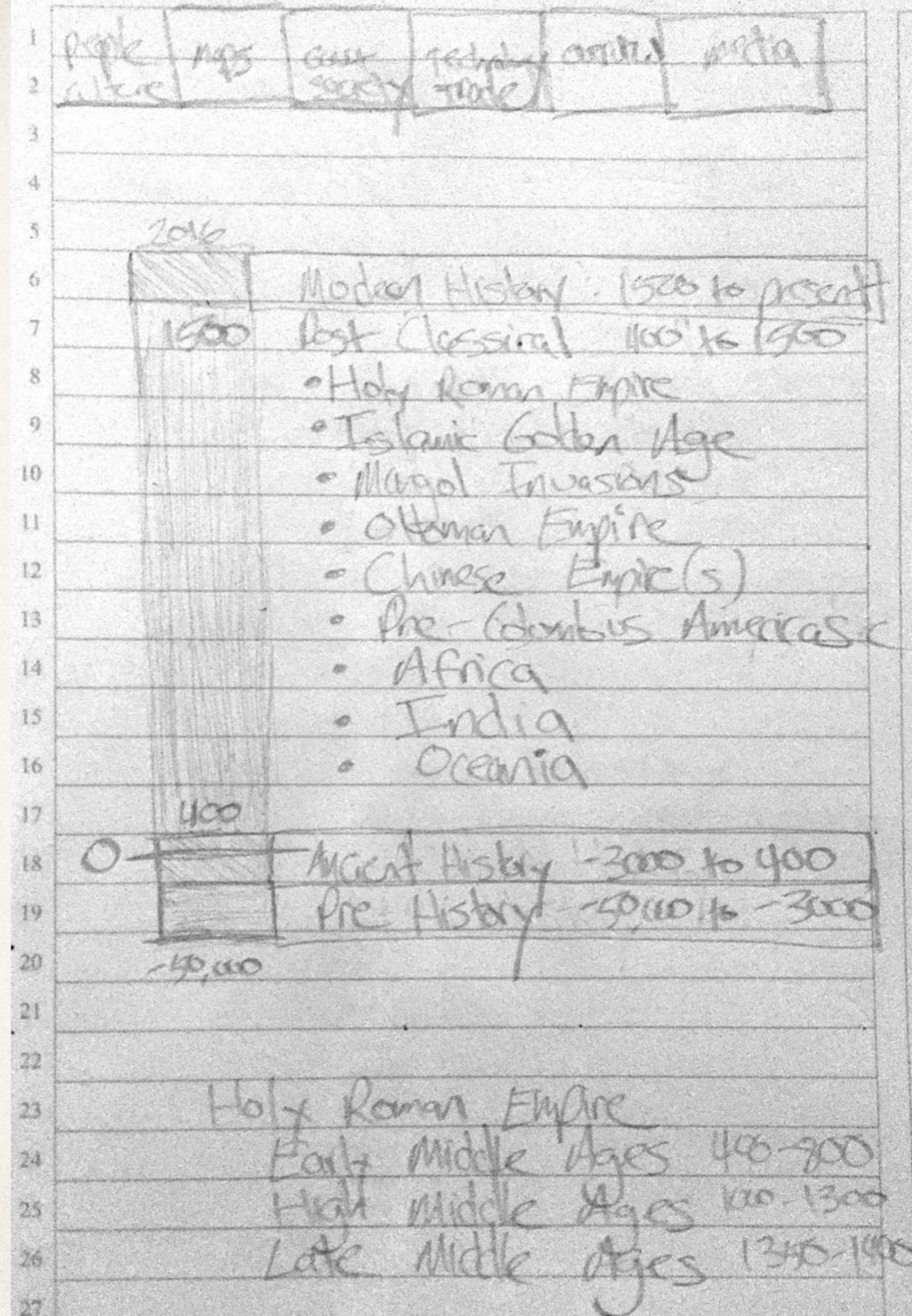
PHOTOS

ADDITIONAL SKETCHES

Choose An Era (1)

Timeline expands like an accordion

- ❖ And additional nested information revealed on tap (“zoom in” — will also require a way to go “back”)
- ❖ Start exploring, then options become limited based on content available
- ❖ Breadcrumbs come into play to show selections
- ❖ Action buttons - highlighter?



Choose An Era (2)

Timeline takes you to a new screen:

- ❖ List vs Map view
- ❖ See the high level subsections of an era

Once they choose a subsection:

- ❖ Breadcrumbs persist
- ❖ Tabs for each menu section?

Post Classical: 400 to 1500

list view

map view

- Holy Roman Empire
- Islamic Golden Age
- Mongol Invasions
- Ottoman Empire
- Chinese ~~Empire~~ Dynasties
- Pre-Columbian Americas
- Indian Empires

Post Classical: 400 to 1500

Pre-Columbian Americas

list | map | topics | media | people

■ Meso America

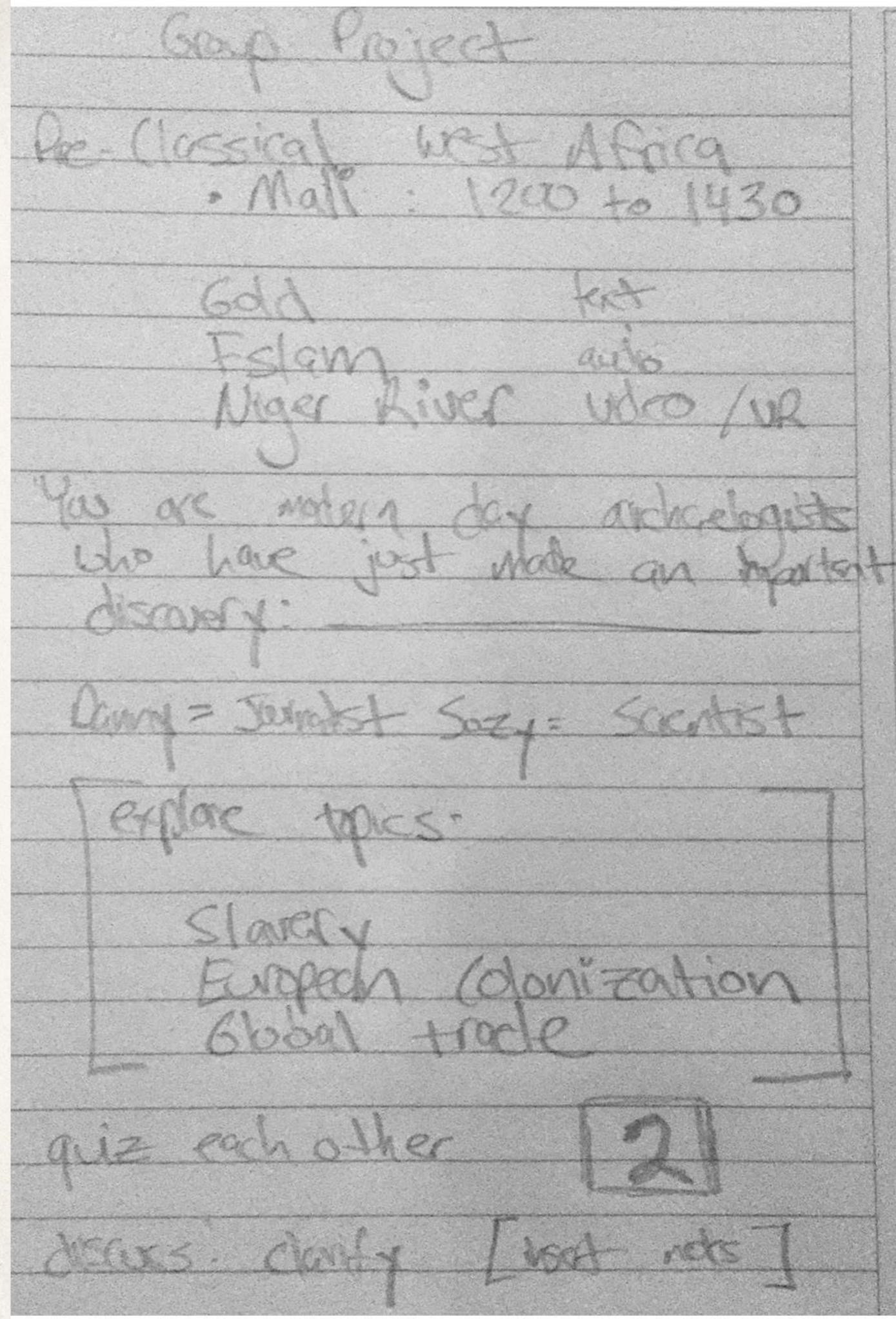
- Olmec
- Toltec
- Teotihuacano
- Zapotec
- Mixtec
- Aztec
- Maya

Andes

- Inca
- Moche
- Chibcha
- Caranans

Group Role Play

- ❖ Once a student completes a section, they are eligible to participate in a group role play activity
- ❖ Auto matching of groups (2, 3 or 4 students per group)
- ❖ Students are assigned roles and given tasks
- ❖ Students administer quizzes and discuss the lesson so everyone understands the main points



ADDITIONAL RESEARCH

- ❖ <http://www.kidspot.com.au/discoverycentre/10-12-years-Physical-Active-kids-are-happier-adults+5511+545+article.htm>
- ❖ <http://www.infoplease.com/dk/encyclopedia/history.html>
- ❖ http://www.hyperhistory.com/online_n2/History_n2/a.html
- ❖ <http://worldhistoryforusall.sdsu.edu/>
- ❖ https://en.wikibooks.org/wiki/World_History
- ❖ <http://www.factmonster.com/ipka/A0001196.html>
- ❖ <http://teachinghistory.org/teaching-materials/ask-a-master-teacher/25626>
- ❖ [https://historyexplorer.si.edu/search-results?
r=4&g=&e=&c=&is=&be=0&brl=0&bg=0&bb=&tab=resources&q=search-
results&results=10&page=0&sort=grade](https://historyexplorer.si.edu/search-results?r=4&g=&e=&c=&is=&be=0&brl=0&bg=0&bb=&tab=resources&q=search-results&results=10&page=0&sort=grade)
- ❖ <http://besthistorysites.net/lesson-plans>
- ❖ <https://www.nlm.nih.gov/hmd/explore-history.html>
- ❖ <http://www.harpweek.com/>