Smithsonian

Learning Lab

learninglab.si.edu

@SmithsonianLab

Search the Smithsonian Learning La

Trending Searches

Galapagos Islands images
Civil War photography
Apollo 11
Wright Brothers
Patent Models

DIS

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C

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SHARE

The *Digital Education* Problem

Fragmented Brand

Outdated Platform

Lack of *Detailed Data*

- Who is using our resources?
- Why are they using them?
- How are they using them?
- Where are they using them?
- How would they prefer to access them?
- In what format would they prefer them?
- Are they using them as designed?
- *Are students **learning** from them…?*

The Solution

Research

The Solution

Research

- Evaluation of Learning Materials
  - Audience Survey
  - Digital Learning Resources Project
  - Tools for Middle Schoolers
  - Learning Resource Metadata Initiative

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SMITHSONIAN
SMITHSONIAN TEACHERS INSTITUTE
WHAT STORY DO
SMITHSONIAN

Remedial Evaluation of the Materials Distributed at the Smithsonian Institution's Annual Teachers' Night (2010)

Literature review and evaluation to produce generalizable guidelines for the design and development of museum-based lesson plans and investigated classroom educator methodologies for incorporating museum-based lessons into classrooms.

Results: Literature Review

Usability and navigability of websites are important. Common usability problems for visitors (including classroom educators) who are non-museum professionals when using museum websites:

- Frustration with overloading of content
- Distracting graphical user interfaces
- Browsing not conducive to understanding specific topics
- Difficulties with certain terminology
- Disconnect of museum websites to the physical museums

Results: Literature Review

Key requirements classroom educators need for museum material to be incorporated into their teaching:

- Aligned to curriculum standards
- Updated
- Interdisciplinary
- Related to big concepts
- Educational
- Not dependent on museum visits

Results: Analysis and Focus Groups

Key requirements classroom educators need for museum material to be incorporated into their teaching:

- Enjoyable for their students
- Interdisciplinary
- Adaptability
- Alignment with curriculum standards
- Flexibility to accommodate a diversity of students

Results: Overall

Educators reported that they used Smithsonian materials acquired at Teachers' Night as resource *starting points* for their teaching. Museum materials do not always fit into their teaching (museum materials must be *deconstructed* and then *reconstructed*). **There was no definite indication that participants from the focus groups used the materials as intended by the Smithsonian.**

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EDUCATORS

Smithsonian Education

Educators | Families | Students

For Educators | Field Trips | Professional Development | Lesson Plans | Resource Library | Online Events

PREPARE . PLAN . TEACH

Lesson Plans

Art & Design

Science & Technology

History & Culture

Language Arts

Find Resources

Use this search to access more than 2,000 resources. Enter a word or phrase **in quotes** for best results.

Enter Search Term(s)

Select Grade

All Grades

Select Subject

All Subjects

Search »

State Standards of Learning

Use this search to find Smithsonian educational resources that are aligned to national, common core, or state standards.

Select Standards

Select Grade

Select Subject

Search »

Advanced Search >>

What's New

Online Conference: Diplomacy in Action
February 12, 2014. Register now. >>

Online Conference: Urban Waterways
April 9, 2014. Register now. >>

Smithsonian on ePals
Check out explorations on the ePals platform. >>

Smithsonian Center for Learning and Digital Access

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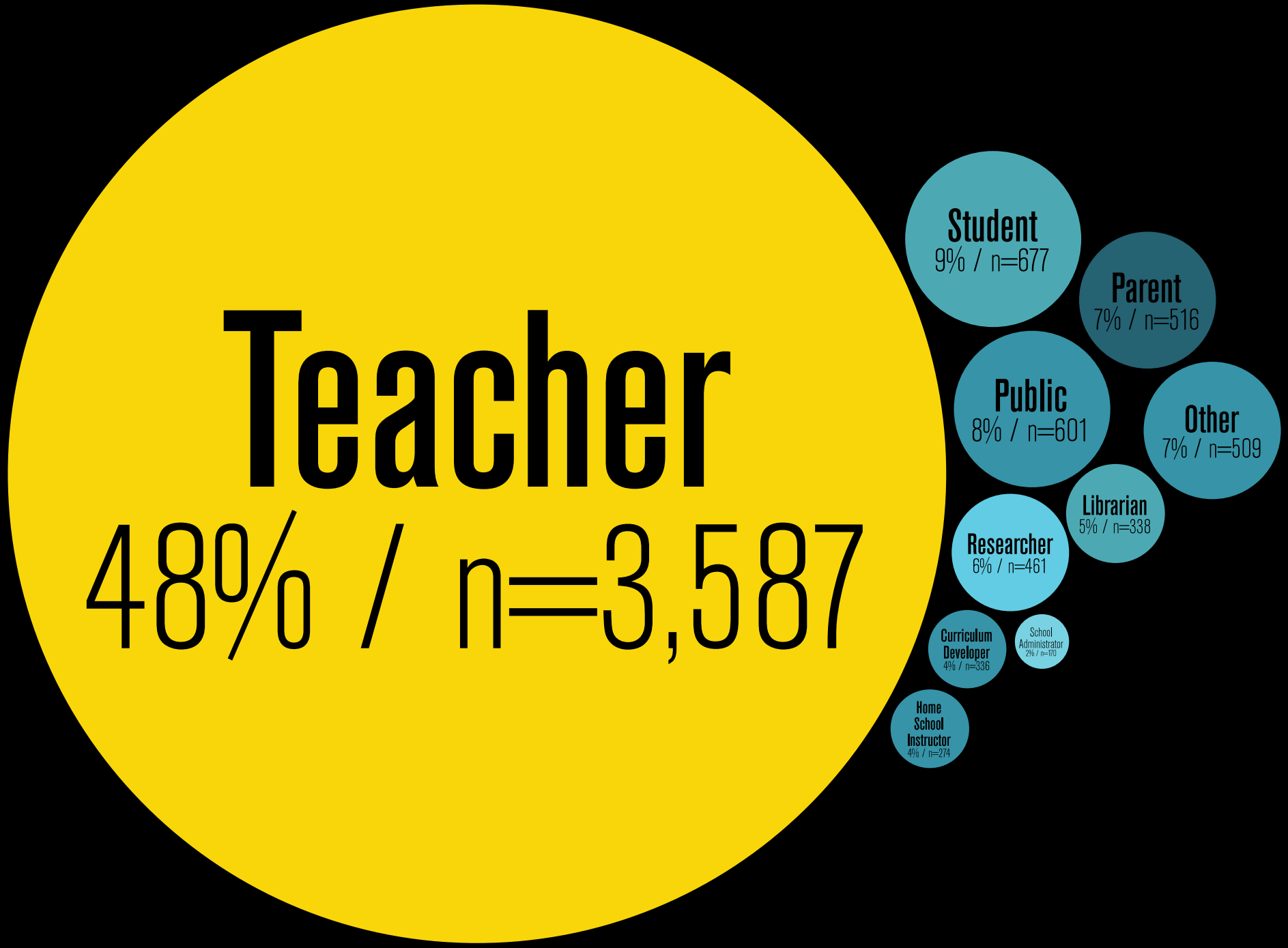
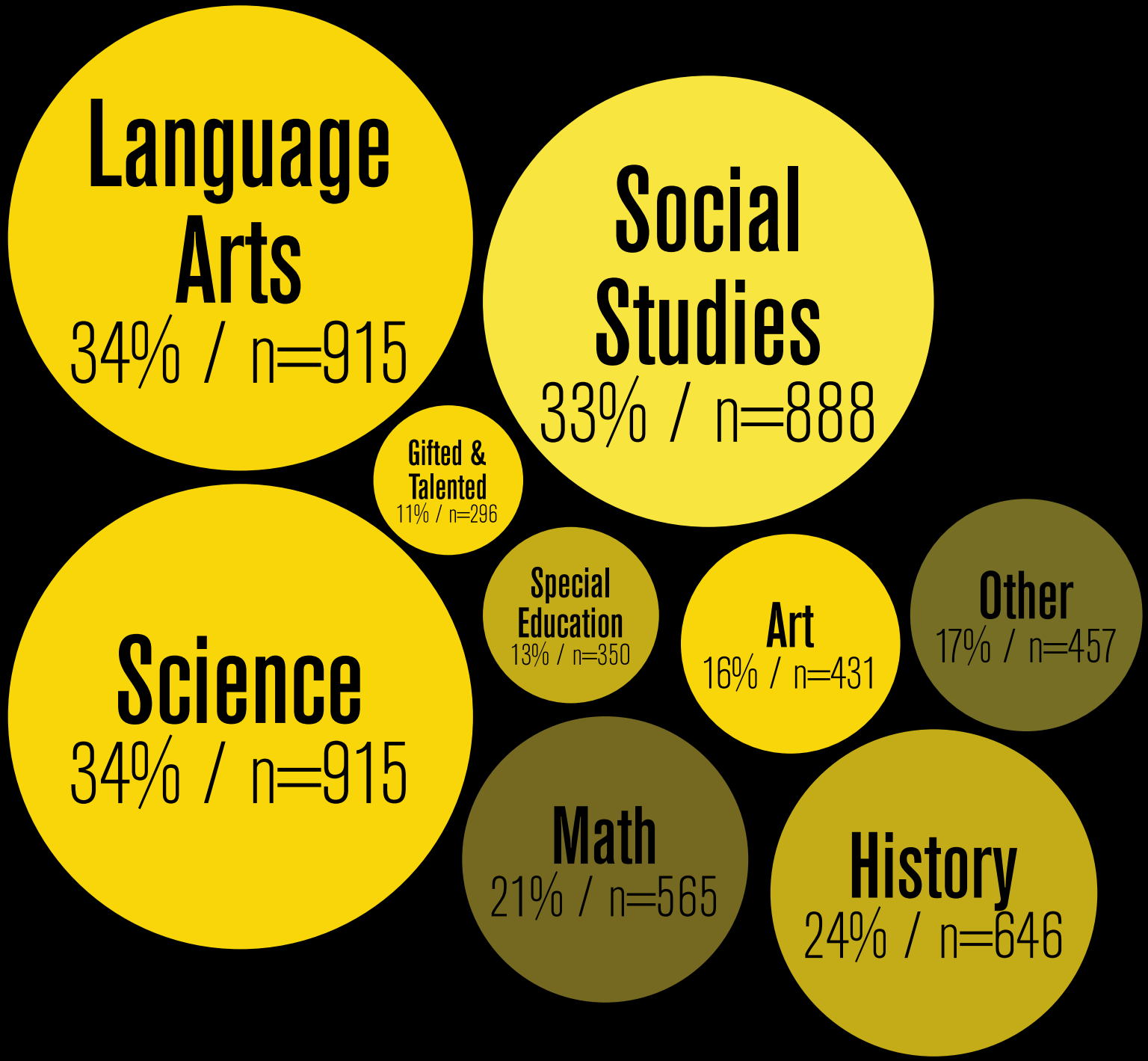
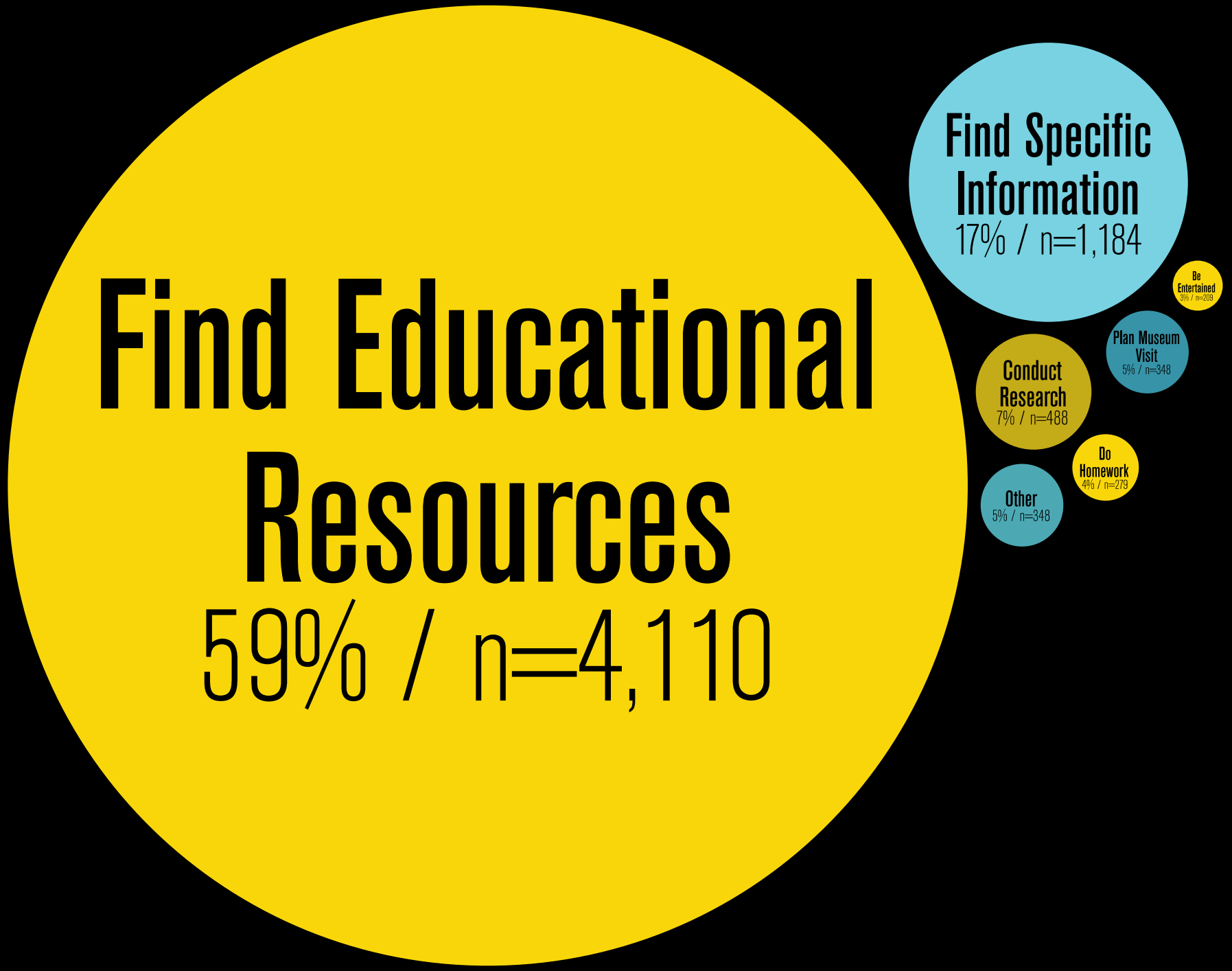
Smithsonian Institution . Websites A-Z . Shop

Capturing the Voice of Customer, Satisfaction Insight Review of SmithsonianEducation.org (2011)

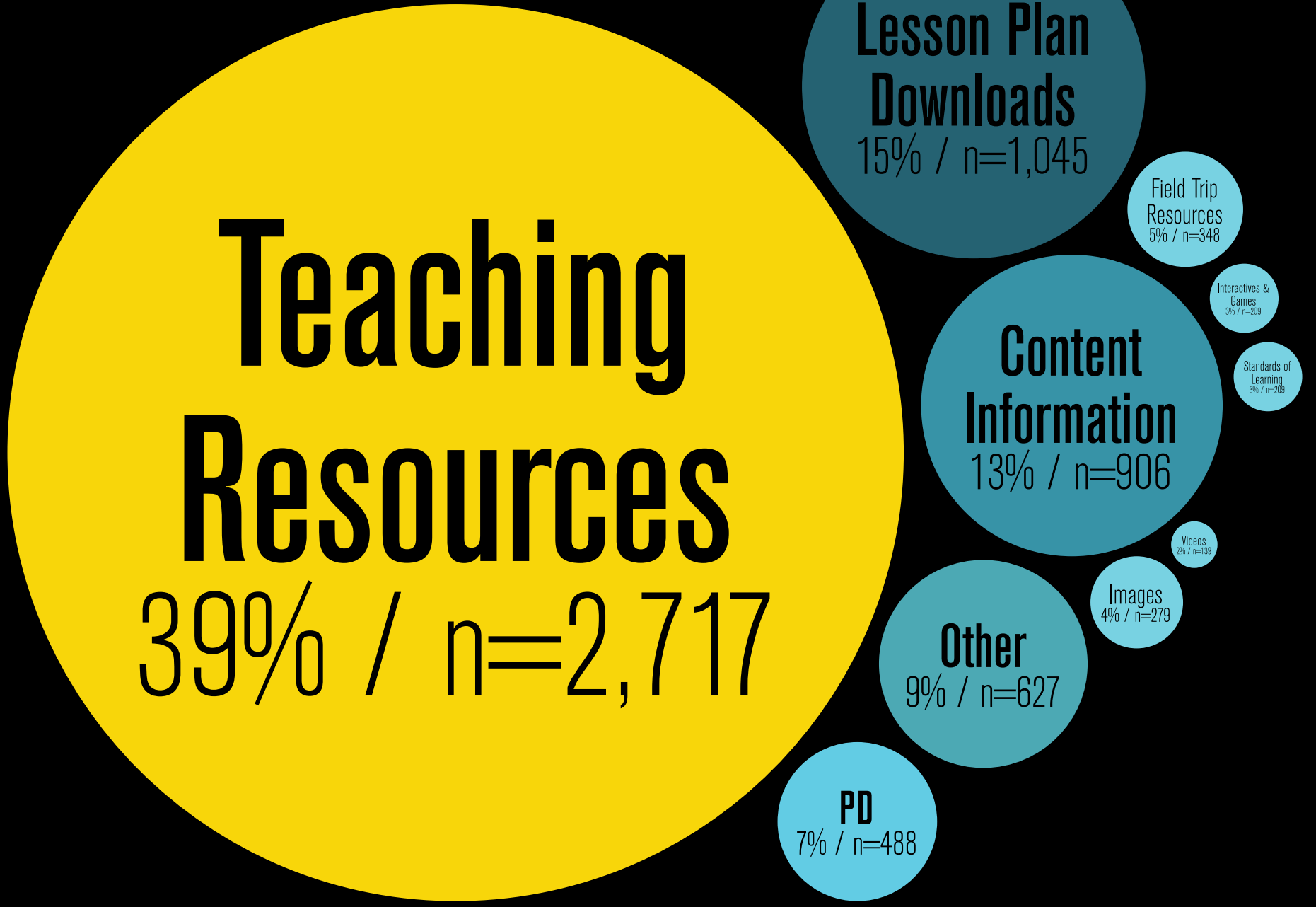
Collected from more than seven thousand surveys completed by visitors to the central Smithsonian Education website, the makeup of this audience, their motivations for site visitation, their activities while on the website, and their sources of dissatisfaction were explored.

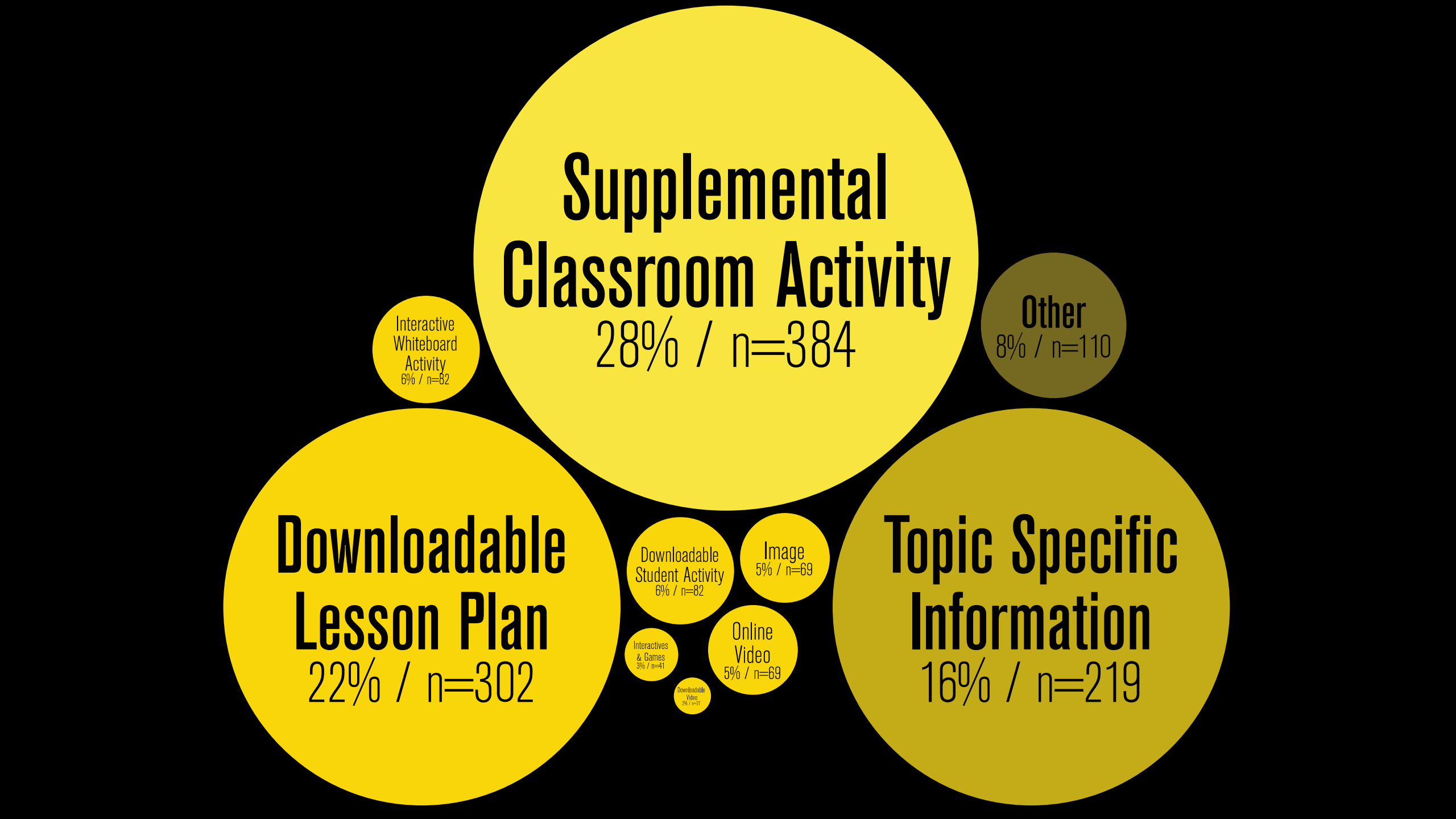

Teacher
48% / n=3,587
Student
9% / n=677
Parent
7% / n=516
Public
8% / n=601
Other
7% / n=509
Librarian
5% / n=338
Researcher
6% / n=461
Curriculum Developer
4% / n=336
School Administrator
2% / n=170
Home School Instructor
4% / n=274


Language Arts
34% / n=915
Social Studies
33% / n=888
Gifted & Talented
11% / n=296
Special Education
13% / n=350
Art
16% / n=431
Other
17% / n=457
Science
34% / n=915
Math
21% / n=565
History
24% / n=646


Find Educational Resources
59% / n=4,110
Find Specific Information
17% / n=1,184
Be Entertained
3% / n=209
Plan Museum Visit
5% / n=348
Conduct Research
7% / n=488
Do Homework
4% / n=279
Other
5% / n=348

Read Material Online
48% / n=3,344
Use Search to Find Resources
47% / n=3,274
Prepare for a Museum Visit
16% / n=1,115
Follow-up on Museum Visit
4% / n=279
Download PDF of Materials
25% / n=1,742
Share Information with Others
22% / n=1,533
Watch a Video
10% / n=697
Play a Game
6% / n=418
Subscribe to Newsletter
4% / n=279


Teaching Resources
39% / n=2,717
Lesson Plan Downloads
15% / n=1,045
Field Trip Resources
5% / n=348
Interactives & Games
3% / n=209
Standards of Learning
3% / n=209
Content Information
13% / n=906
Videos
2% / n=139
Images
4% / n=279
Other
9% / n=627
PD
7% / n=488


Supplemental Classroom Activity
28% / n=384
Other
8% / n=110
Interactive Whiteboard Activity
6% / n=82
Downloadable Lesson Plan
22% / n=302
Topic Specific Information
16% / n=219
Downloadable Student Activity
6% / n=82
Image
5% / n=69
Online Video
5% / n=69
Interactives & Games
3% / n=41
Downloadable Video
2% / n=27

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Digital Learning Resources Project (2012)

To assist the Smithsonian to better understand the educational uses of Smithsonian digital resources and provide a road map for future digital development.

Research objectives focused on classroom educators' ability to identify, analyze, and extract digital content, with the ultimate goal of enabling all users to achieve their own personal learning objectives through the Smithsonian's resources.

Intended Outcomes

Short-term: to increase classroom educators' skills in identifying, analyzing, and extracting specific Smithsonian digital learning content

Medium-term: to increase skills to make strategic use of digital learning content

Long-term: to foster online users who are active creators of digital resources personalized for learning in their own classroom.

Rr Ss Tt Uu Vv Ww Xx Yy Zz
Calendar Time
GREAT WORK!
WORDS
K L M N O P Q R S
T U V W X Y Z

Results: Focus Groups, Literature Review, Environmental Scan

Search and Visualization Tools

Museums need to make resources more findable and to generate assets that are personalized and accessible anytime, anywhere, and on multiple platforms. Classroom educators also asked for:

- Search results with thumbnails, previews, tag clouds, and rating systems that allow them to easily identify what is useful and what is not
- Personalized search hints
- Search capabilities that can be either highly filtered or extremely broad

Results: Focus Groups, Literature Review, Environmental Scan

Engaging, Standards-aligned, Learner-centered Content

Classroom educators put student interest and engagement at the top of their list and need content that aligns with learning goals and standards.

- Engage students
- Allow for student interaction and adaptation
- Afford accessibility for various learning styles and levels
- Offer coherence with the lesson and multidisciplinary opportunities
- Support problem-based learning goals
- Support standards-based teaching goals

Results: Focus Groups, Literature Review, Environmental Scan

Instructional Tools

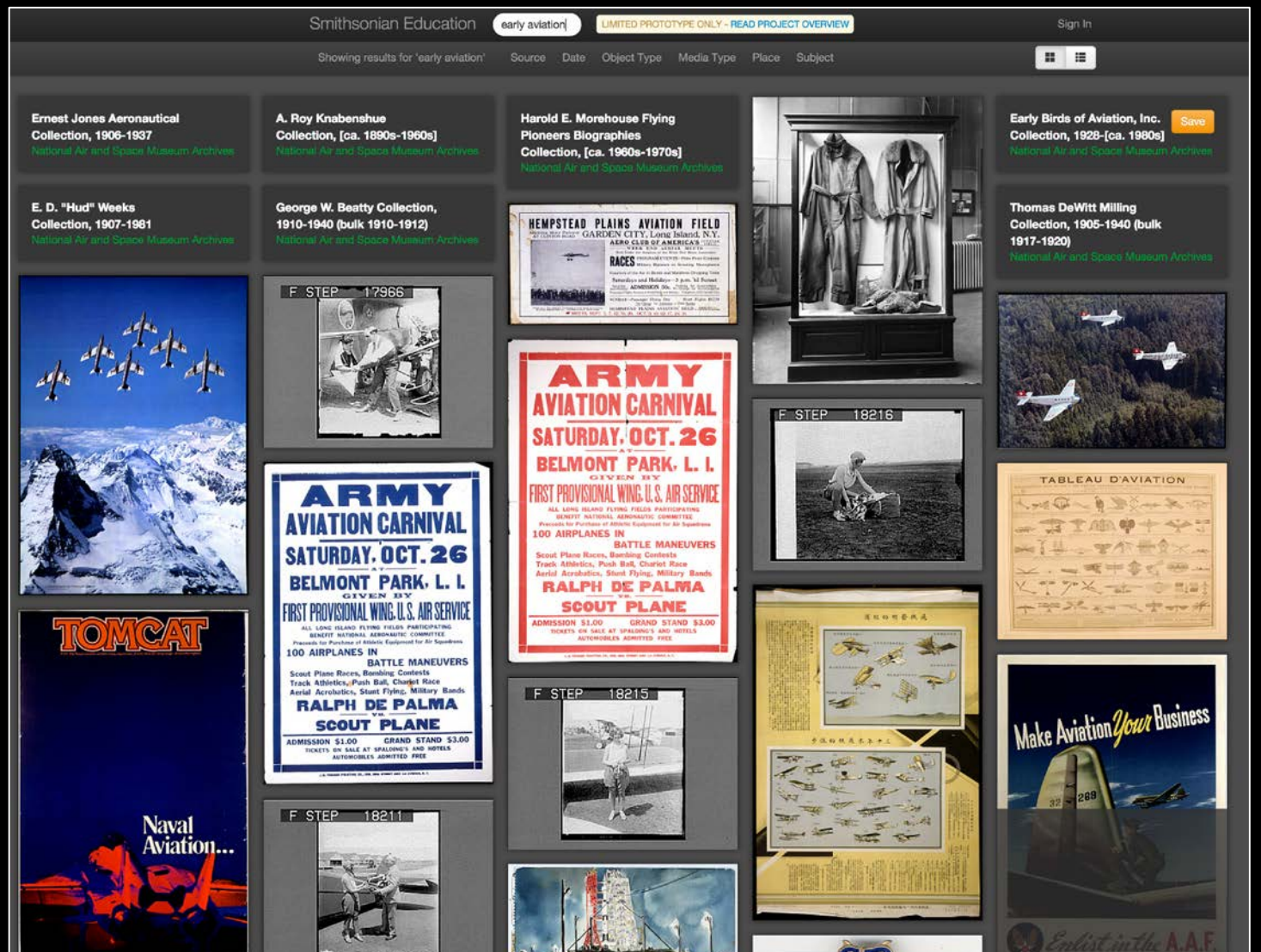
When extracting resources, classroom educators want:

- Flexible technologies for a diversity of devices and delivery methods
- Tools to assess learning
- Tools to adjust reading level of text
- Ways for classroom educators to upload their self-authored components into a saved file, or resources from other sites or collections
- Specific pedagogical tools

File Edit
American Mammals
Ocean Eco.
Climate Change
The Dynamic Earth

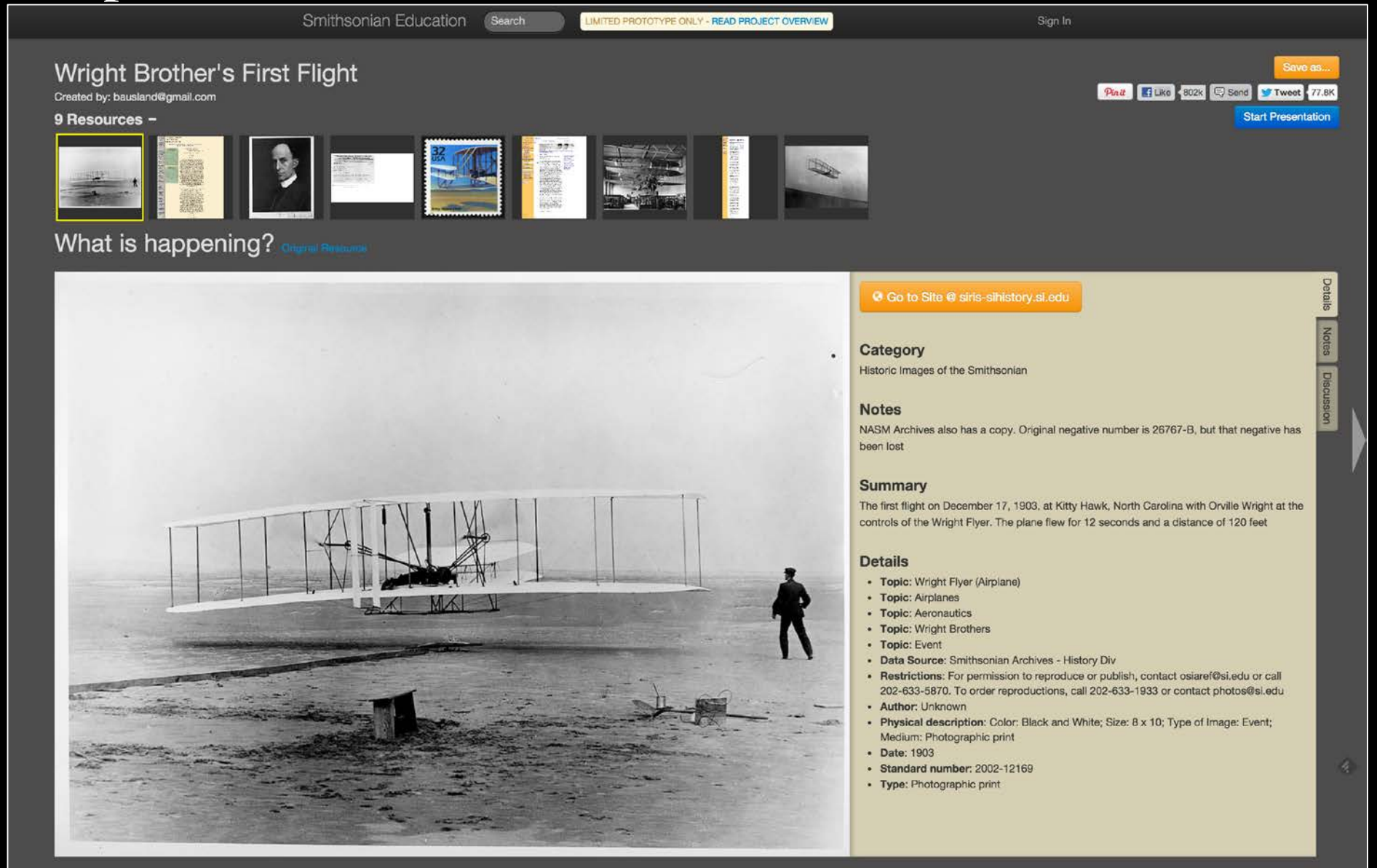
Prototype

http://scems.navnorth.com



Prototype

http://scems.navnorth.com



Results: Iterative Prototyping

Search and Visualization (Identifying)

- Search by entering a general search term, then filtering further if needed. Educators also preferred the gallery view to review their search results. Participants want more intelligence in their searches and results to guide them toward the most valuable resources.
- Use a diversity of locations to find what they need and have little loyalty to one site in particular
- Use the Facebook Share option, but the most popular method of sharing was emailing the link to themselves or a colleague.

Results: Iterative Prototyping

Authentication, Saving, and Storing (Analyzing)

- To save resources that they find useful.
- The flexibility to organize and annotate resources according to their own schemas.
- Flexibility in the types of viewing methods available: one for whole-class interaction and one for individual interaction.
- The ability to allow students to use the site and its tools as much as the classroom educator.
- Content that is aligned with Common Core State Standards.

Results: Iterative Prototyping

Instructional Tools (Extracting)

- Were excited about the use of “interactives” with the resources found in the Smithsonian collection.
- Appreciated the search functionality of the site but want better visibility of the tools, including prompts and explanations for their use.
- Liked being able to upload resources from other sources to augment their collections and appreciated being given tools that make this easier to accomplish within the site.

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Piloting Tools to Enable Active and Participatory Learning for Middle School Students: Facilitating Digital Learning with Smithsonian Digital Resources (2014)

Classroom educators have indicated that relevance to students' needs are a top priority. We are now testing directly with students to better understand how they use digital museum assets (specifically digitized collection objects) and to document the types of scaffolds necessary to enable active and participatory learning using them.

Jodi
EXIT
LIFEGUARD
DELL

Results: Prototyping

Challenges for Student Users

- Unintelligible descriptions: some of the students found that the descriptions were difficult to understand
- Spelling limitations: some of the students could not find the items they were looking for because they could not spell the search terms correctly
- Loss of authority: some of the participants thought that the information in their collections was unreliable if they (or anyone else) were able to change the information from the original Smithsonian descriptions (a feature of the prototype)

Results: Prototyping

Feature Requests

- Auto-correct to assist with spelling
- Predictive searches/Recommended searches
- Ability to adjust fonts
- Draw on objects
- Put external images into their collection
- Share collections through social media and email
- Export their collection
- Create unique collages from multiple images
- Child-accessible collection descriptions

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Learning Resource Metadata Initiative Project and Evaluation (2014–2015)

Smithsonian produced educationally-relevant metadata for 2,500 Smithsonian learning resources, distributed the metadata via the Learning Registry, and built capacity for Smithsonian educators and content creators to develop metadata as they publish new digital learning resources.

The goals of the Smithsonian LRMI project are to:

- Develop and publish metadata required to fully describe the existing Smithsonian learning resources
- Evaluate the impact of LRMI metadata on the discoverability, analysis, and use of Smithsonian learning resources

Results: Online Survey

Only a handful of the participants were familiar with LRMI, having heard about it from “our school librarian” or “at a teachers’ conference.” Almost all of the participants projected that educator specific tags would increase their search satisfaction and increase the likelihood they would use the materials.

Which educator specific tags were ranked most relevant:

- Grade level
- Content/subject area
- Alignment to standards

Results: Webpage Analysis

Majority primarily use Google to search for digital learning resources several times a week, if not almost every day. Less than one half of educators consider their searches successful. Irrelevant results, lack of educator specific filters, and time consumption are the factors leading to search failure.

Participants found search and analysis to be most useful when these metadata fields are visible:

- Content/subject area
- Grade level
- Source

Minimally Viable Product (MVP)- (2 week release cycle)

- Digital Beta-testers
- Classroom-tested iteration
- Persistent feedback button on every page
- In-Person Professional Development, in partnership with professional organizations, fellow Smithsonian museums

Carnegie Corporation Grant & Grable Foundation Grant (Pittsburgh) providing insights into how teachers use digital museum resources and the types of supports they need to increase their use, based on their experiences using the Smithsonian Learning Lab (SLL).

Metadata-

Existing for each resource, accessible language for a nonSME

Useful educational metadata

Strategies-

Visual Thinking Strategies

Visible Thinking Routines

Replicable Models-

Adapt vs. Create from Scratch

Shoes: Exploring Culture, History, Place, and Innovation

Unpublish | Edit Collection

Share Learning Lab Collection

Copy Link

Add this collection to your site

<script type="text/javascript" src: | Copy the code

Tess Porter

dies +2

Teacher's guide for using shoes to explore culture, history, place, and innovation. Includes images of thirty shoes and three different strategies for using roup object analysis activity; a poster, "If You Walked in My Shoes," introducing students to basic primary source analysis questions through six pairs of shoes

Feedback

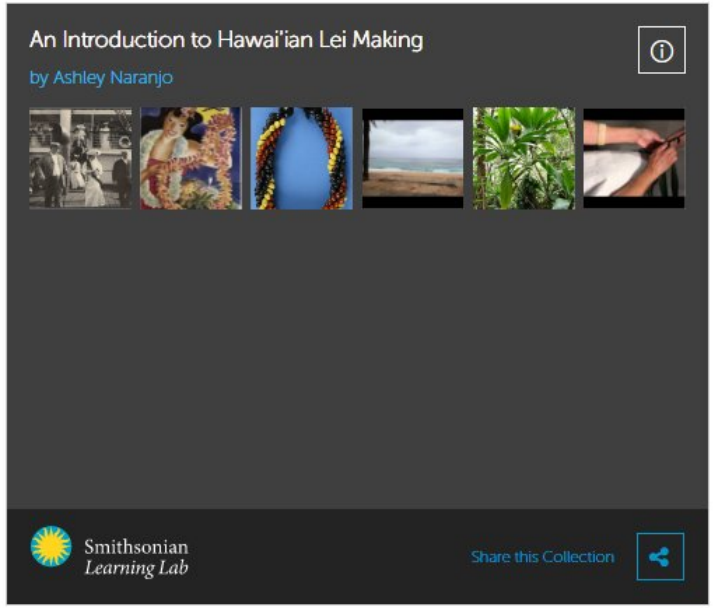
Herndon MS Library

HMS Library | HMS Reads | HMS Databases | Books Online | Resources | more...

Gratitude in the Hawaiian Culture

11/4/2016 0 Comments

Click on the letter "i" in the circle, in the box in the upper right corner for an introduction.



Like 0 Tweet

0 Comments

What's next? Next Steps 2017–2020

- Integrate Learning Lab content into school district learning management systems
- Build comprehensive content through a network of super users
- Continue to make audience-driven enhancements
- Demonstrate increased student engagement as a result of using the Learning Lab

Further work with specific groups, including:

Student Use (13-17)
Librarian/Media Specialists
Early Childhood & Parents