

1

WHAT DO JELLY BEANS HAVE TO DO WITH MUSEUM VISITORS?

2

DATA VISUALIZATION CONTINUUM



Excel chart/number
art in a report or
presentation

Complex infographic
that includes a variety
of visual elements

3

QUESTION:

Where is your library on the data visualization continuum?



Excel chart/number
art in a report or
presentation

Complex infographic
that includes a variety
of visual elements

4

TODAY'S PLAN



Learn **6** simple tips for making data visualizations **meaningful and engaging**



Apply tips to **3** data visualization formats



Using **4** free and/or low-cost software tools

5

DATA VISUALIZATION FORMATS

Operational Report
(Board or Annual
Reports, Staff
Updates)

Presentation

Social Media Post

6



6 SIMPLE TIPS TO MAKE DATA VISUALIZATIONS MEANINGFUL & ENGAGING



7



I. PUT NUMBERS IN CONTEXT




8

LIBRARIES WORKING FOR ACCESS

123M

items circulated annually




or more than **22** items for each person in the state

LIBRARIES WORKING FOR ACCESS

3.61M


Coloradans have a public library card



That's **3 out of 5** Coloradans

LIBRARIES WORKING FOR COMMUNITY

6 times

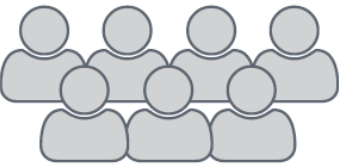


as many public, school, and academic libraries in Colorado as Starbucks coffee shops

LIBRARIES WORKING FOR COMMUNITY

38M

public and school library visits annually

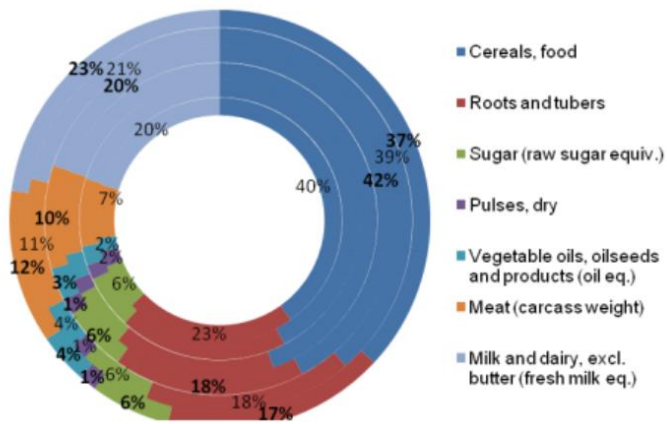


7 times more than the total annual attendance of every professional sporting event in Colorado combined

2. FOCUS ON YOUR MAIN POINT

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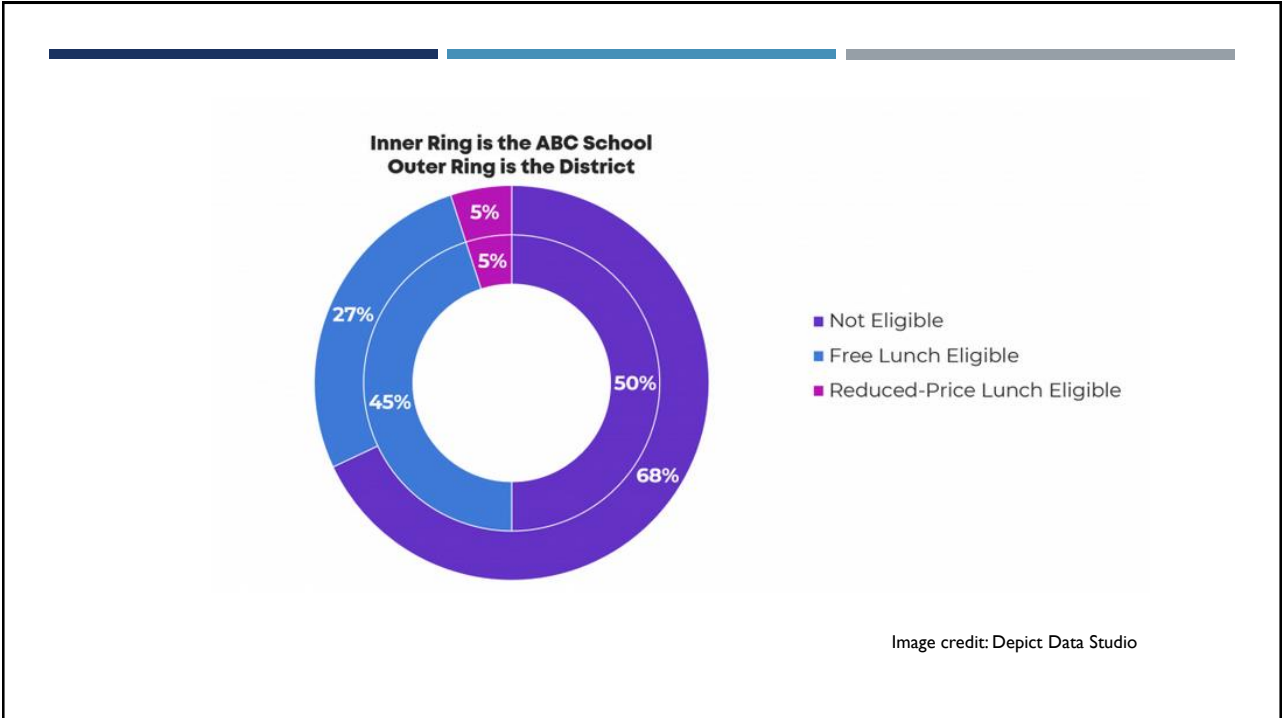
World Dietary shares: (from inside to outside) 1970, 1980, 1990, 2000, 2030, 2050



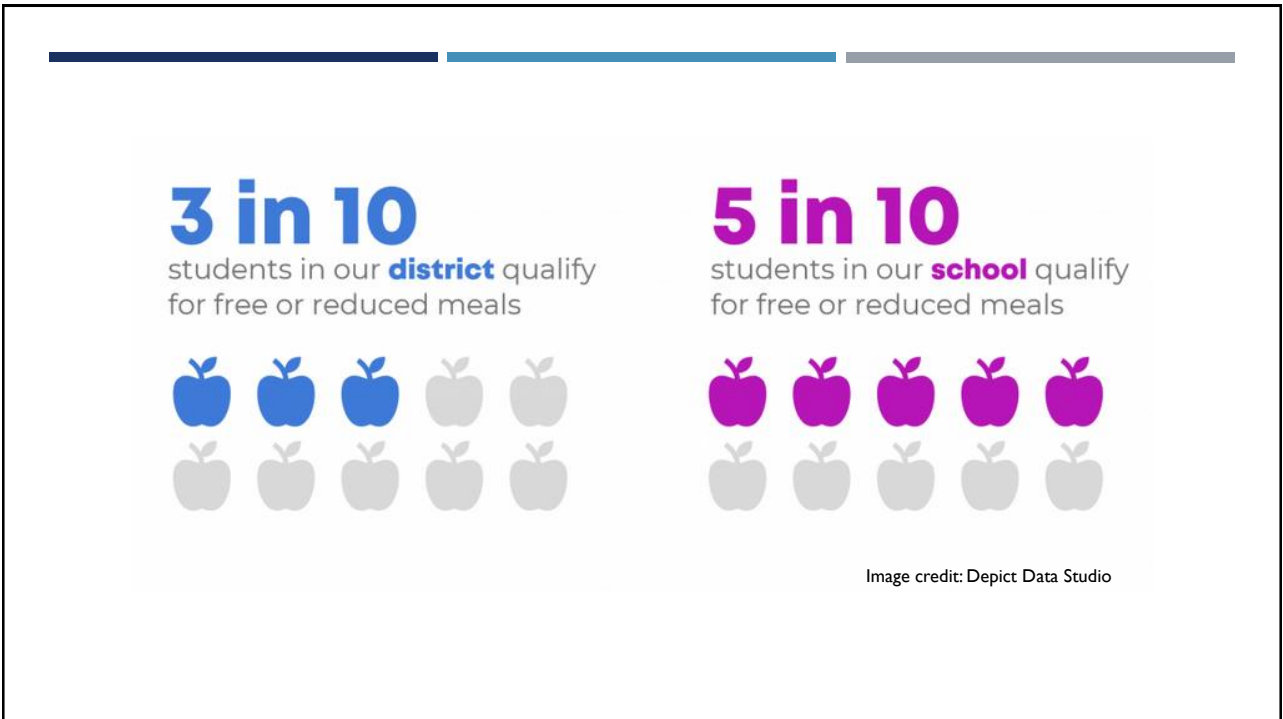
Note: figures for 1980 and 1990 shares are not shown for sake of clarity.

Image credit: Full Fact

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3. K.I.S.S.

15

IT'S NOT JUST A NUMBER.



CITY COUNCIL PROPOSED

1.5% CUT FROM RICHMOND PUBLIC LIBRARIES


could reduce the hours public
libraries are open

NYC Libraries: Demand ↑ Funding ↓


	2002-2011
Circulation	59%
Program Attendance	40%
Program Sessions	27%
Average Hours per Week	2%
	-8% City Funding
	-35% Proposed FY14 City Funding

Image credit: Richmond Public Libraries, New York Public Library


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4.APPLY GRAPHIC DESIGN BEST PRACTICES



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4.APPLY GRAPHIC DESIGN BEST PRACTICES - COLOR

Primary Color Palette: Colorado Brand

R=0	R=92	R=208	R=239	R=110	R=101
G=149	G=102	G=210	G=117	G=196	G=80
B=58	B=112	B=211	B=33	B=232	B=60

CDE Shield Colors

R=72	R=255
G=139	G=200
B=201	B=70

CDE Accent Color Palette

R=211	R=143	R=130	R=70	R=109	R=16
G=204	G=198	G=188	G=121	G=58	G=30
B=188	B=232	B=0	B=122	B=93	B=142

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Center for an Urban Future
www.urbanfuture.org

Branches of Opportunity

New York City's public libraries are serving more people in more ways than ever before, but they have been underfunded by policymakers and face growing threats in today's digital age.

Endorsed by the
Charles M. Schwab Foundation

OUT OF 25 URBAN LIBRARIES NATIONWIDE

In program sessions per 1,000 residents:
Brooklyn ranked **2nd**
NYPL ranked **7th**
Queens ranked **5th**

In average hours per week:
NYPL ranked **12th**
Brooklyn ranked **15th**
Queens ranked **20th**

OVER THE LAST DECADE

Metric	Value
City Funding	-6%
Avg. Hours per Week	2%
Program Sessions	27%
Program Attendance	40%
Circulation	59%

48 different branches citywide have at least doubled annual attendance of programs

18 different branches citywide have more than doubled their circulation

Raised in capital funds:

Library	Amount
Brooklyn	\$101M (\$45.55 per person)
Queens	\$133M (\$18.70 per person)
NYPL	\$215M (\$52.41 per person)

Since 2008, the libraries have seen city operating funds reduced by **\$68M**

WITH ADDITIONAL \$50M IN FUNDS

Hours per week would increase from 43 to **50**

Program attendance would increase by **500K**

Circulation would rise by **10M**

Computer sessions at public libraries:

Year	Sessions
2007	3.8M
2011	9.3M

In 2011, e-book checkouts across all three libraries rose **179%**

Because of the cuts, full time equivalent employment has dropped **24%**

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FISCAL YEAR 2018

free LIBRARY OF PHILADELPHIA

THE YEAR IN REVIEW

freelibrary.org

123 Author Events
attended by **34,570** people
videos viewed by **250,000** people
downloadable podcasts listened to by nearly **1,180,000** people

488,473 preschoolers, children, and teens
attended 17,756 children's programs

219,491 adults and seniors
attended 13,862 adult programs

149,645 student sessions through LEAP
(Library Enrichment After-school Program)

764,638 library-card holders,
a 19% increase over 2017

57,367 new card sign-ups for young people,
a 113% increase over 2017

4,961,657 in-person library visits

697,460 computer sessions

1,006,180 WiFi sessions

6,361,657 website visits

5,293,138 materials borrowed system-wide this fiscal year

2,354,330 books (hard and e-books)

29,708 audiobooks

236,849 DVDs and Blu-Ray

62,290 CDs

727 journals, magazines, and newspapers

449,547 eBooks (hard and e-books)

69,208 digital audiobooks

29,170 streaming movies and videos

353,141 streaming music albums

28,600 digital journals, magazines, and newspapers

SERVICES

MATERIALS

20

10

ANIMAL CARE
 WE CARE FOR ONE OF THE LARGEST AND MOST DIVERSE COLLECTIONS ON EARTH.
550 SPECIES 3,500 ANIMALS

ECONOMIC IMPACT & EMPLOYMENT
 THE ECONOMIC BENEFITS OF ZOO OPERATIONS TOTAL MORE THAN
\$116 MILLION ANNUALLY IN THE SCFD REGION.
 IT TAKES MORE THAN **378 FULL-TIME EMPLOYEES** AND HELP FROM AN ADDITIONAL **670 VOLUNTEERS** TO HELP OPERATE THE ZOO.
* "The Economics of Denver Zoo" August 2013 Development Research Partners.

ACCESS & VISITATION
298,000 GUESTS ENJOYED FREE ACCESS TO THE ZOO THROUGH FREE DAYS AND OTHER FREE ACCESS PROGRAMS.
 Denver Zoo partnered with Denver Human Services to provide \$1 admission for those receiving benefits through the Supplemental Nutrition Assistance Program (SNAP).
 MORE THAN **46,000 VISITORS** ENJOYED REDUCED ADMISSION THROUGH THIS NEW ACCESS PROGRAM.

Image credit: Denver Zoo

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SIOUX CENTER PUBLIC LIBRARY

2020 | YEAR IN REVIEW

Top Ten Checked Out Titles

SERVICES ADDED IN RESPONSE TO COVID

- Curbside Pickup
- Virtual Programming
- Grab-and-Go Art Kits
- Ask a Librarian Live Chat
- Book Bundles
- Digital Library Card

266,887 Total Circulation

7,847 Total Cardholders

27,868 Items Picked Up at Curbside

301 Virtual Programs Offered

2,253 Virtual Program Attendance

15,983 Reference Questions Answered

129,643 Visits to our Website

19 Library Staff That Contributed Expertise

Sioux Center Public Library
 102 S Main Ave | Sioux Center, Iowa 51250 | 712-722-2138 | siouxcenterlibrary.org

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4. APPLY GRAPHIC DESIGN BEST PRACTICES - FONTS

HEADLINE

Museo Slab 500 (Regular or CAPS)

Museo Slab 500 and Museo Slab 500 Italic are the primary typefaces of the Colorado brand. Use these fonts to evoke the brand voice in **headlines** and **titles**.

SUBHEAD

Trebuchet Bold

Trebuchet MS is the secondary typeface of the Colorado brand. Use it for **alternate headlines**, **subheadings** and **detail callouts**.

BODY

Calibri

Calibri is an CDE approved typeface for use in **subheadings**, **body copy**, **detail callouts** and **captions**.

CAPTIONS, CHARTS ETC.

Calibri

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1 in 2 parents  joined **Facebook** in part to keep tabs  on their **kids**.

74% of parents check their **child's**  **Facebook** several times a week. 

1 in 3 teens are **EMBARRASSED**  by  their parents' **Facebook** comments.

30% of teens would **UNFRIEND** their parents.

 **Teens** feel they don't get the **privacy** they seek anymore on **Facebook** !!!

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Use Fonts Strategically

You can help your viewer easily navigate a visualization by using one font (or CAPITAL LETTERS, **bold text**, or a **different color**) for titles and a second font for text.

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ADVANCING LITERACY

PRE-K PROGRAMS

SERVING THE CHILDREN OF PHILADELPHIA is more than a joyous part of our work at the Library—it is essential to paving the way for our city's future. Through early-literacy initiatives, we are molding minds and making connections with children across the whole city.

13,566 kindergarteners RECEIVED LIBRARY CARDS THROUGH THE KINDERGARTEN LIBRARY CARD REGISTRATION DRIVE.

LIBRARIANS HOSTED 2,781 early-literacy programs THIS YEAR, WITH OVER **65,000 children and caregivers** in attendance.

90% of parents WHO RESPONDED TO A SURVEY SAID THEY RECOGNIZED **improvement in their child's reading skills** FOLLOWING PARTICIPATION IN THE SUNDAY LITERACY PROGRAM.

Programming Highlights

The Library-managed **Read by 4th** program is a citywide effort of over 100 organizations that aims to significantly increase the number of students in Philadelphia entering the 4th grade at reading level. It is the largest, most comprehensive literacy push in the nation, employing strategies rooted in research, practitioner experiences, community integration, and family engagement. Partner organizations hosted hundreds of workshops this year for parents and businesses on how to make every day count for reading.

The **Words at Play Vocabulary Initiative**, based in the Widener and Cecil B. Moore libraries, empowers caregivers to support their child's vocabulary and early literacy with highly interactive Play Parties, community-wide Block Parties, and Family Fun Trips to partner organizations. This year, we **welcomed 684 attendees to Play Parties** at these libraries.

Words at Play is supported by PNC Grow Up Great®.

The pilot **Sunday Literacy Program** offered drop-in assistance at neighborhood libraries to students struggling to read in 1st through 3rd grades. Run by a certified teacher, these sessions included story read alouds, independent reading, literacy games, and writing. Piloted at 11 libraries, the program **held 758 individual student sessions to boost reading skills**—with more than half of students participating five or more times.

READ BY 4TH BY THE NUMBERS

- In the last school year, there was a **5 PERCENT INCREASE** in 3rd-grade students scoring proficient or advanced on the Language Arts PSSA exam—GROWTH THAT OUTPACES THAT FOR 3RD GRADERS AT THE STATE-LEVEL.
- 459 teachers** attended program-run **TRAININGS** ON EVIDENCE-BASED INSTRUCTION.
- 379 BOOK NOOKS** were created and distributed across the city to barbershops, laundromats, nail salons and more.

Image credit: Free Library of Philadelphia

26

13,566 kindergarteners

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Image credit: Free Library of Philadelphia

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4.APPLY GRAPHIC DESIGN BEST PRACTICES - WHITE SPACE



28

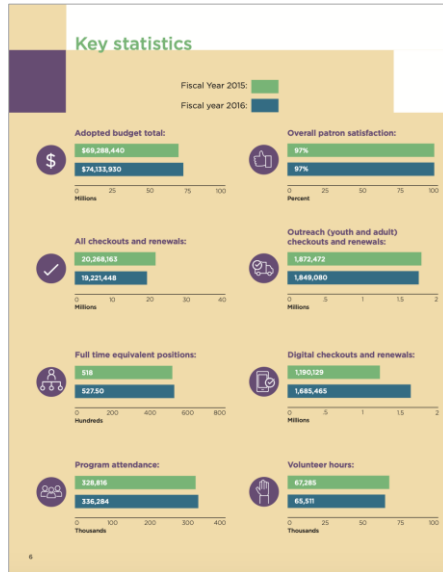


Image credit: Multnomah County Library

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Image credit: Atlanta Downtown

30

5. USE ICONS TO GUIDE AND ORIENT VIEWERS

31



More than **5 million** items borrowed



Nearly **1 million** reference questions answered



More than **220,000** items added to the library collection



More than **2 million** people visited the library




Over **19,000** programs hosted with more than **285,000** guests in attendance

Image credit: Cleveland Public Library

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2018—YEAR IN REVIEW

- 
ITEMS BORROWED:
3,369,631
- 
CURRENT CARDHOLDERS:
323,361
- 
WEBSITE VISITS:
2,106,118
- 
LIBRARY VISITS:
1,766,216
- 
COMPUTER SESSIONS:
462,117
- 
DIGITAL DOWNLOADS:
441,792
- 
PROGRAM ATTENDEES:
119,967
- 
MEETING ATTENDEES:
32,813

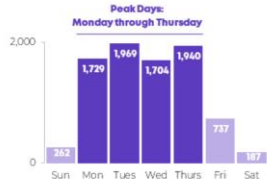
State of the Department

The library is utilized by students on a regular basis.

The Public Services Department worked hard to maintain the level of service expected from us this year. The library expanded its hours in the fall after hiring a new librarian. The library was open 88 hours a week (M-Th 8am-11pm; F 8am-6pm; S 9am-6pm; Su 12pm-9pm). The library maintained between 77 and 88 hours a week this past year.

Daily Headcounts

The library is open seven days a week. Mondays through Thursdays are peak days, with an average headcount of 1,704 to 1,969 visitors each day.



Hourly Headcounts

The library is open from 8am until 11pm during the week with reduced hours on weekends. Our peak hours are 10am to 7pm, when we have an average headcount of 26 to 48 visitors.



Every Bit Helps

\$25 
provides 2 new children's books

\$40 
provides a year of library service for 4 cardholders

\$113 
provides 1 research volume

\$1,350 
provides 1 job-search laptop, plus software

Image credits: Omaha Public Library, Depict Data Studio, New York Public Library

6. SHOW, DON'T TELL

Every day

1.3 billion bottles

Every day the equivalent of a bottle pile half the size of the Eiffel Tower in Paris is sold around the world.



Image credit: Reuters Graphics

35

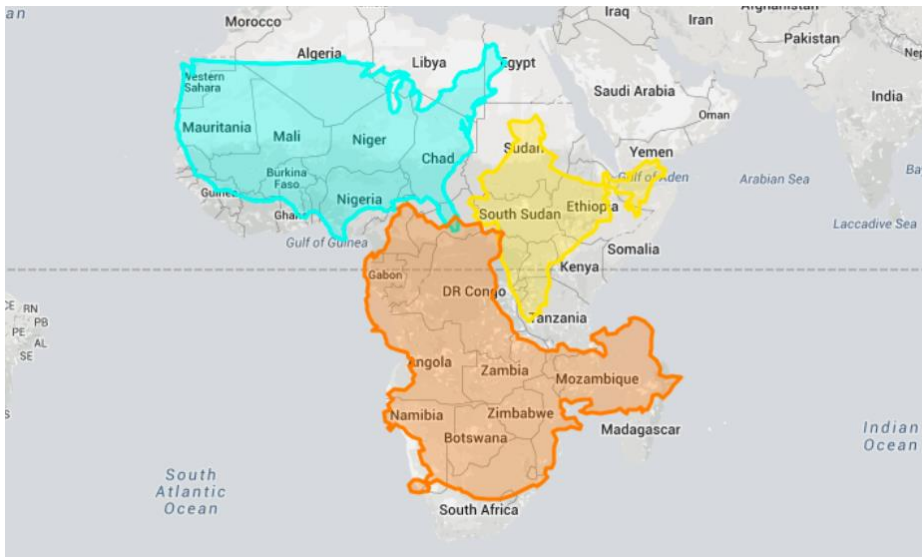


Image credit: My Modern Met

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37



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DATA VISUALIZATION FORMATS

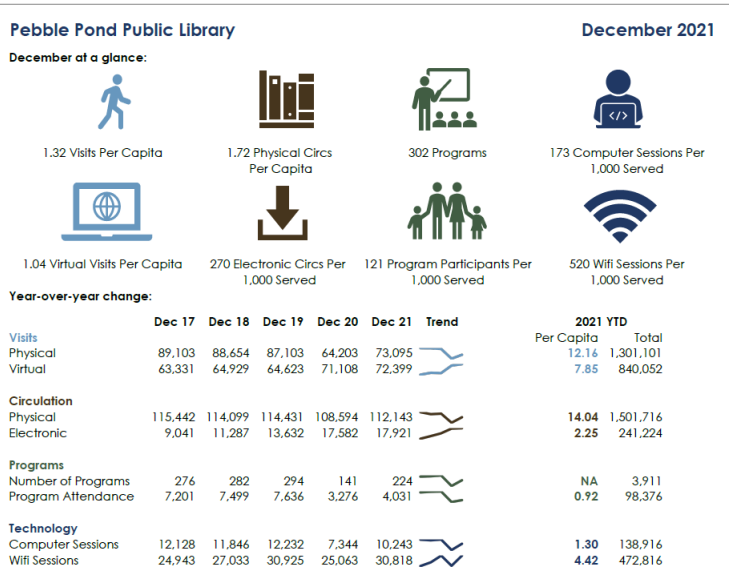
Operational Report
(Board or Annual
Reports, Staff
Updates)

Tool = Excel or
Google Sheets

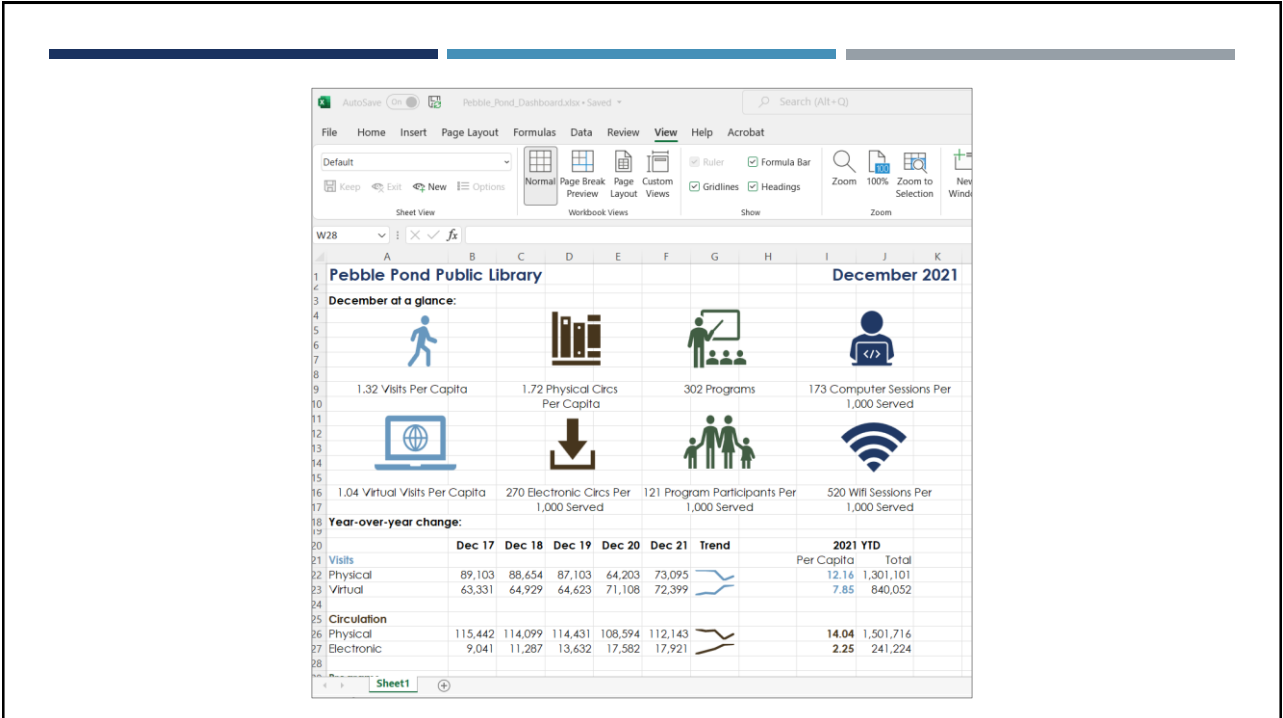
Presentation

Social Media Post

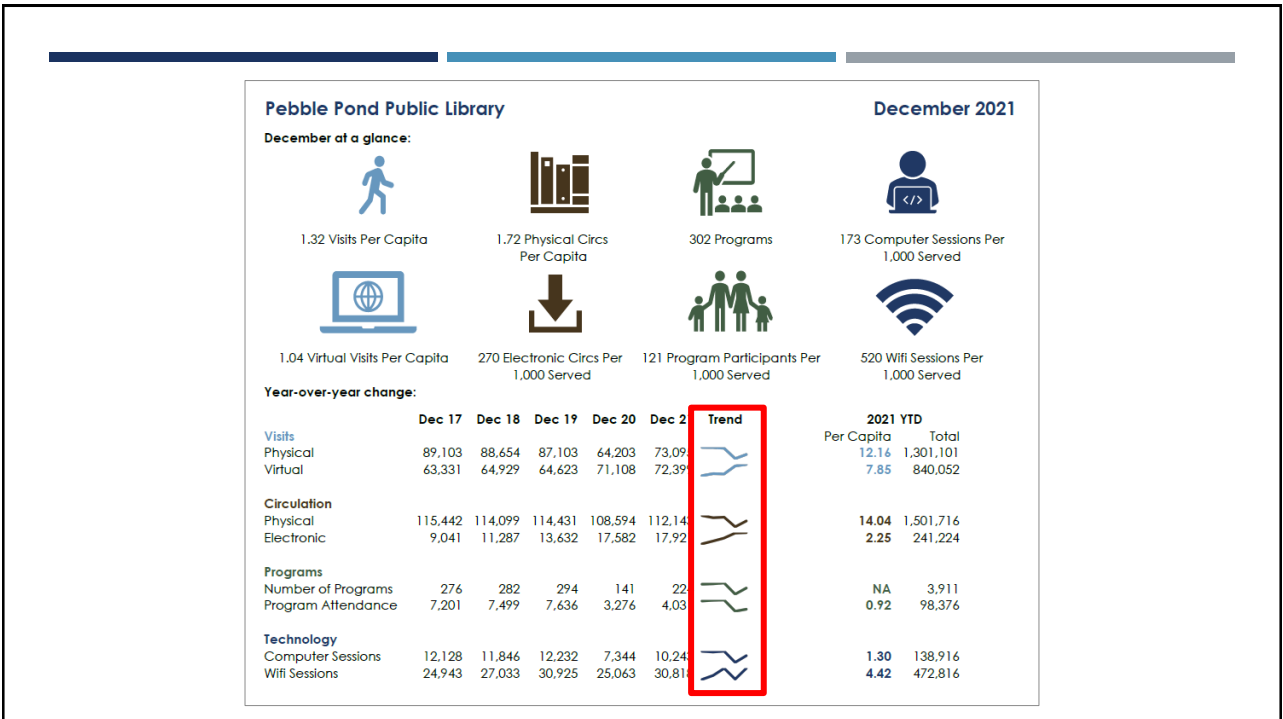
39



40



41



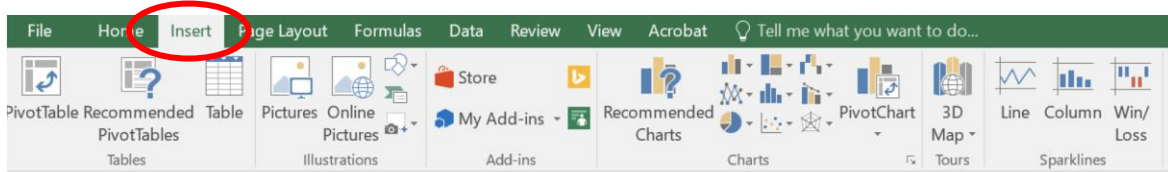
42

SPARKLINES – EXCEL OR GOOGLE SHEETS

Year-over-year change:						
	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Trend
Visits						
Physical	89,103	88,654	87,103	64,203	73,095	
Virtual	63,331	64,929	64,623	71,108	72,399	
Circulation						
Physical	115,442	114,099	114,431	108,594	112,143	
Electronic	9,041	11,287	13,632	17,582	17,921	
Programs						
Number of Programs	276	282	294	141	224	
Program Attendance	7,201	7,499	7,636	3,276	4,031	
Technology						
Computer Sessions	12,128	11,846	12,232	7,344	10,243	
Wifi Sessions	24,943	27,033	30,925	25,063	30,818	

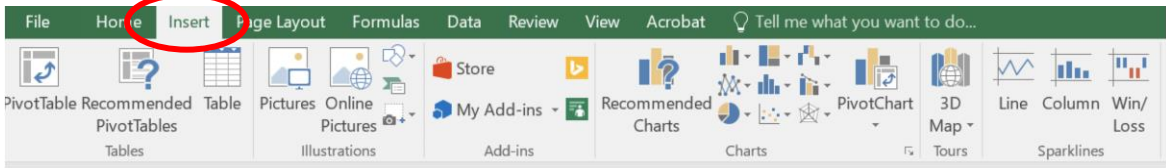
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SPARKLINES – EXCEL OR GOOGLE SHEETS



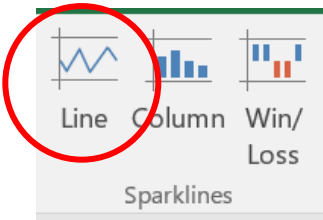
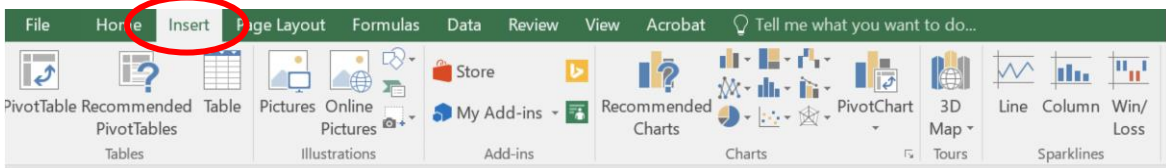
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SPARKLINES – EXCEL OR GOOGLE SHEETS

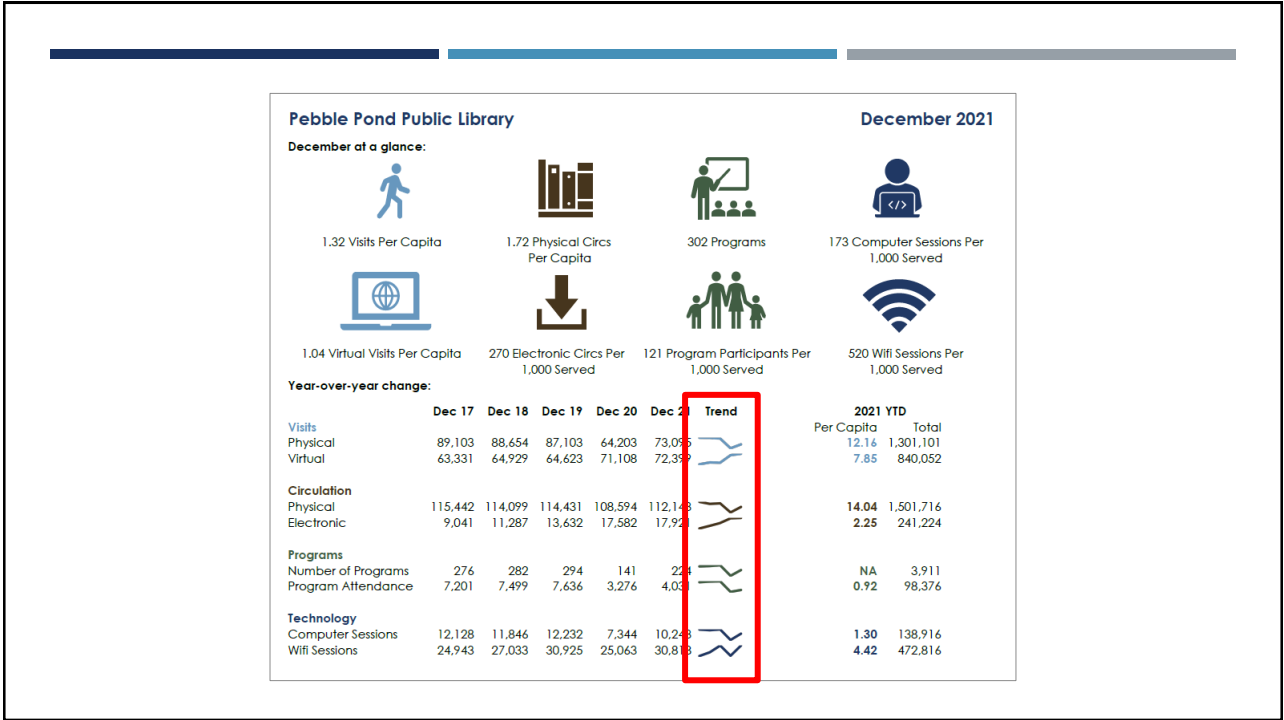


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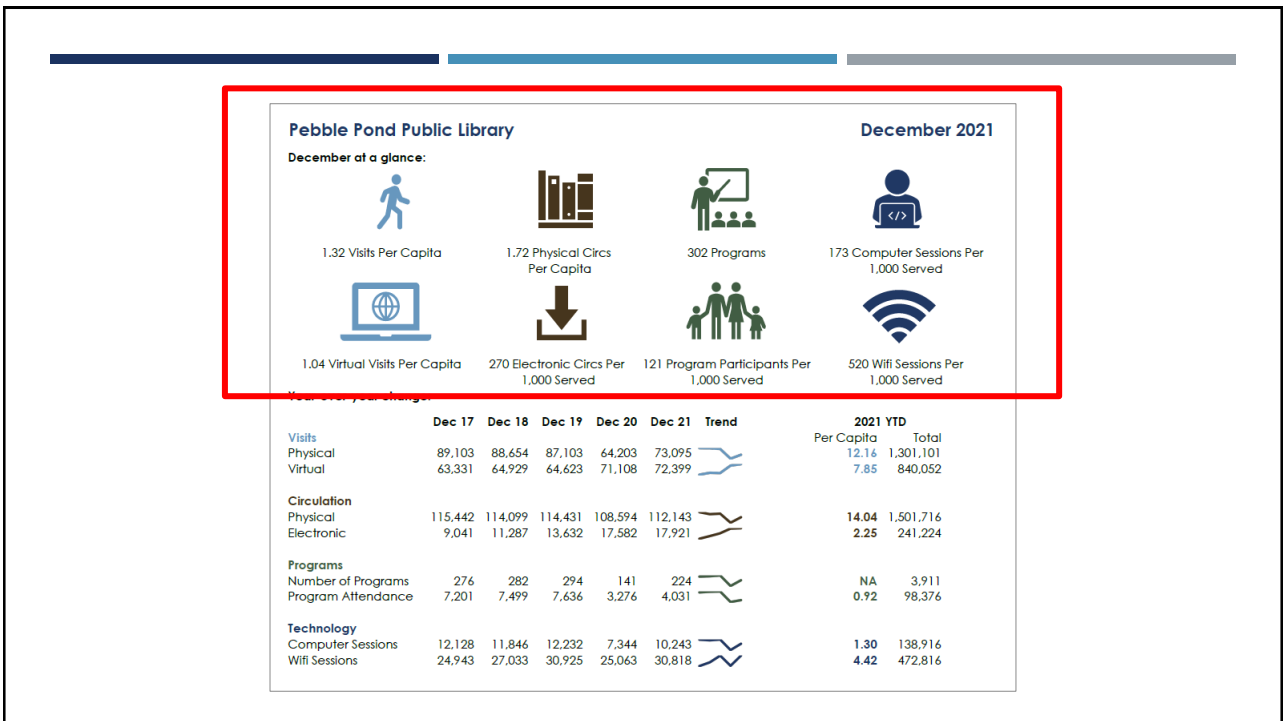
SPARKLINES – EXCEL OR GOOGLE SHEETS



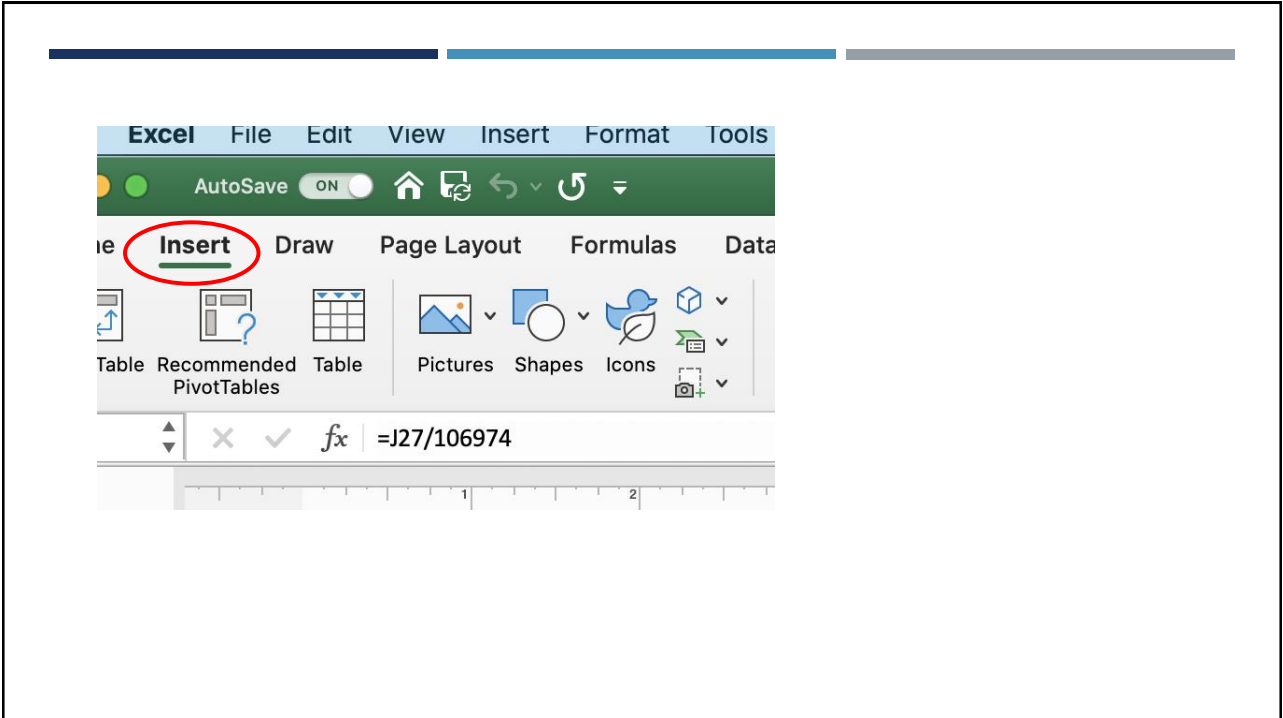
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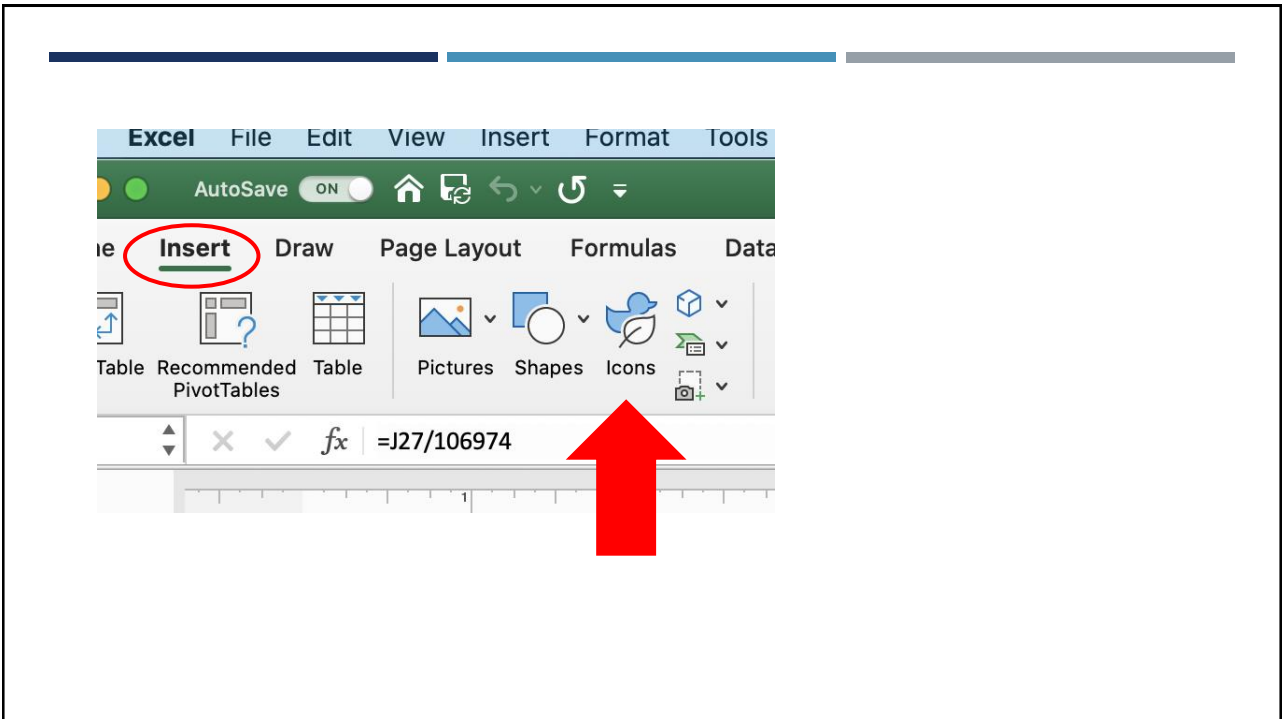
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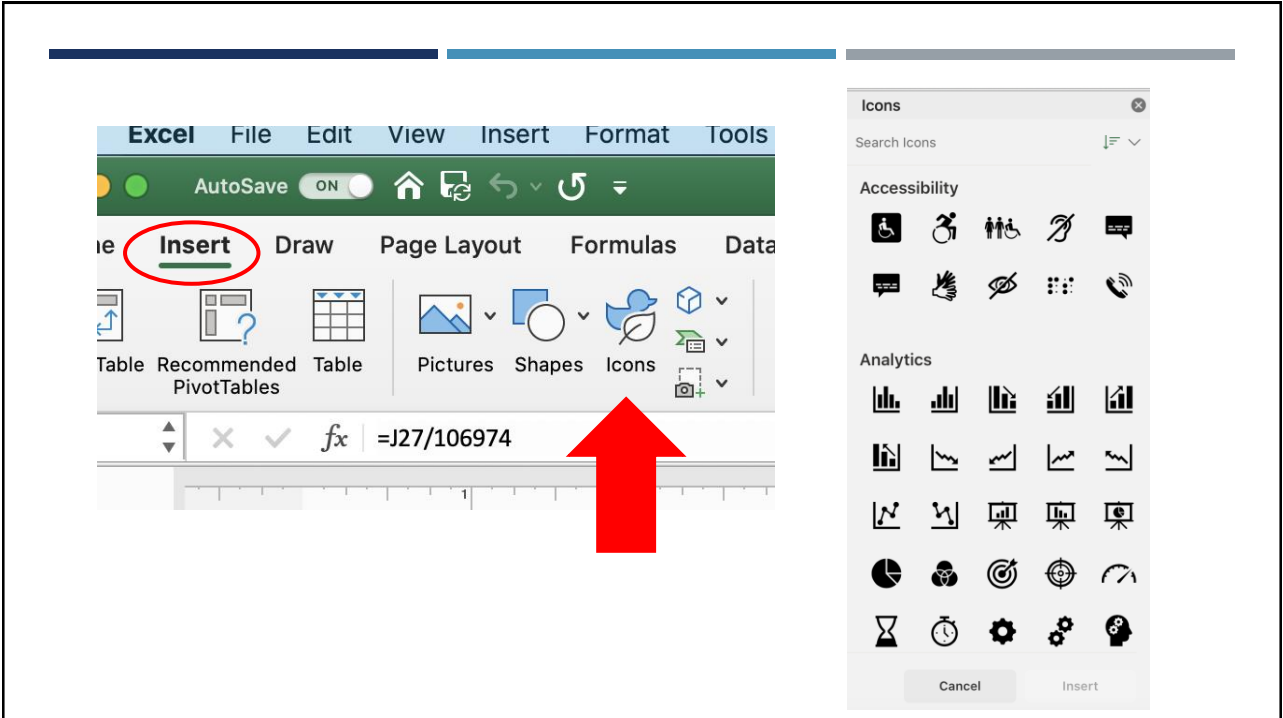
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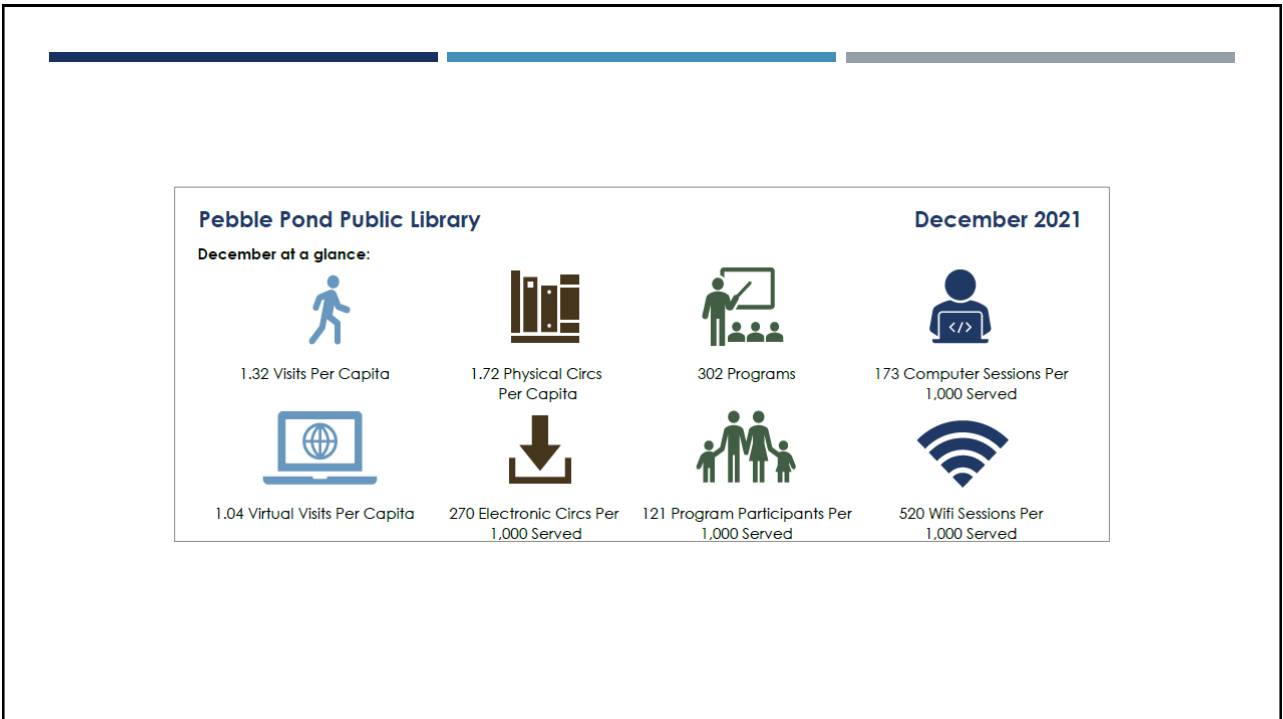
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50

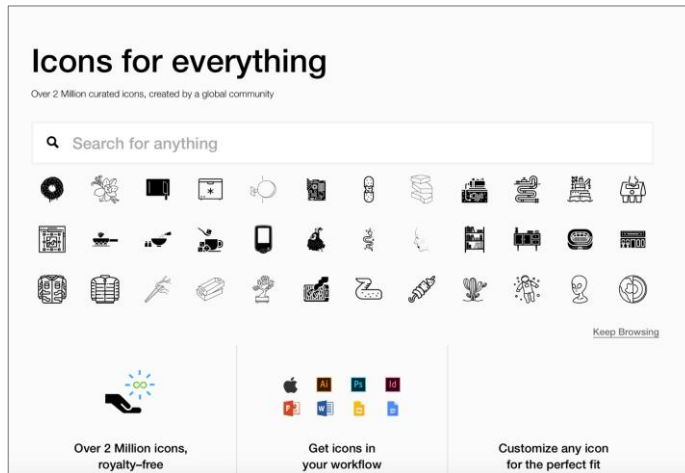


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ICONS FOR GOOGLE SHEETS – NOUN PROJECT



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DATA VISUALIZATION FORMATS

Operational Report
(Board or Annual
Reports, Staff
Updates)

Presentation

Social Media Post

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DATA VISUALIZATION FORMATS

Operational Report
(Board or Annual
Reports, Staff
Updates)

Presentation

Tools = Excel,
Google Sheets,
Canva

Social Media Post

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4 SIMPLE STEPS TO CREATE MEANINGFUL CHARTS

1. Choose the appropriate chart
2. Remove clutter
3. Don't assume Excel knows best
4. Use titles and formatting to make a point

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I. CHOOSE THE APPROPRIATE CHART

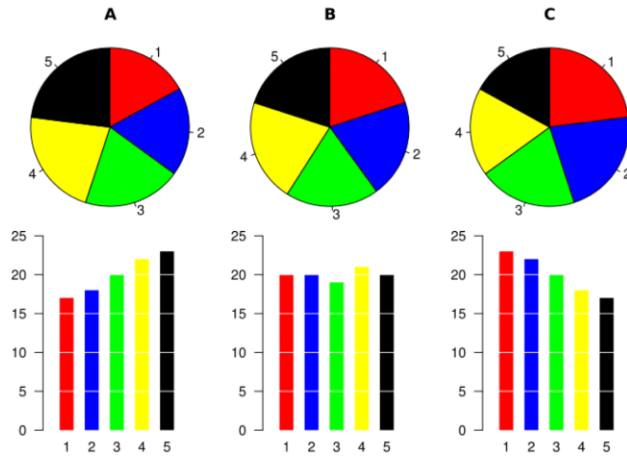
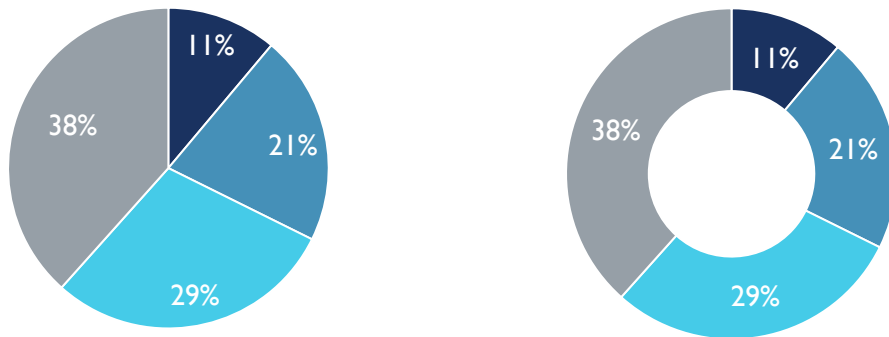


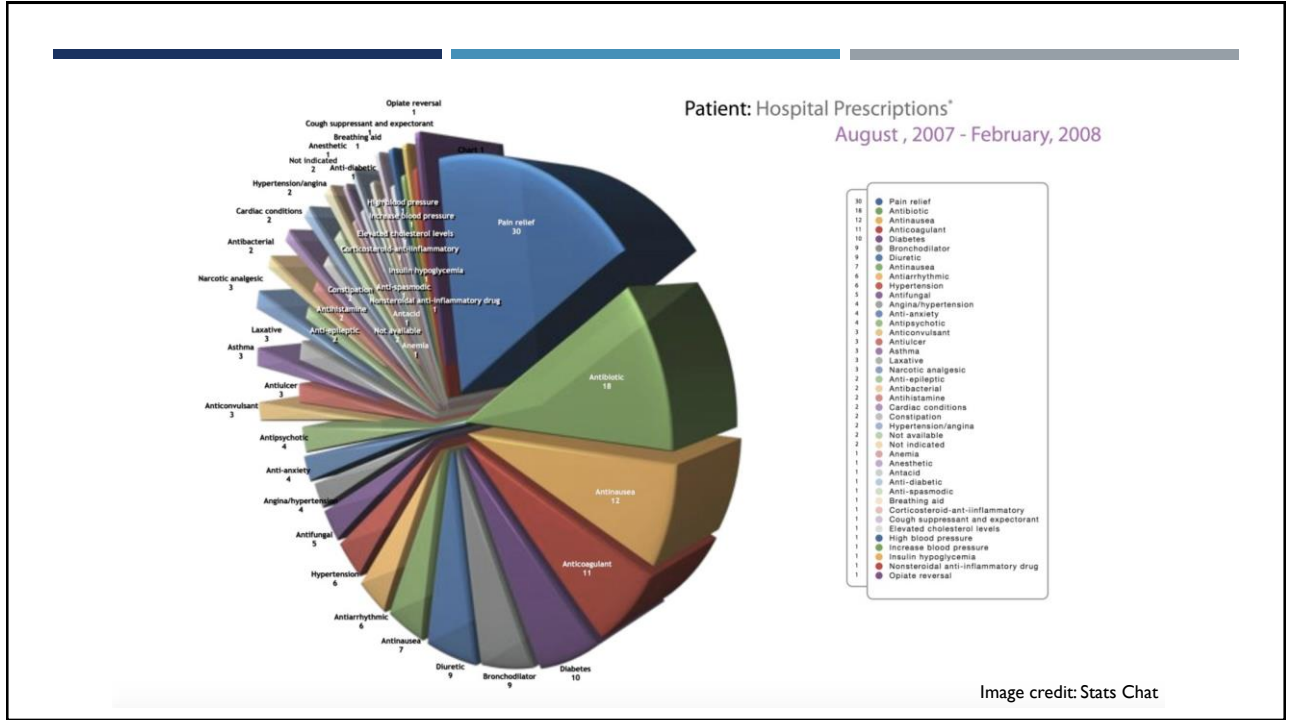
Image credit: Data is Beautiful/Reddit

57

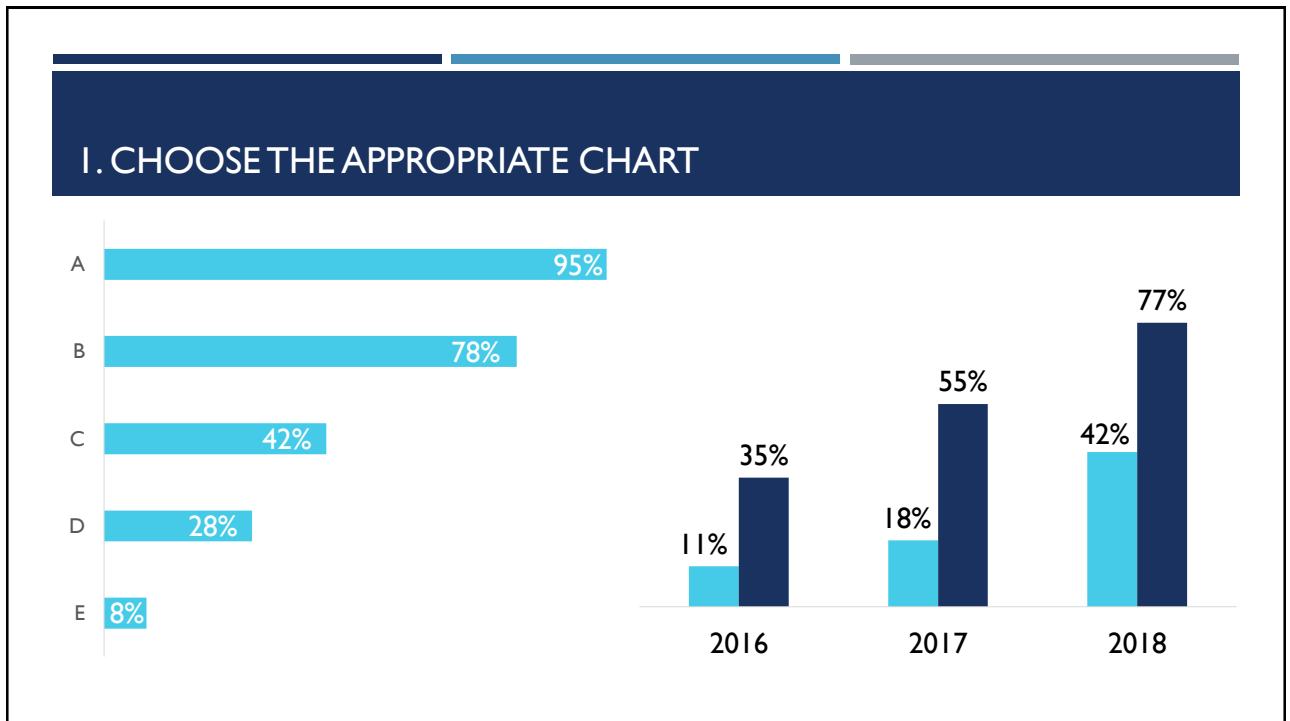
I. CHOOSE THE APPROPRIATE CHART



58

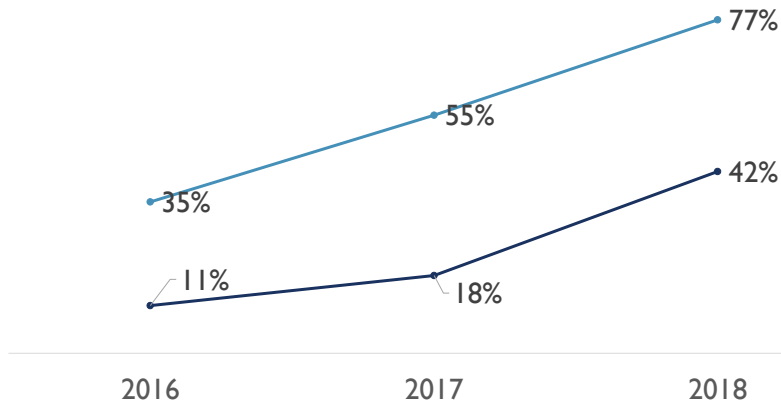


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I. CHOOSE THE APPROPRIATE CHART



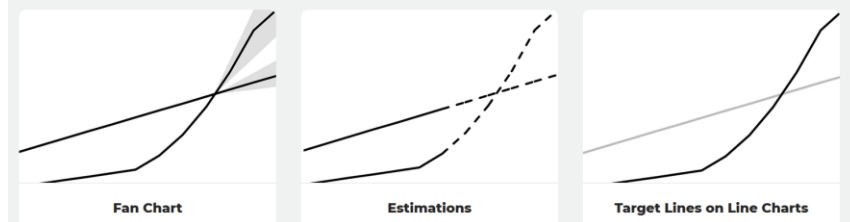
61

DEPICT DATA STUDIO'S CHART CHOOSER TOOL

Interactive Chart Chooser

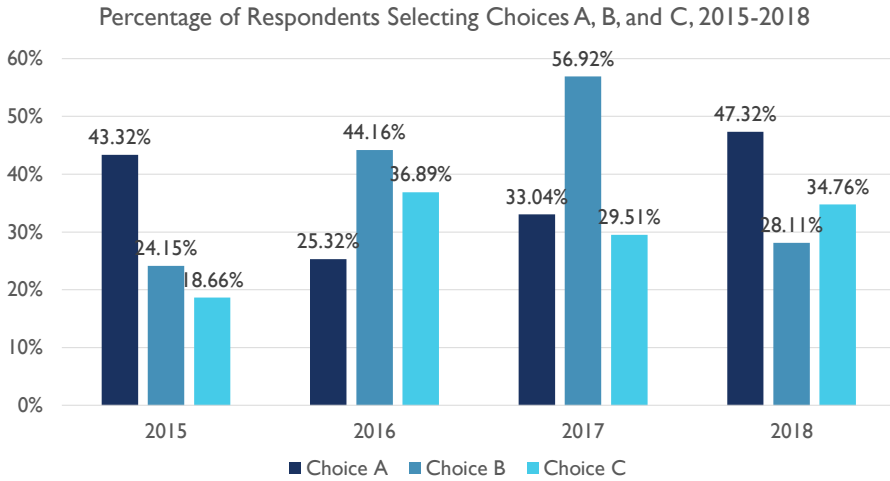
Wondering which type of graph is the best fit for your data? Explore our interactive chart chooser using the filters. For example, if you click on 3+ Points in Time, you'll see familiar faces like line graphs and meet new friends like multimedia timelines.

[All](#) | [1 Point in Time](#) | [2 Points in Time](#) | [3+ Points in Time](#) | [Comparisons](#) | [Correlation](#) | [Distribution](#) | [Exploratory](#) | [Part to Whole](#) | [Progress Towards Goals](#) | [Relationships](#)



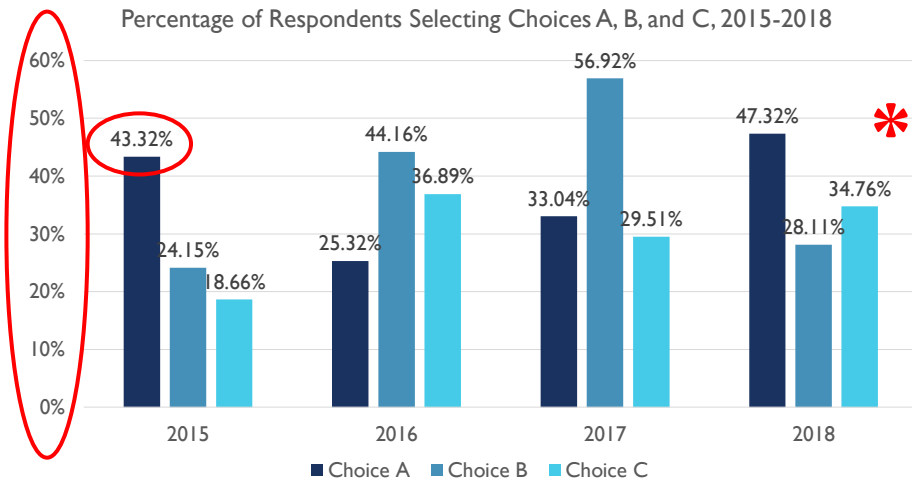
62

2. REMOVE CLUTTER



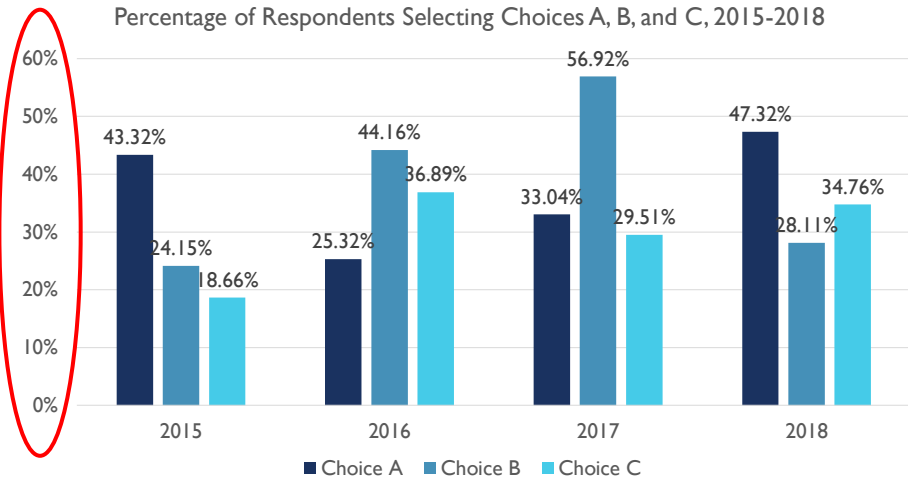
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2. REMOVE CLUTTER



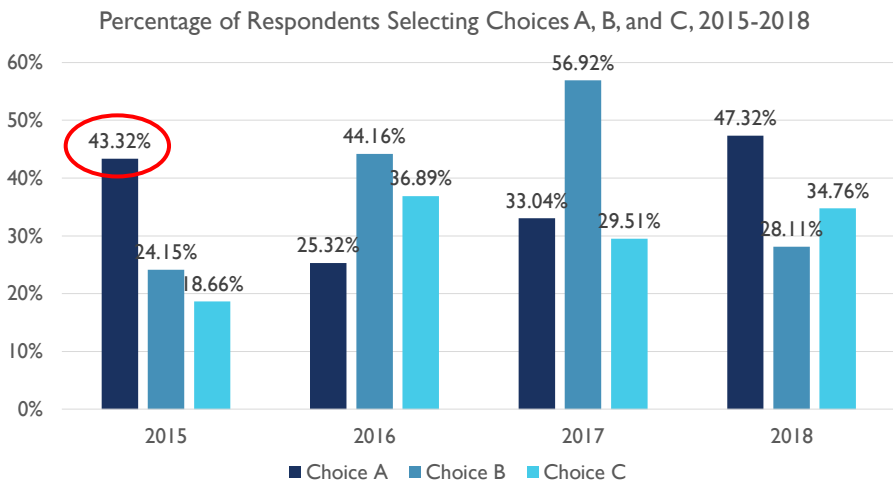
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2. REMOVE CLUTTER



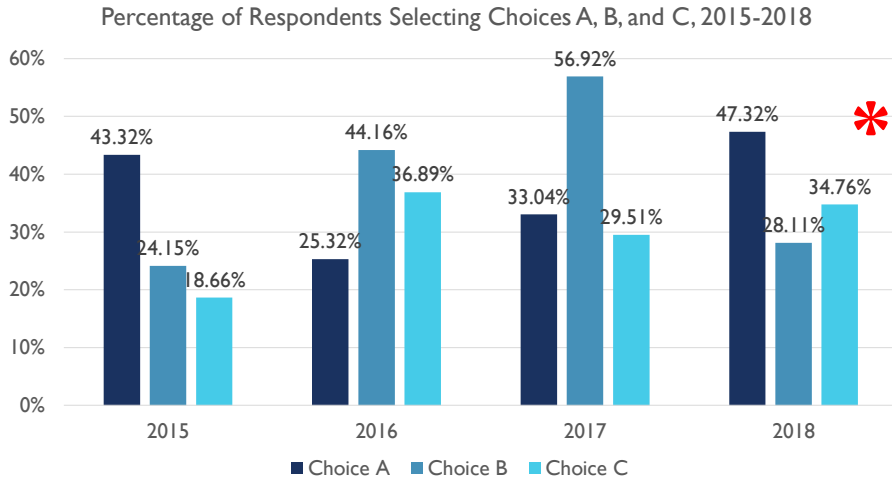
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2. REMOVE CLUTTER



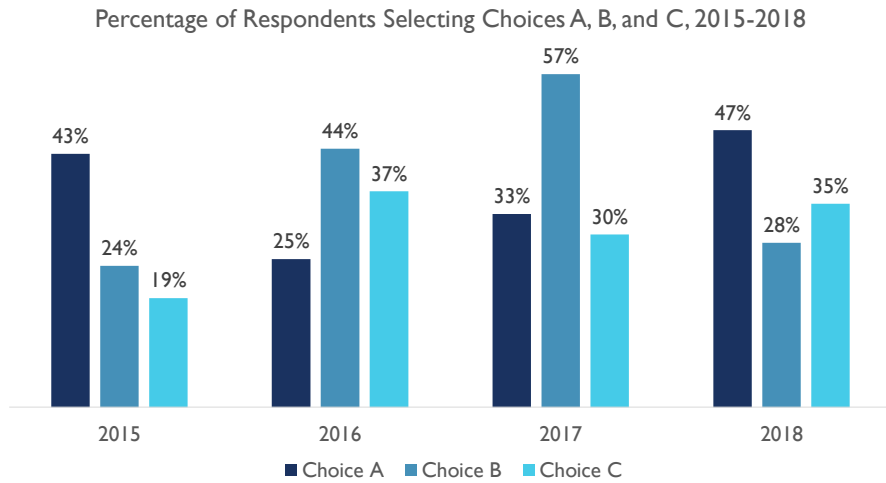
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2. REMOVE CLUTTER



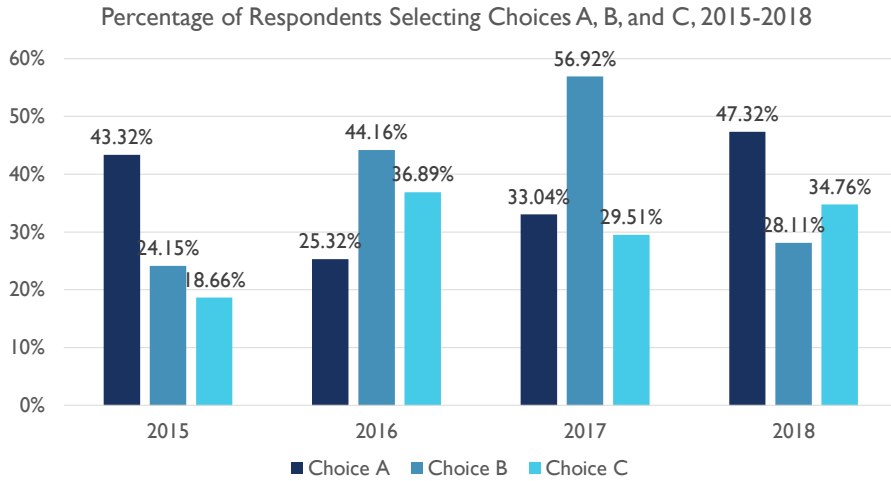
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2. REMOVE CLUTTER



68

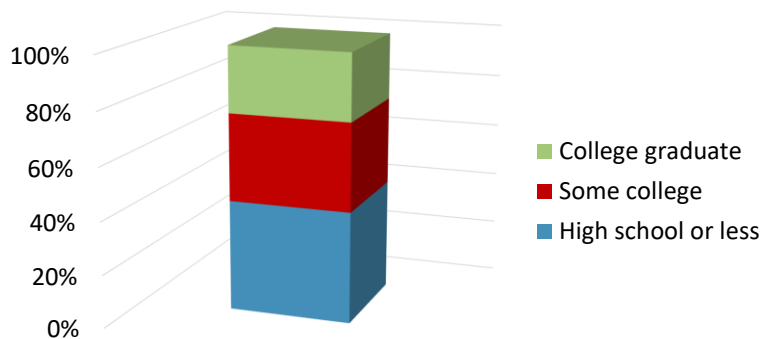
2. REMOVE CLUTTER



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3. EXCEL DOESN'T ALWAYS KNOW BEST

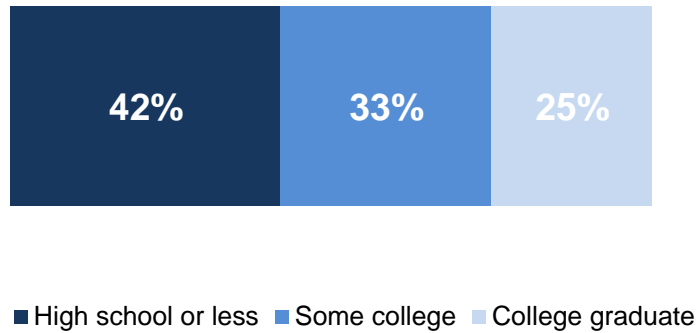
About 4 in 10 respondents have a high school education or less.



70

3. EXCEL DOESN'T ALWAYS KNOW BEST

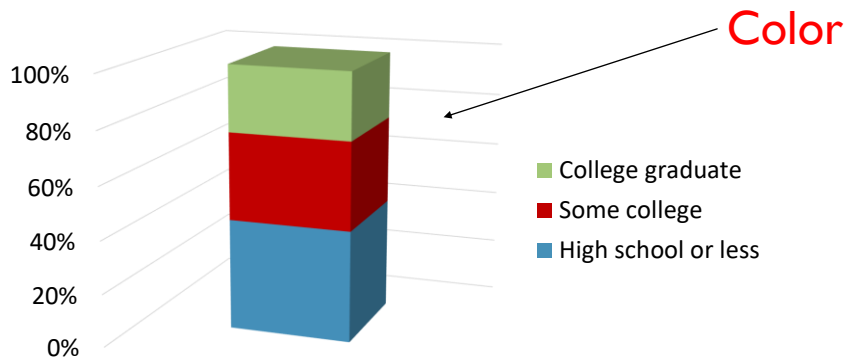
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71

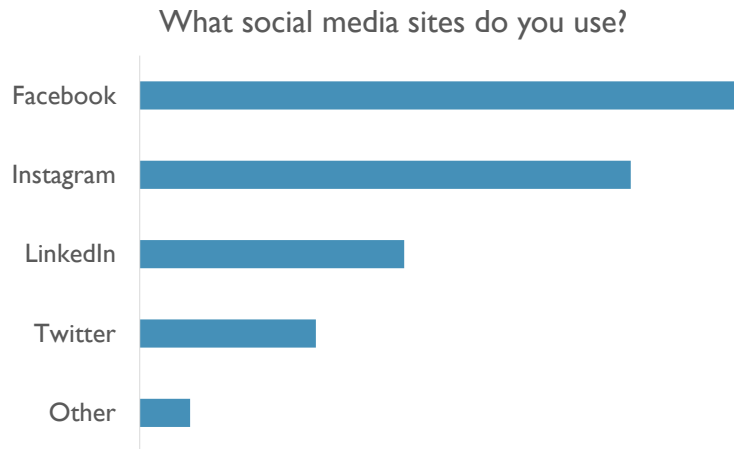
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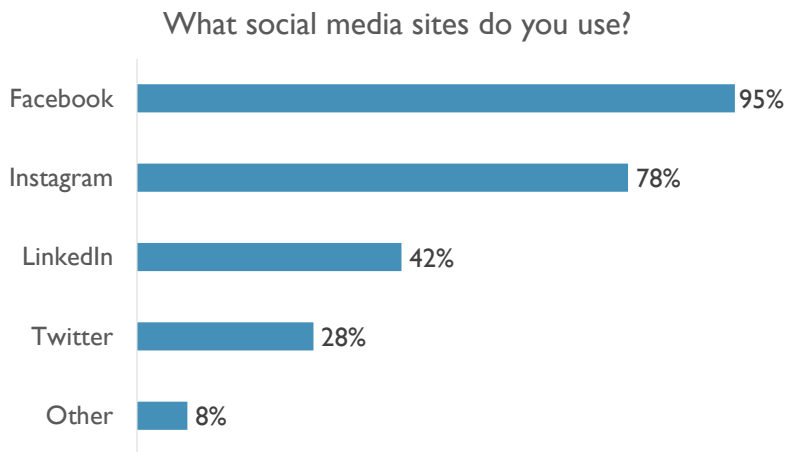
72

3. EXCEL DOESN'T ALWAYS KNOW BEST



73

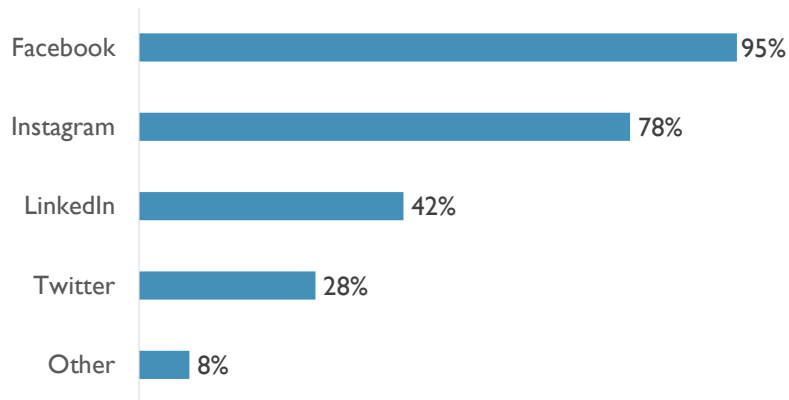
3. EXCEL DOESN'T ALWAYS KNOW BEST



74

4. USE TITLES AND FORMATTING TO MAKE A POINT

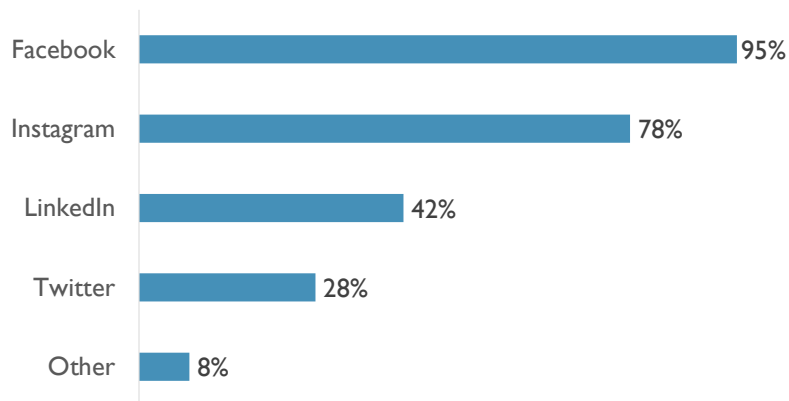
What social media sites do you use?



75

4. USE TITLES AND FORMATTING TO MAKE A POINT

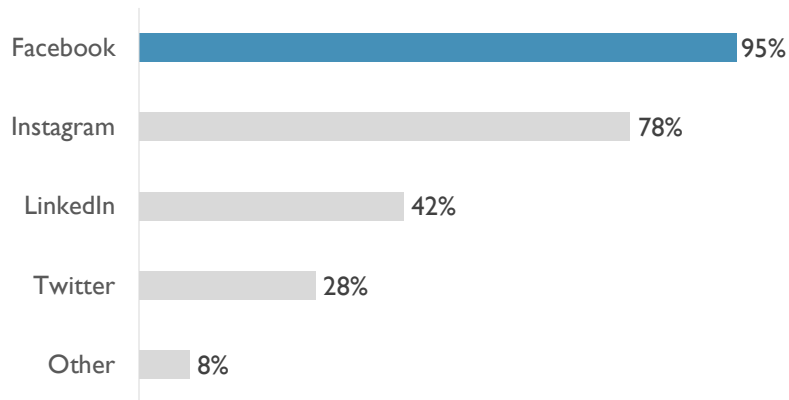
Most of our library patrons use Facebook.



76

4. USE TITLES AND FORMATTING TO MAKE A POINT

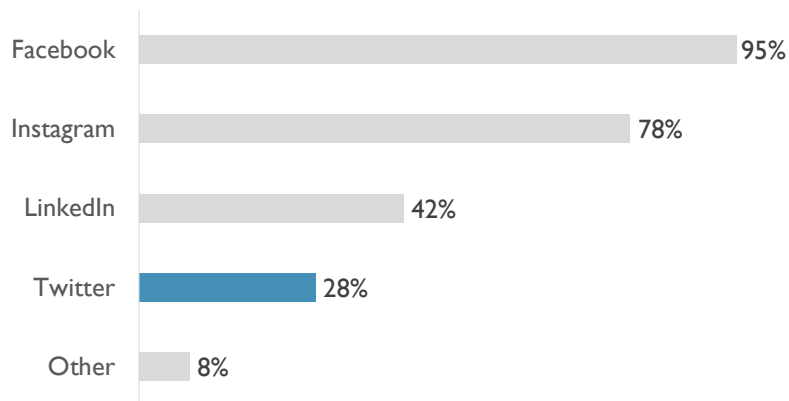
Most of our library patrons use Facebook.



77

4. USE TITLES AND FORMATTING TO MAKE A POINT

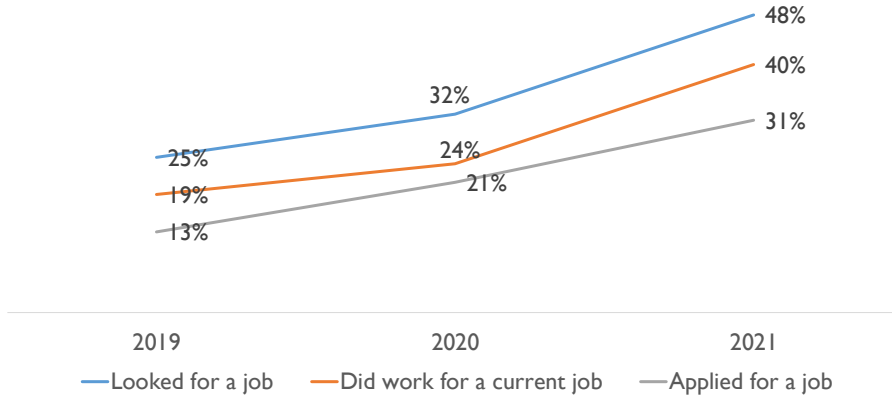
Less than 3 in 10 of our patrons use Twitter.



78

4. USE TITLES AND FORMATTING TO MAKE A POINT

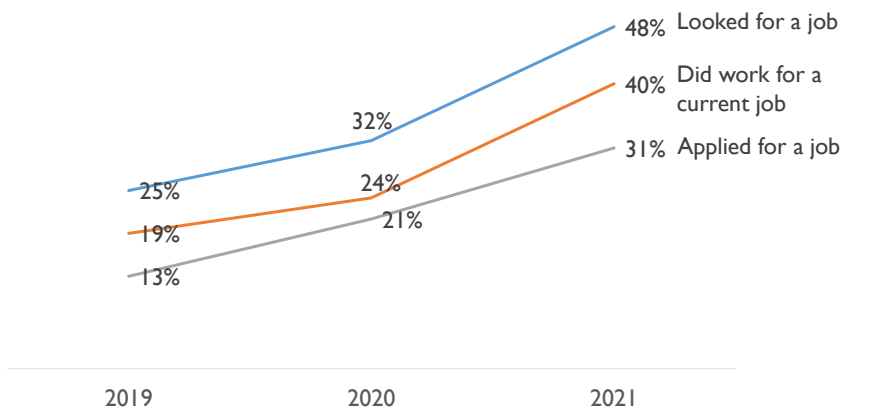
The percentages of library computer users accomplishing work-related tasks have increased steadily since 2019.



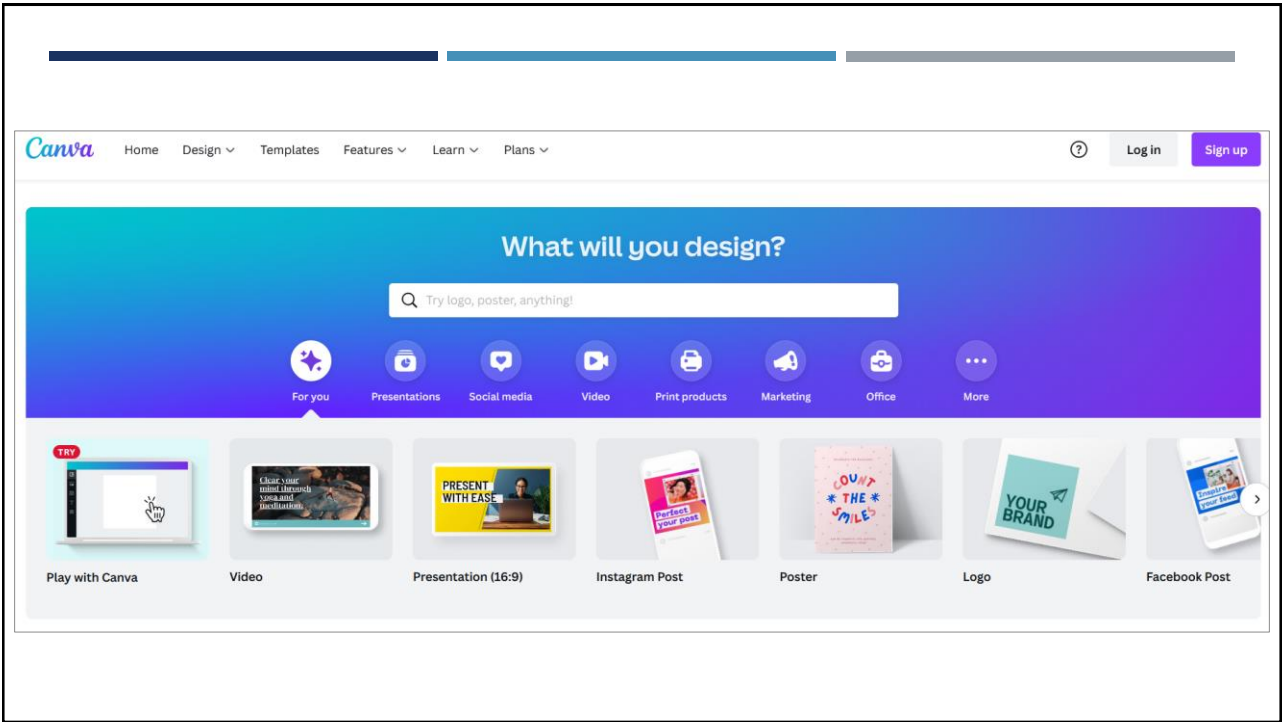
79

4. USE TITLES AND FORMATTING TO MAKE A POINT

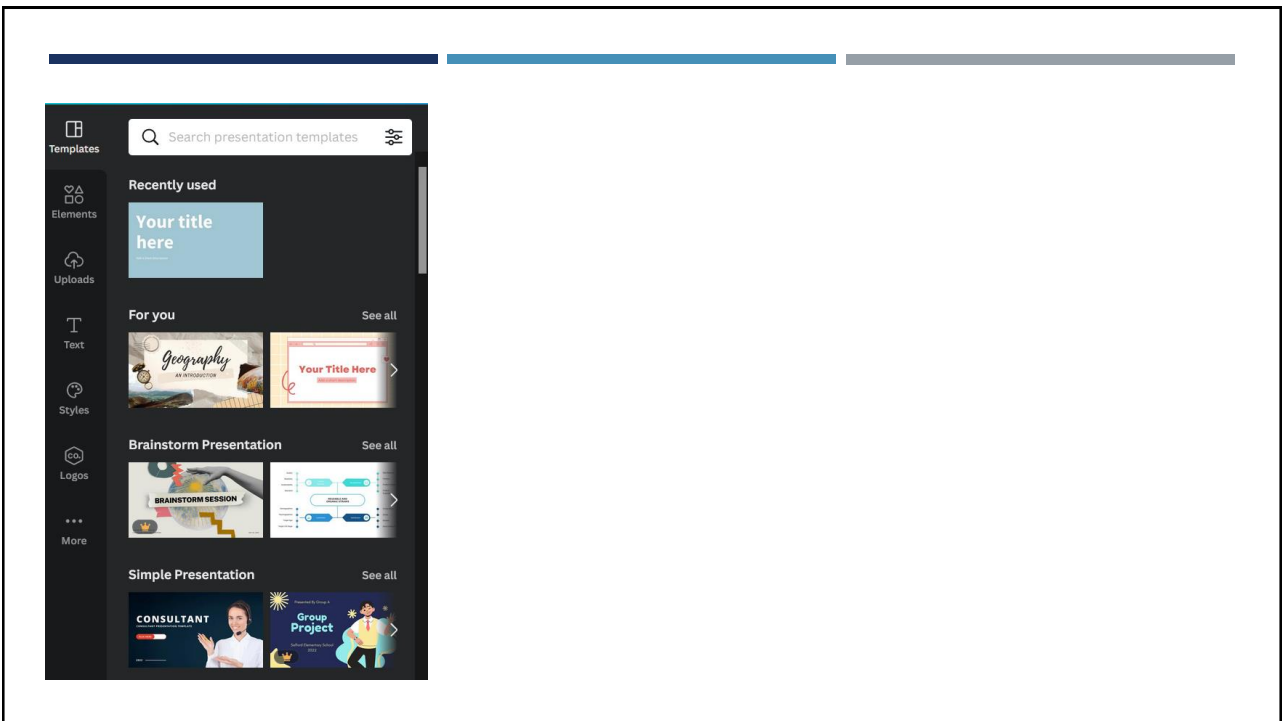
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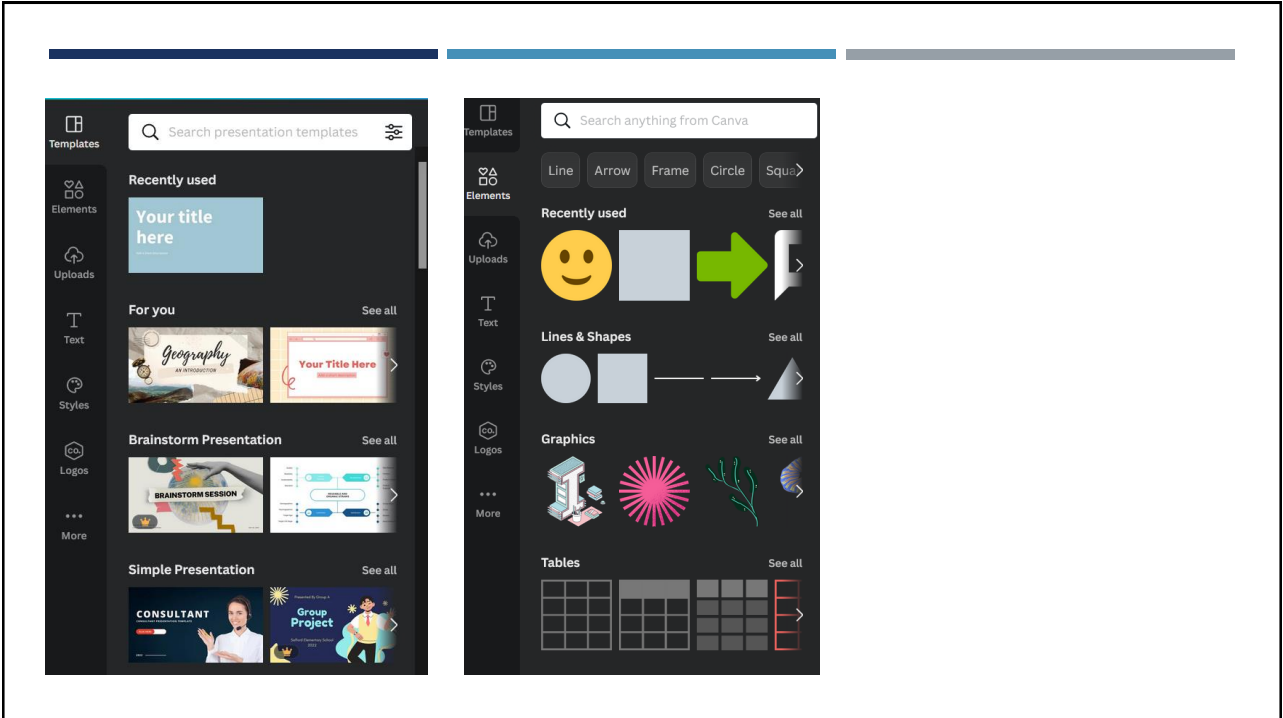
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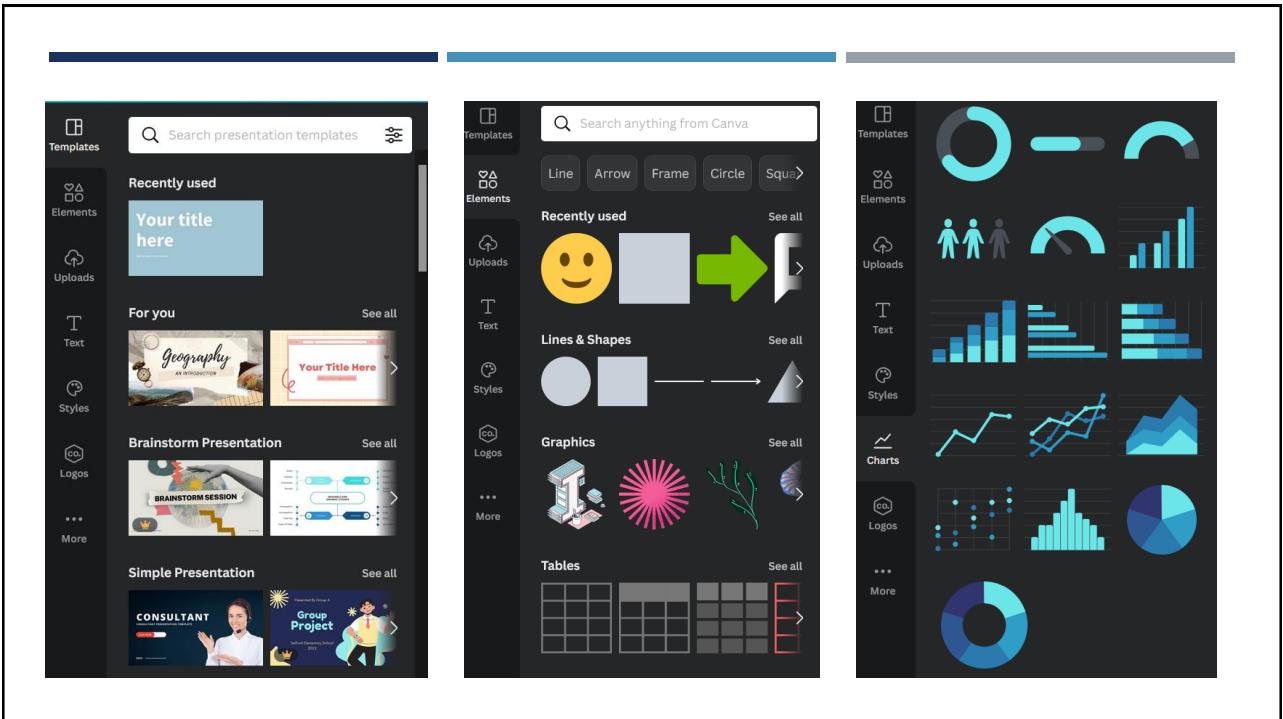
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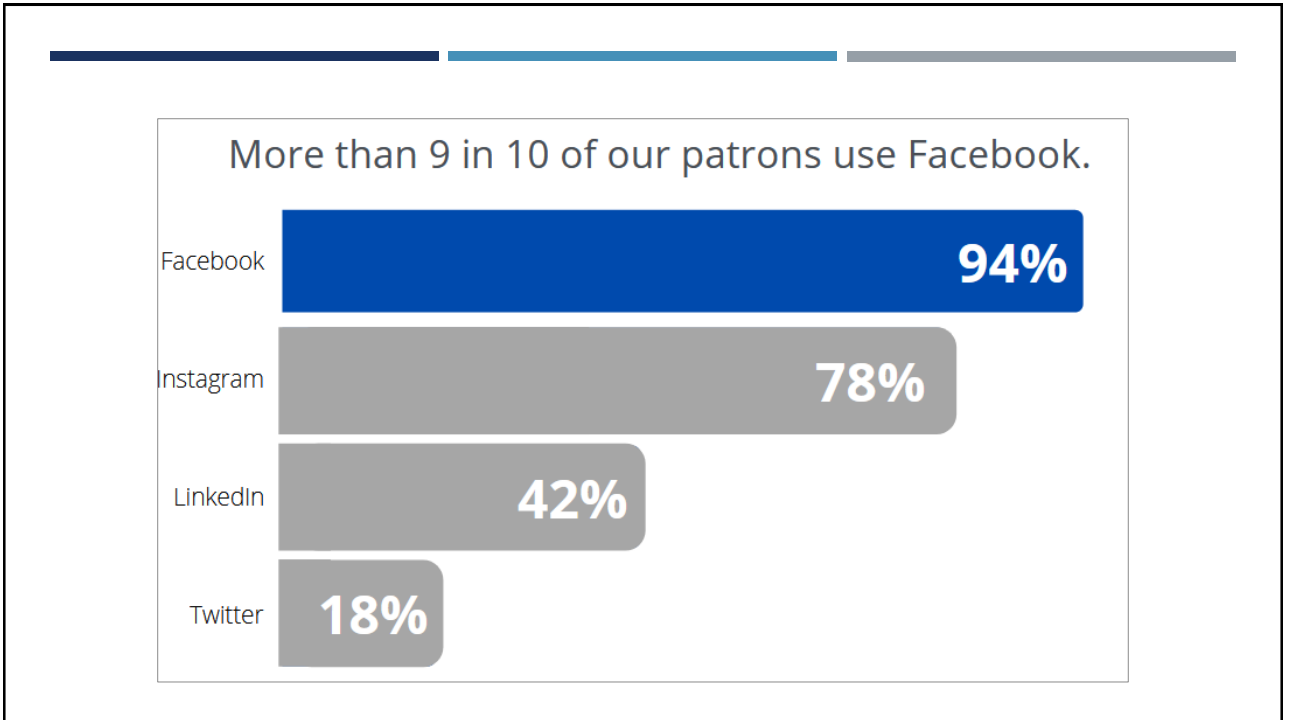
82



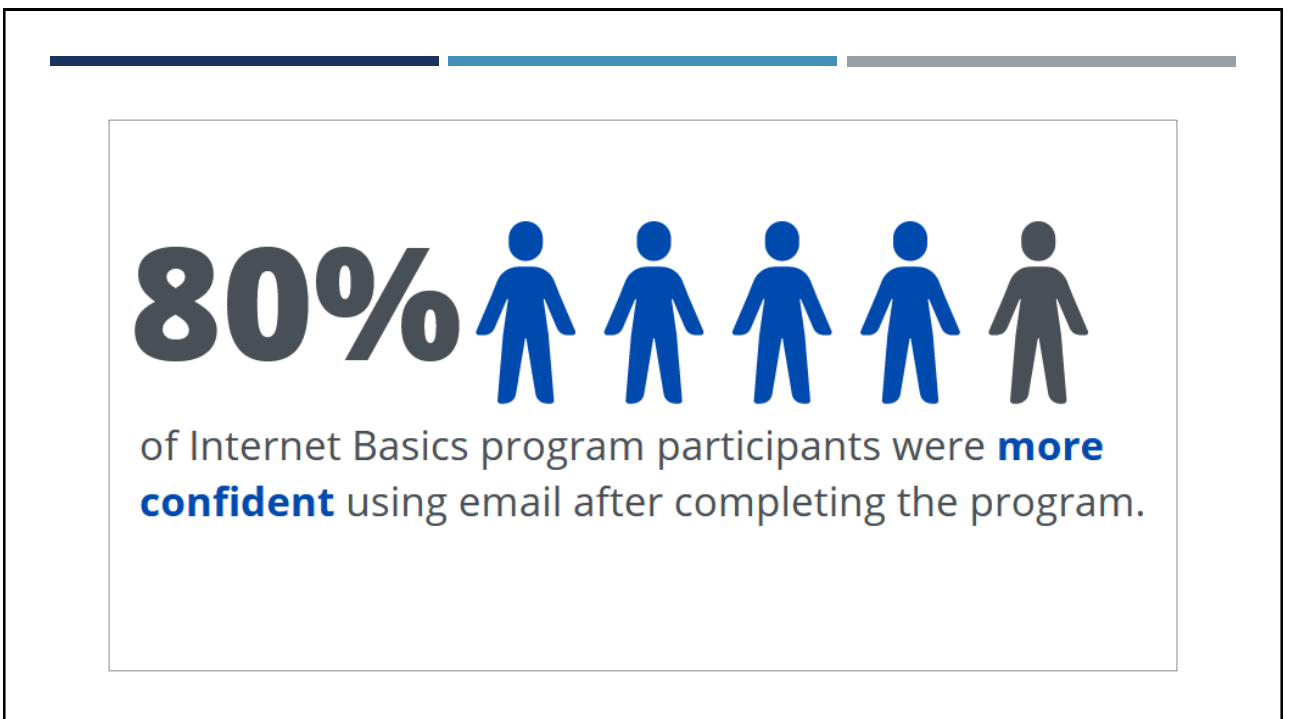
83



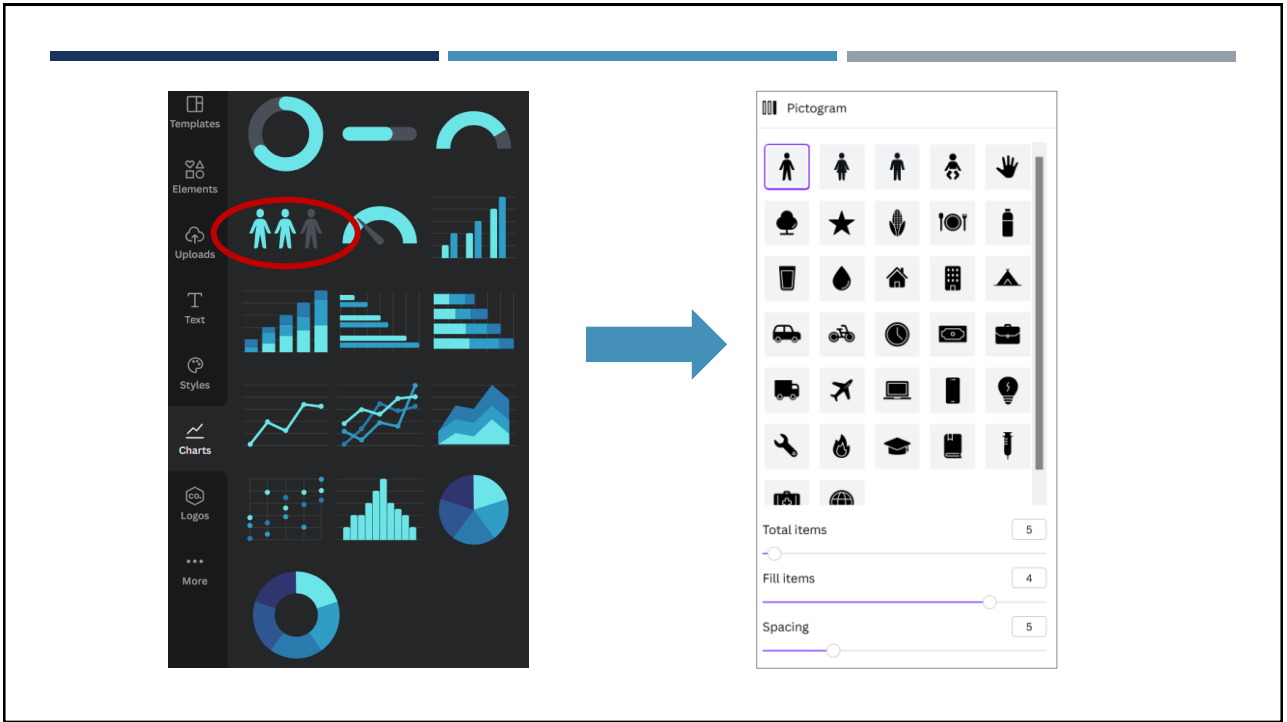
84



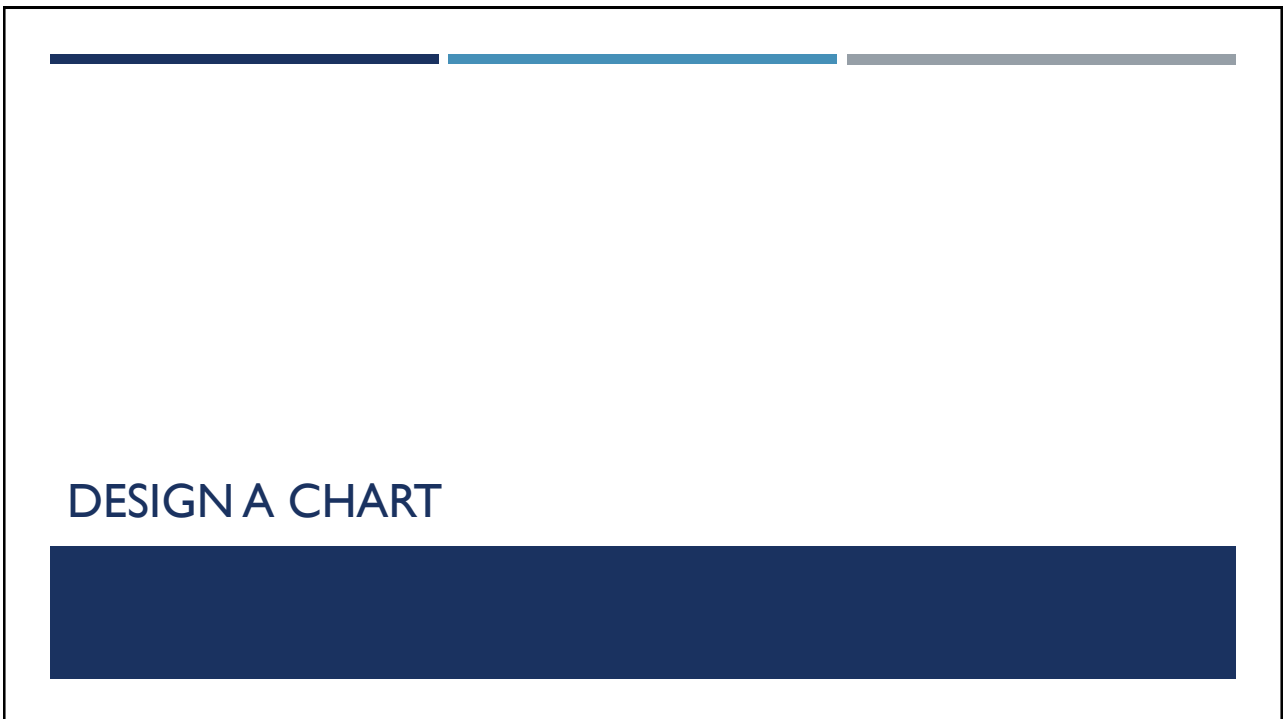
85



86



87



88

DATA VISUALIZATION FORMATS

Operational Report
(Board or Annual Reports, Staff Updates)

Presentation

Social Media Post

89

DATA VISUALIZATION FORMATS

Operational Report
(Board or Annual Reports, Staff Updates)

Presentation

Social Media Post
Tools = Infogram,
Adobe Creative
Cloud Express

90

71%
of online daters say it was very important to them that the profiles they looked at include a user's photo.

Source: Survey of U.S. adults conducted Oct. 16-28, 2019. oatawa/istock

Pew Research Center

Image credit: @pewresearch

91

Americans explain why they think online dating has had a mostly **POSITIVE** effect on dating and relationships

Pew Research Center

AMERICANS EXPLAIN WHY THEY THINK ONLINE DATING HAS HAD A MOSTLY POSITIVE EFFECT ON DATING AND RELATIONSHIPS

“ You read people’s profiles and know what they are all about before reaching out to them. Cheaper than going on a date to find out the hard way. ”

— MAN, 43

Pew Research Center

Image credit: @pewresearch

92

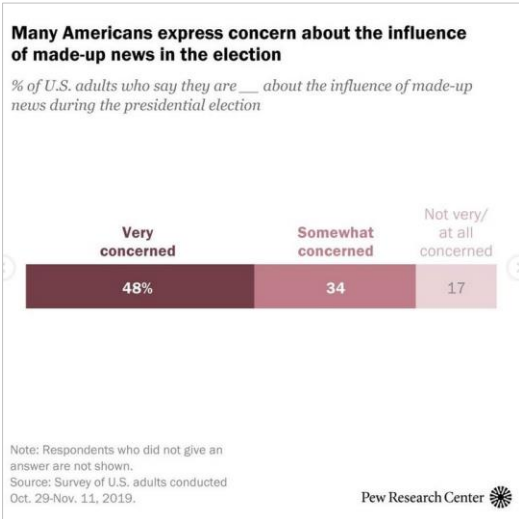
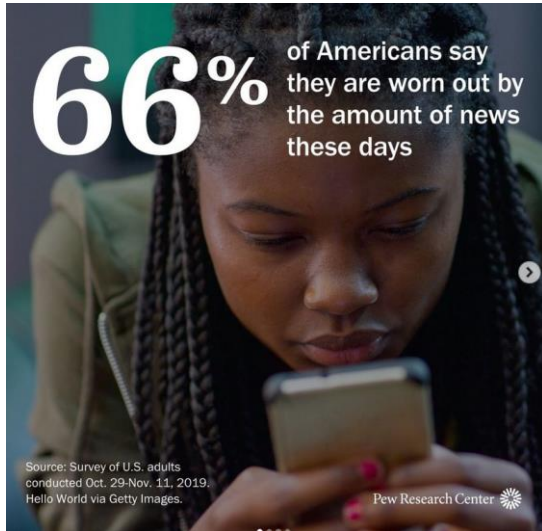


Image credit: @pewresearch

93

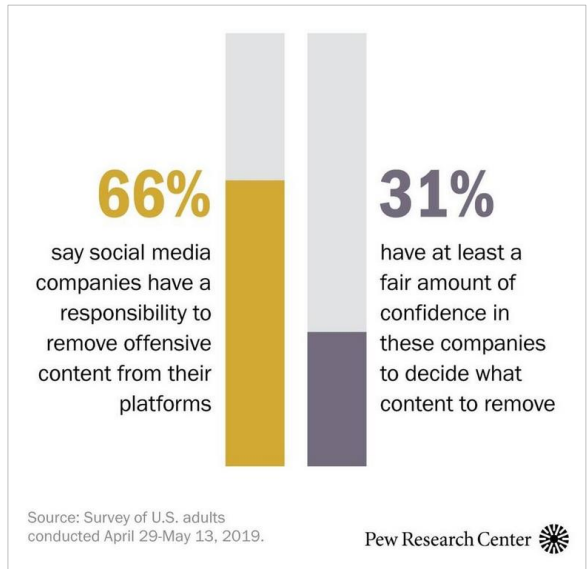
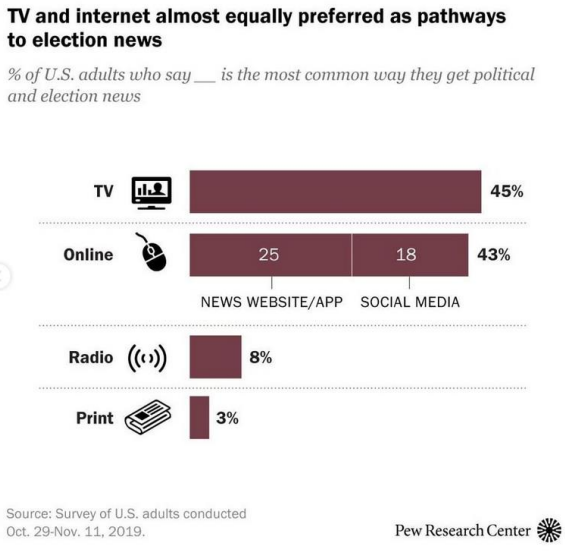
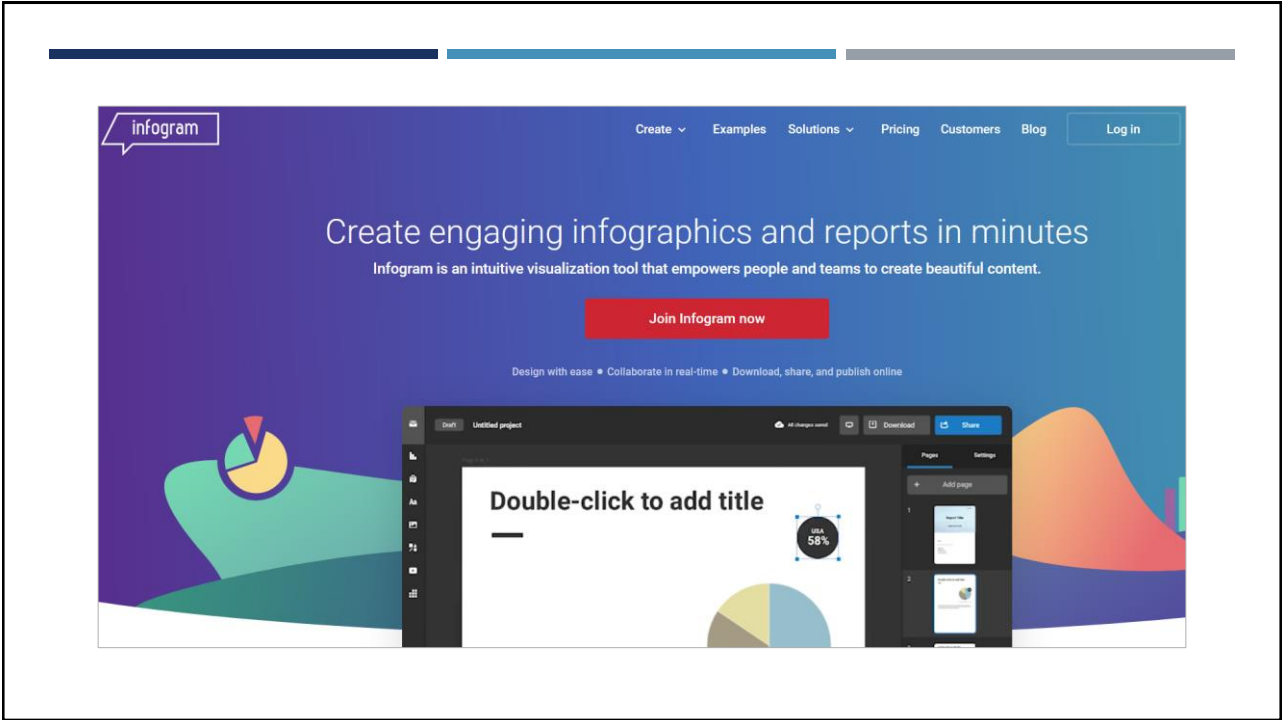
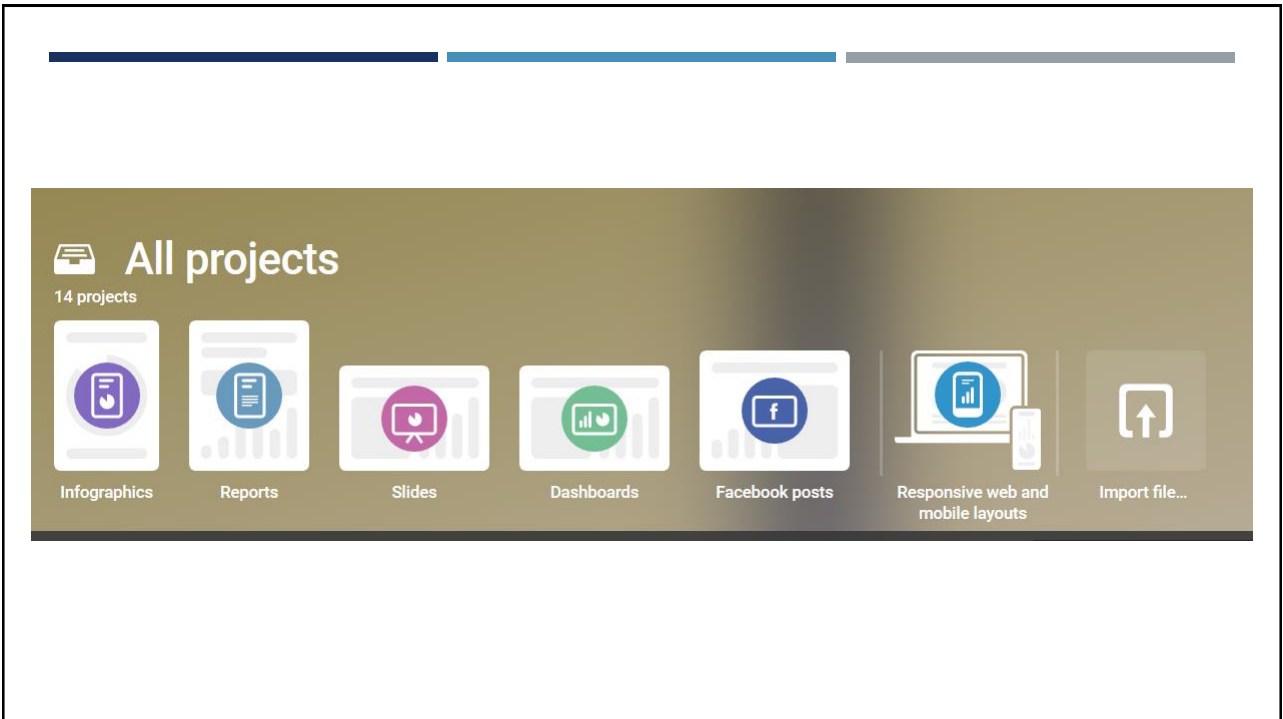


Image credit: @pewresearch

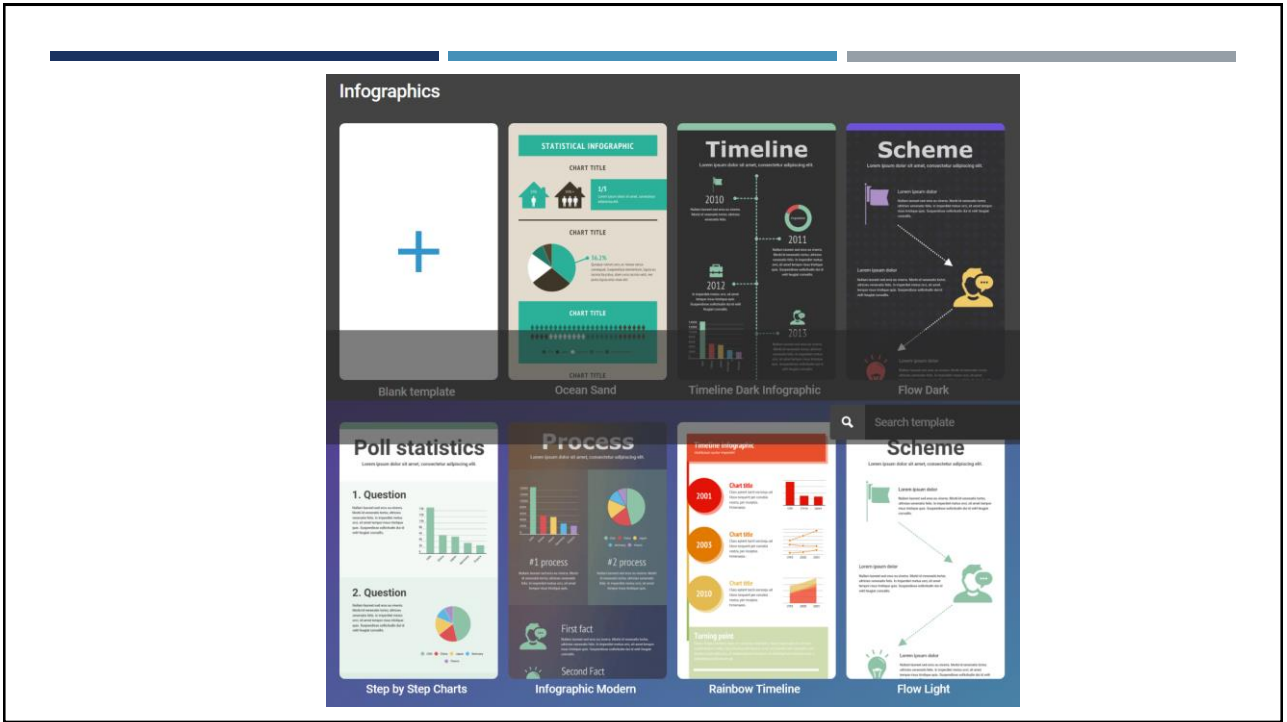
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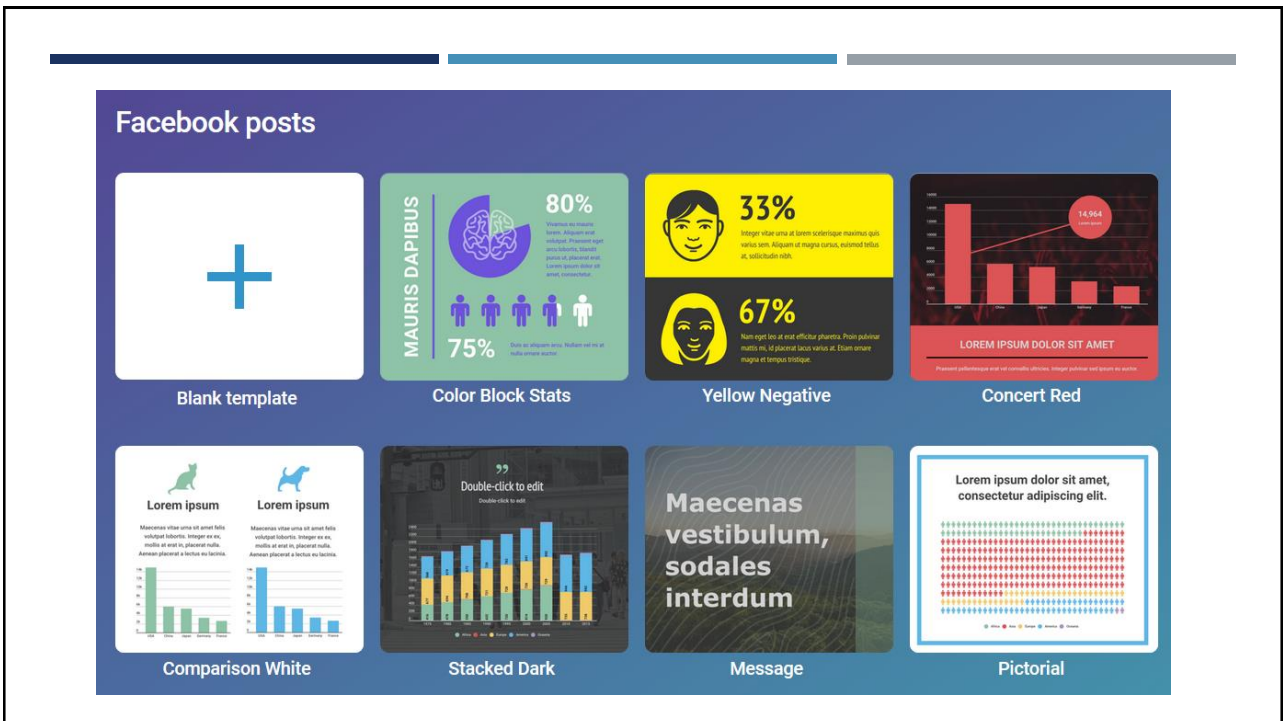
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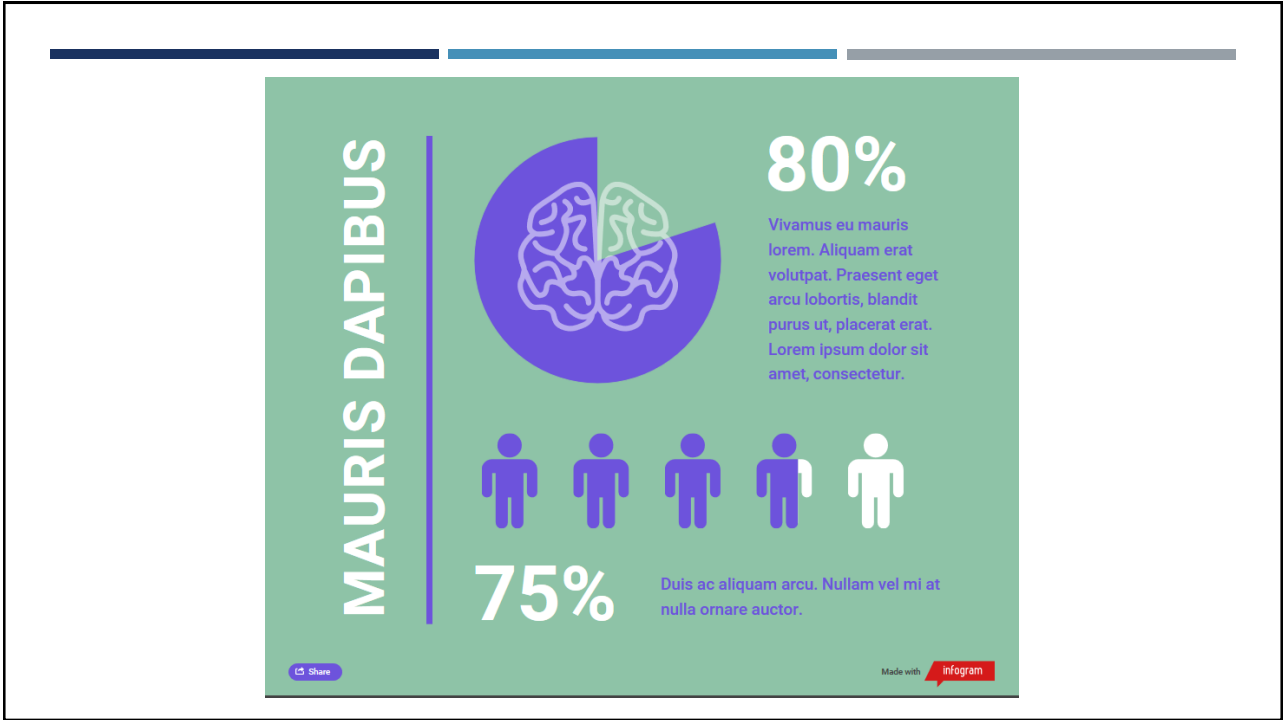
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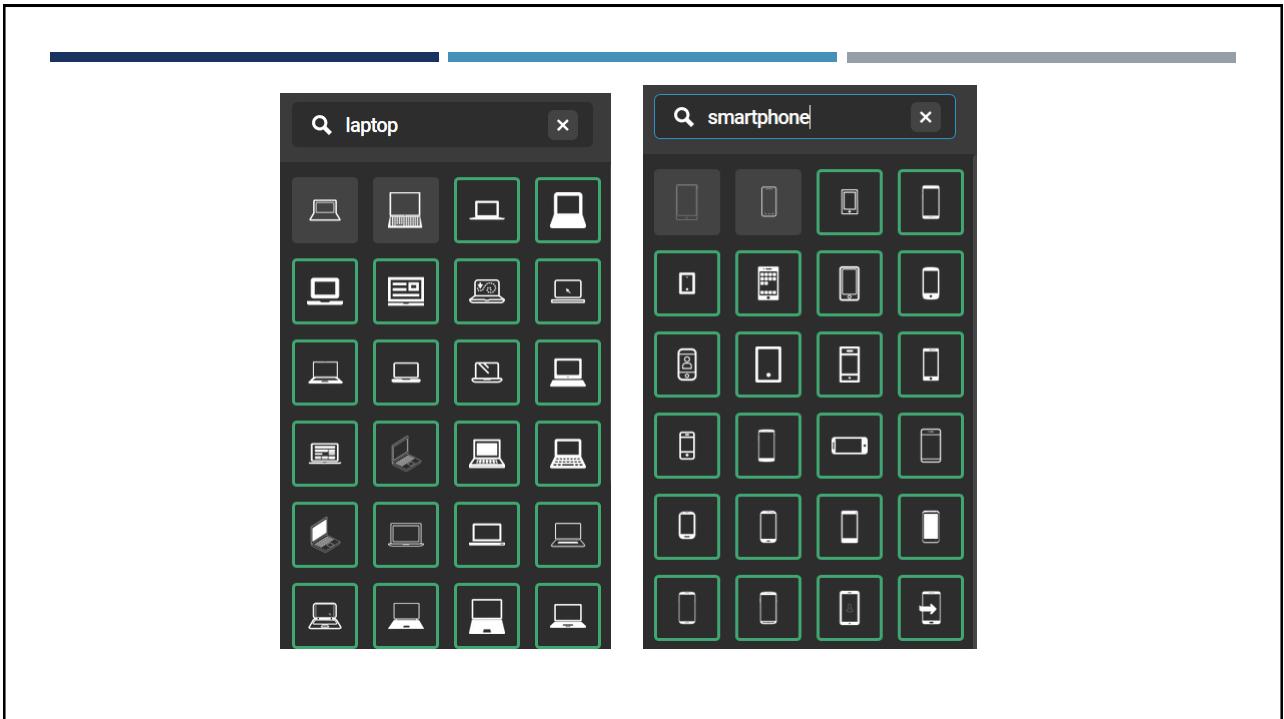
97



98



99



100

	A	B	C	D	E	F	G	H
1		Group A						
2	Value or percentage	75%						
3	Number of icons	5						
4	Legend	Title A						
5	Pictorial bar text	75%						
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

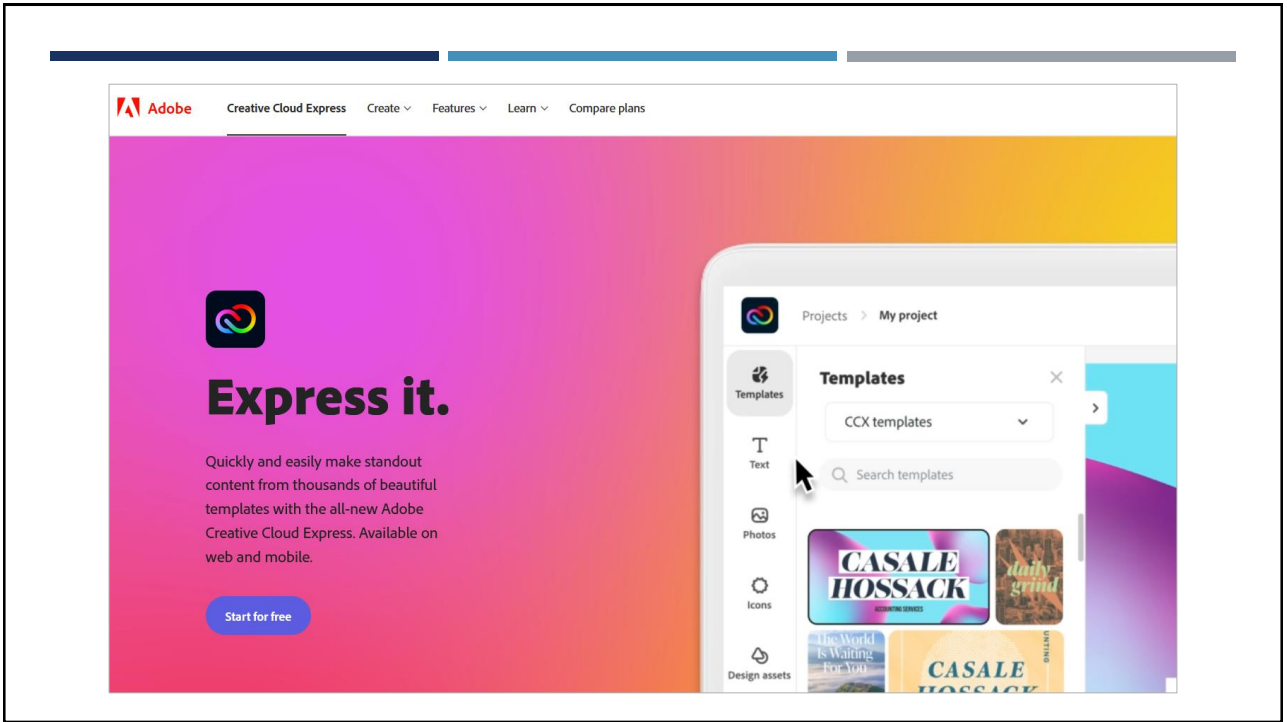
101

PEBBLE POND PUBLIC LIBRARY

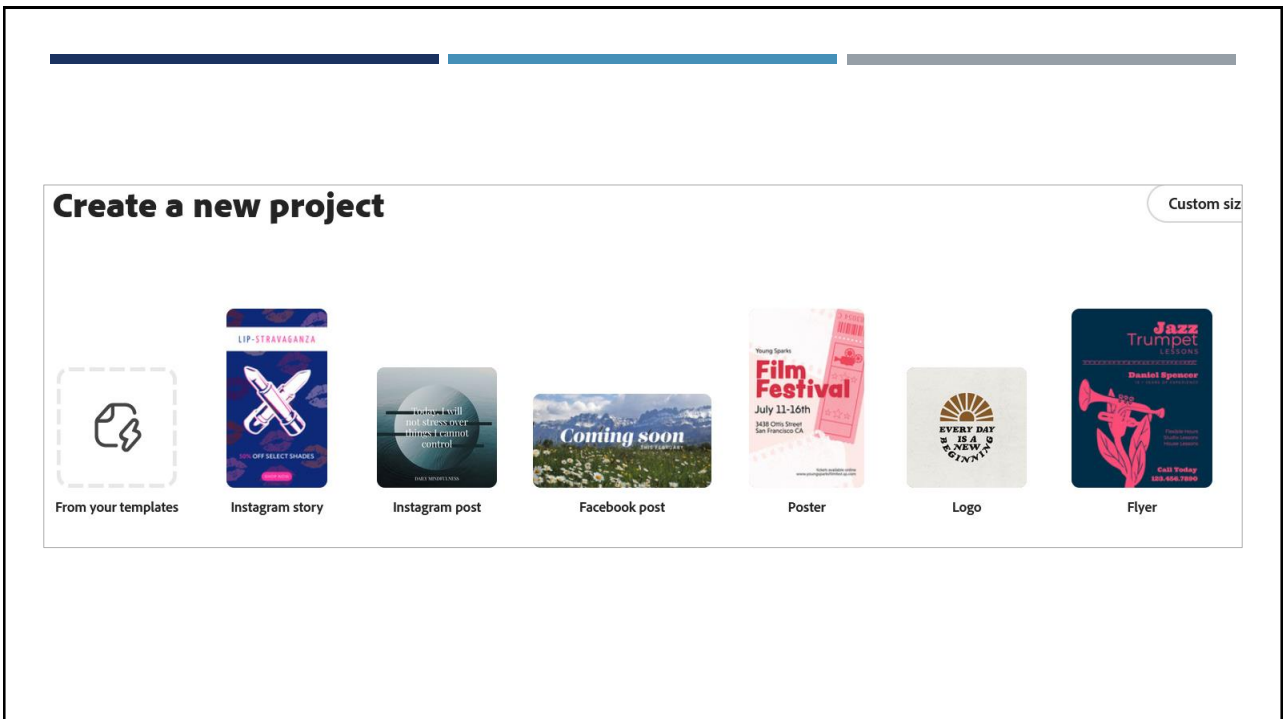
90%
of technology program participants learned new computer skills.

4 in 5 technology program participants felt more confident using a computer.

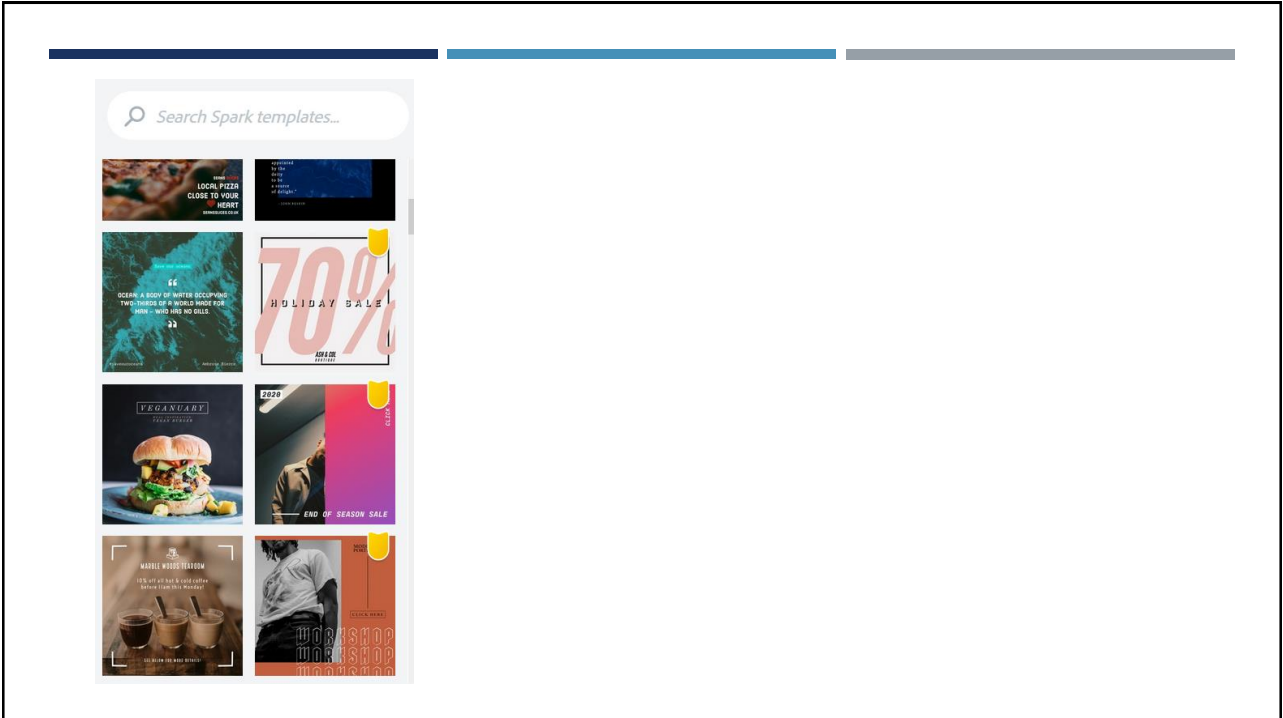
102



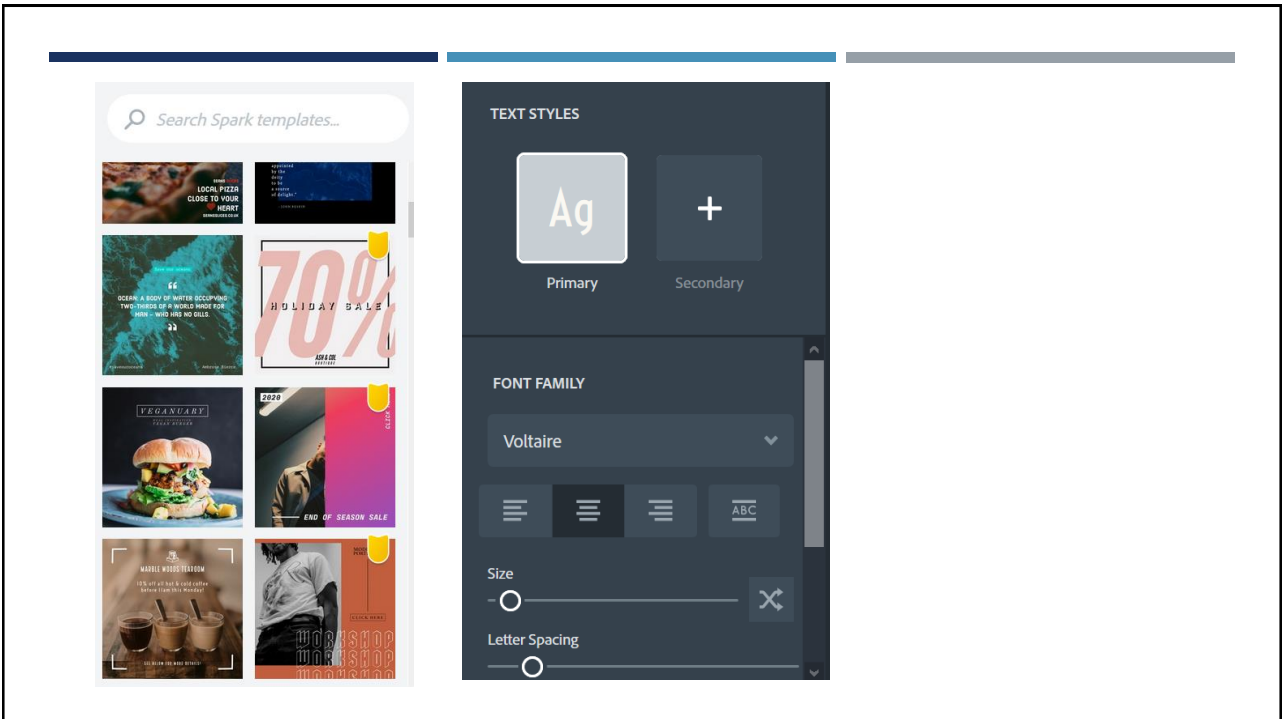
103



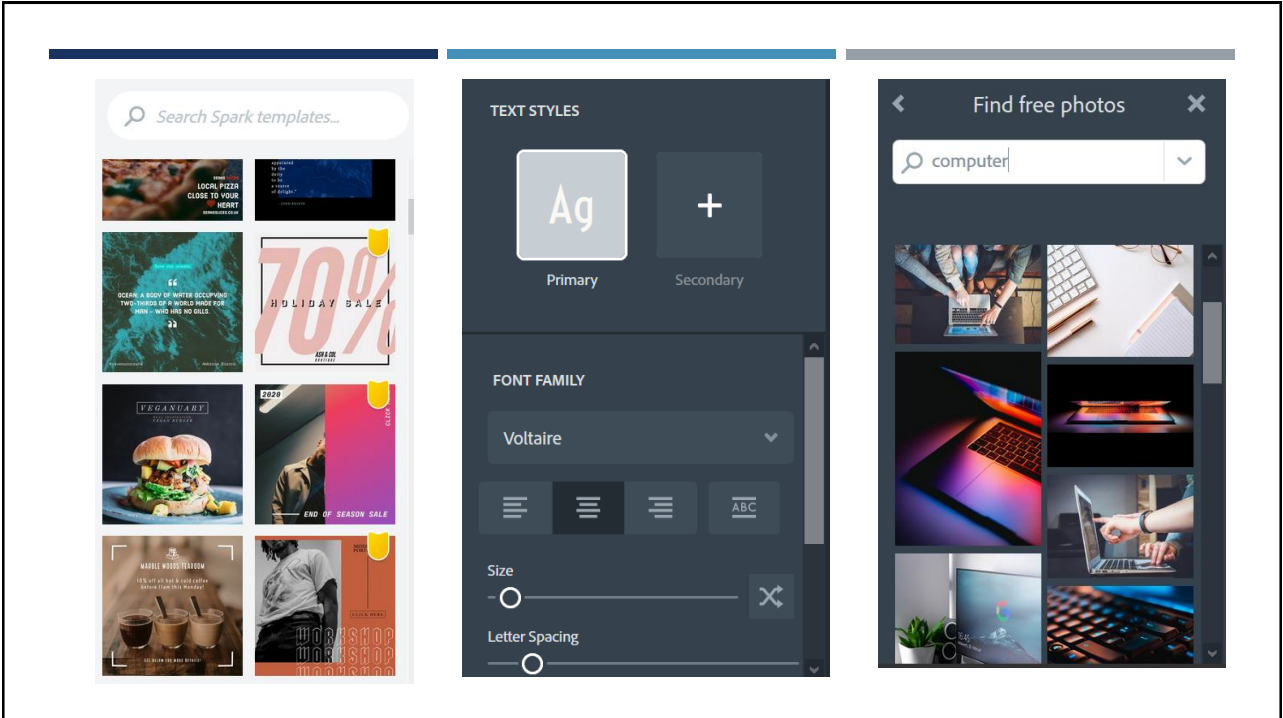
104



105



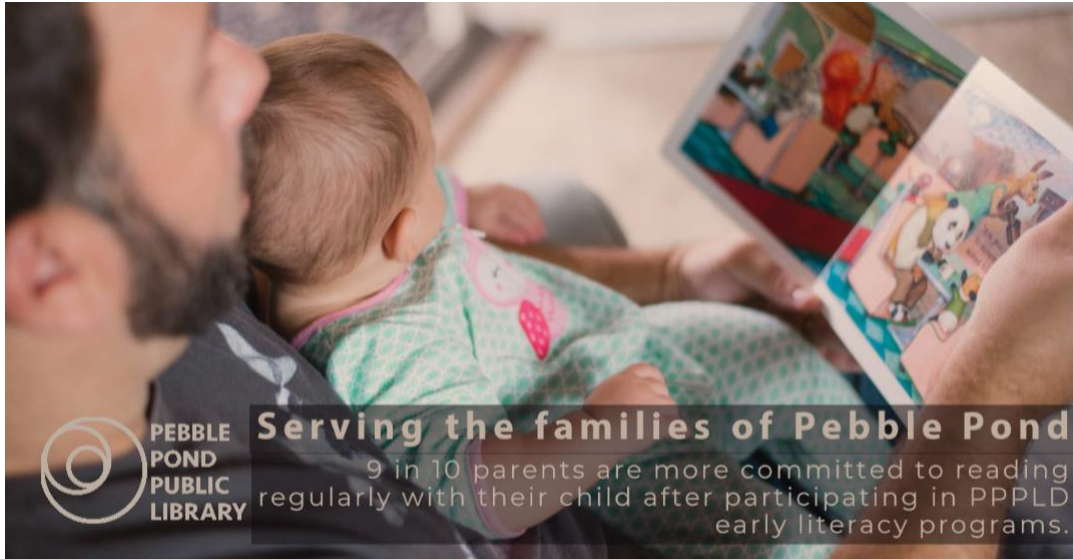
106



107



108



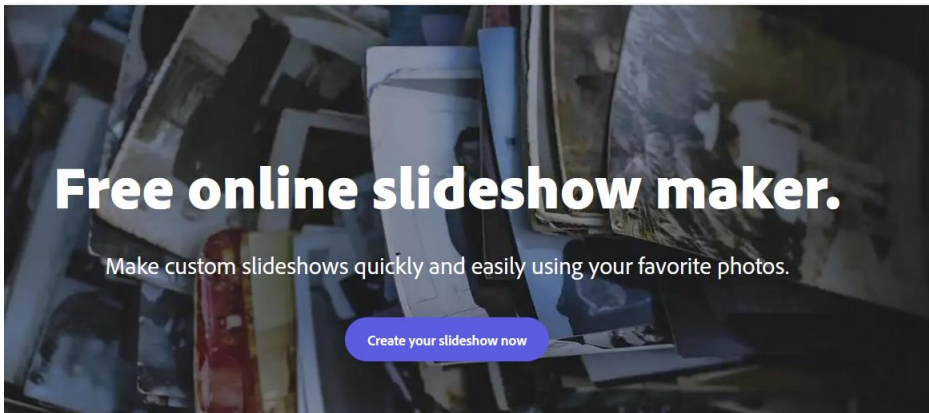
PEBBLE POND PUBLIC LIBRARY

Serving the families of Pebble Pond

9 in 10 parents are more committed to reading regularly with their child after participating in PPPLD early literacy programs.

109

 Adobe Creative Cloud Express

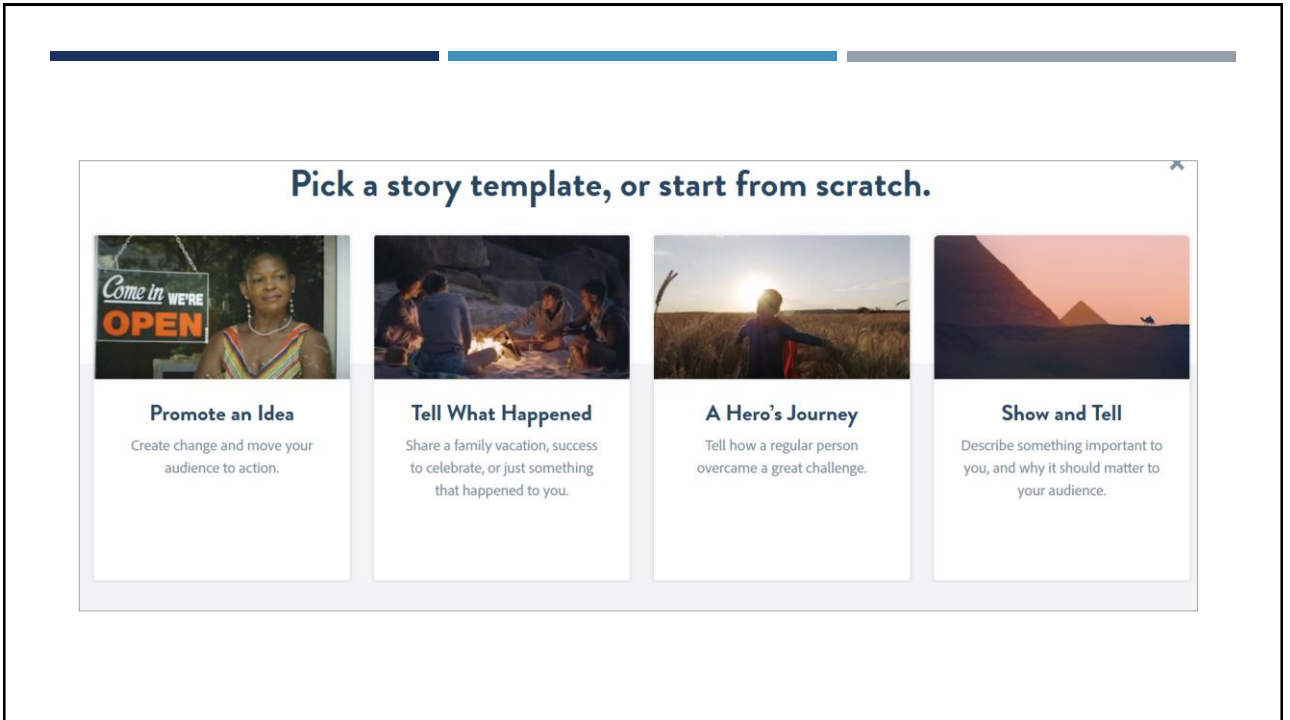


Free online slideshow maker.

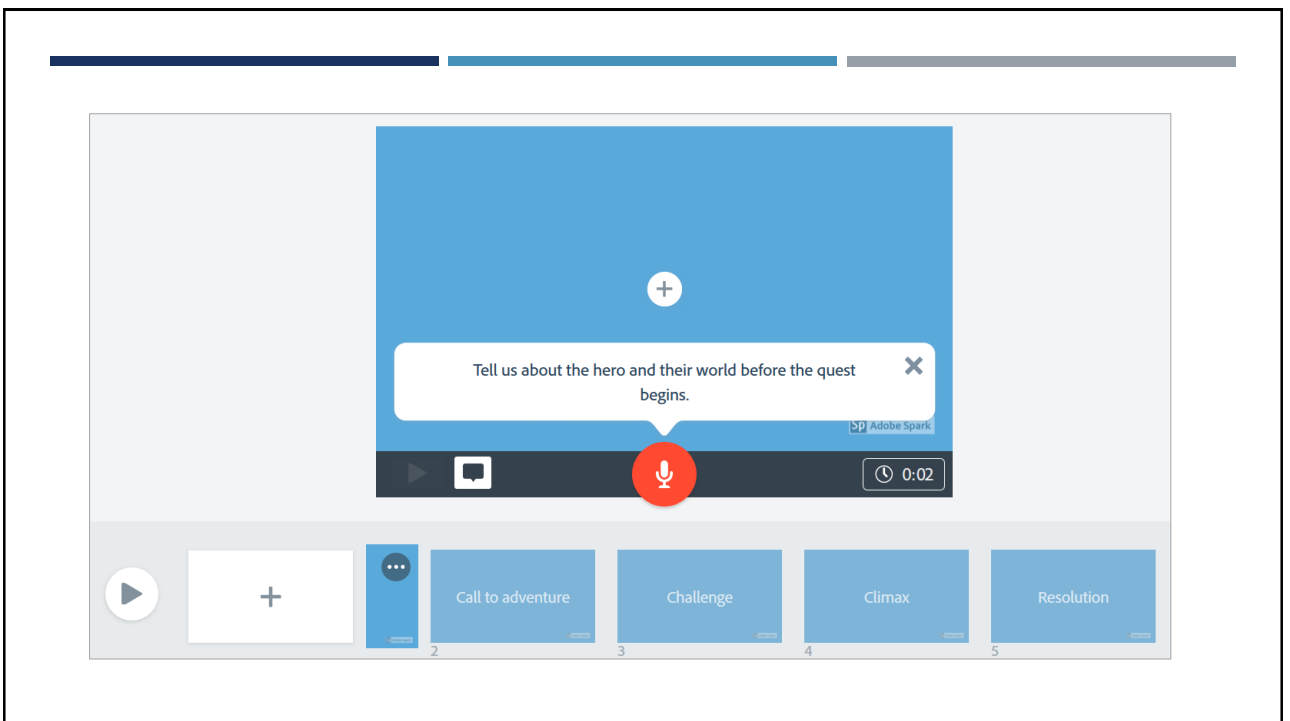
Make custom slideshows quickly and easily using your favorite photos.

[Create your slideshow now](#)

110

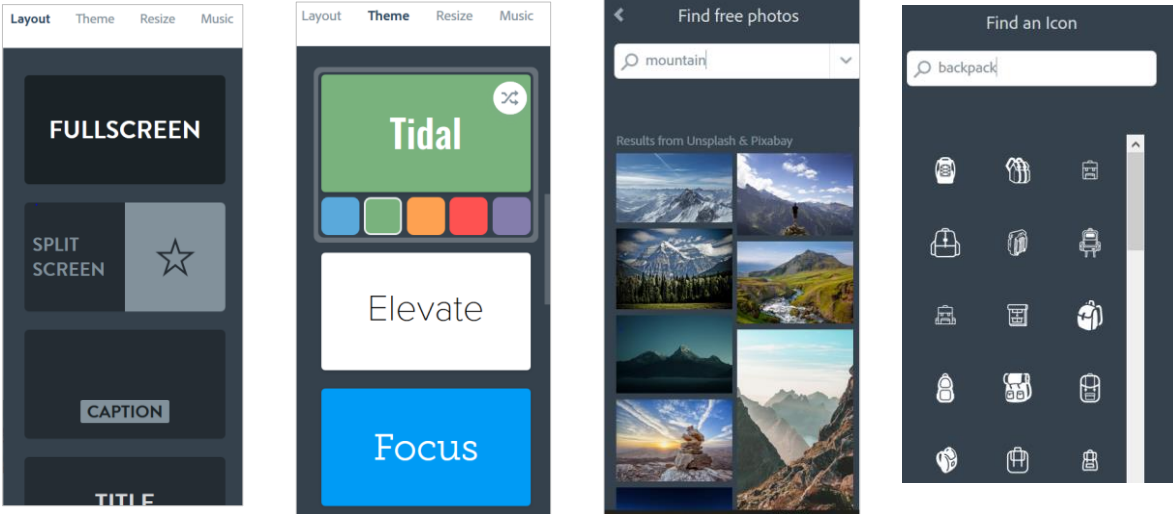


111



112

ADOBE CREATIVE CLOUD EXPRESS



113

ADOBE CREATIVE CLOUD EXPRESS



114

ADOBE CREATIVE CLOUD EXPRESS

 **CO State Library** @COStateLibrary
 Mar 7

From @LRS_CO: Study finds a \$23 billion funding gap between white and nonwhite school districts ow.ly/QGth30nW8EL @EdBuild #LRSNumber

The LRS Number

March 6, 2019

115

Example 1: Page from an annual report

Library Usage

Library visits: 23,400
 Checkouts: 21,326
 Emedia checkouts: 4,039
 ILL Loans: 3,937
 ILL Borrowed: 6,214
 Items added to the collection: 2,201
 WiFi Logins: 2,224
 Website visits: 32,374

Consistently professional, informed and courteous staff. The building is an original Carnegie Bldg. Please patronize and support this library.

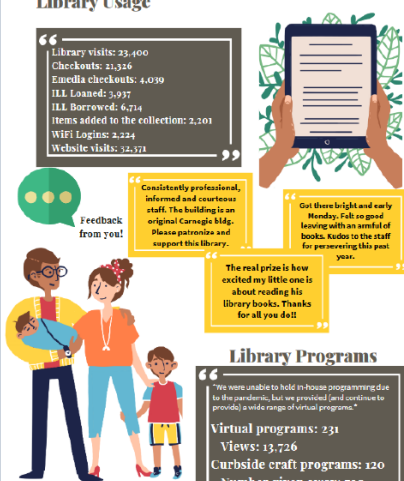
Got there bright and early Monday. Felt so good leaving with a handful of books. Kudos to the staff for generating this post year.

The real prize is how excited my little one is about reading his library books. Thanks for all you do!!

Library Programs

"We were unable to hold in-house programming due to the pandemic, but we provided and continue to provide a wide range of virtual programs."

Virtual programs: 231
 Views: 13,726
 Curbside craft programs: 120
 Number given away: 720

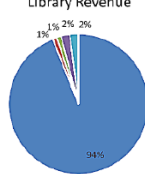


Example 2: Page from an annual report

Library Financials FY 2020-2021

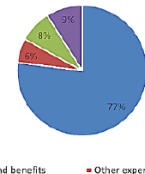
20-21 FY Budget: \$434,352

Library Revenue



Category	Percentage
School District	94%
Library Charges	1%
County Aid	2%
Grants	2%
Other	1%

Library Expenditures



Category	Percentage
Wages and benefits	77%
Library Materials	8%
Operation and Maintenance	13%
Other expenditures	2%

116

Example 3: Infographic



Example 4: Social media post



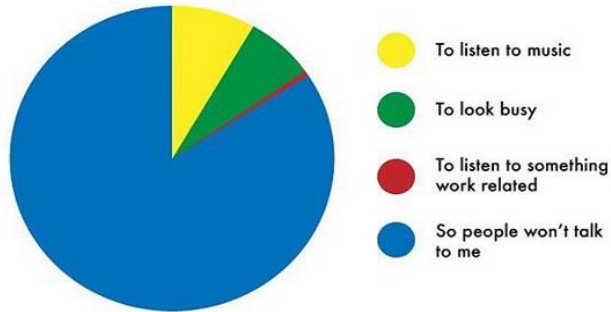
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IT'S EASIER TO BE A CRITIC THAN IT IS TO BE A CREATOR.

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QUESTIONS?

WHY I WEAR HEADPHONES AT WORK



Civilized.