Identification

Plan

Data Collection

Data Analysis

Data Use

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

1. 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

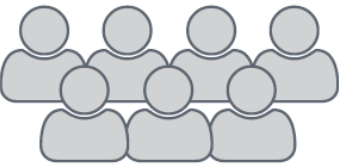That's **3 out of 5** Coloradans

9

LIBRARIES WORKING FOR COMMUNITY

6 times

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

LIBRARIES WORKING FOR COMMUNITY
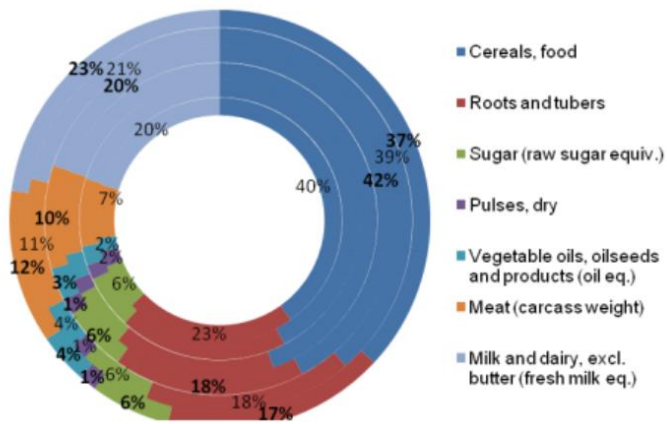
38M public and school library visits annually

7 times more than the total annual attendance of every professional sporting event in Colorado combined
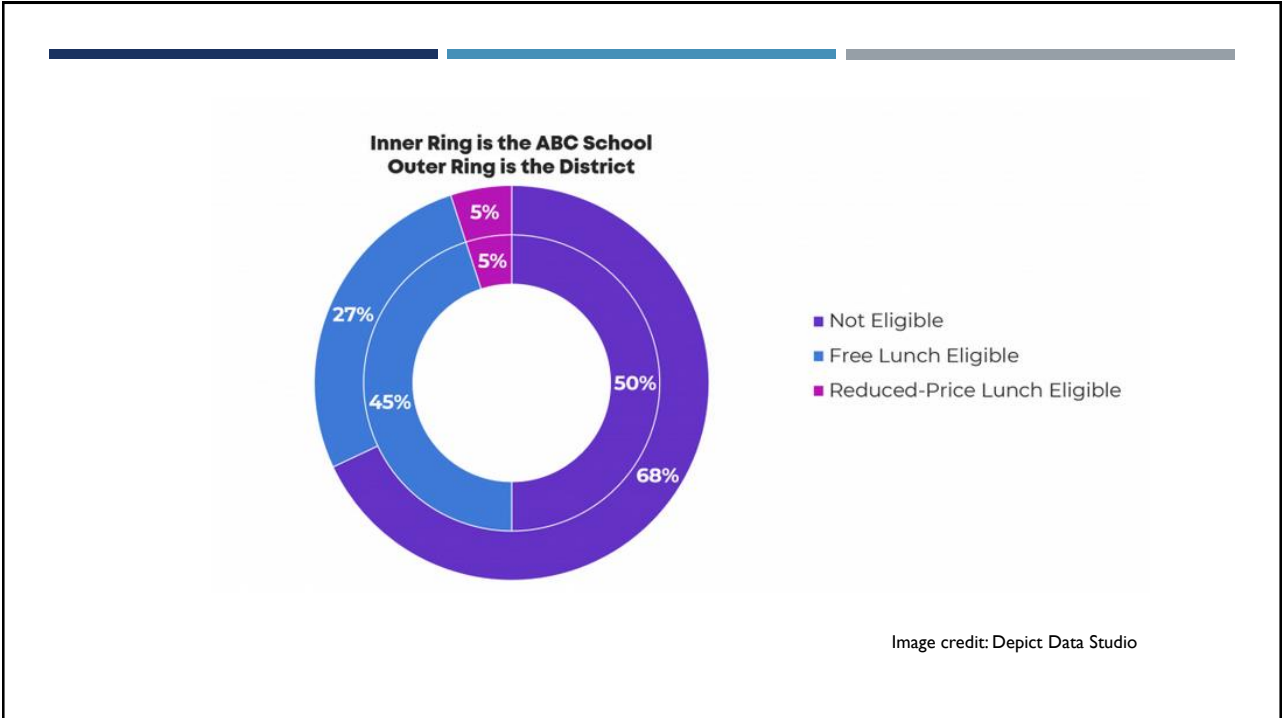
10

2. FOCUS ON YOUR MAIN POINT

11

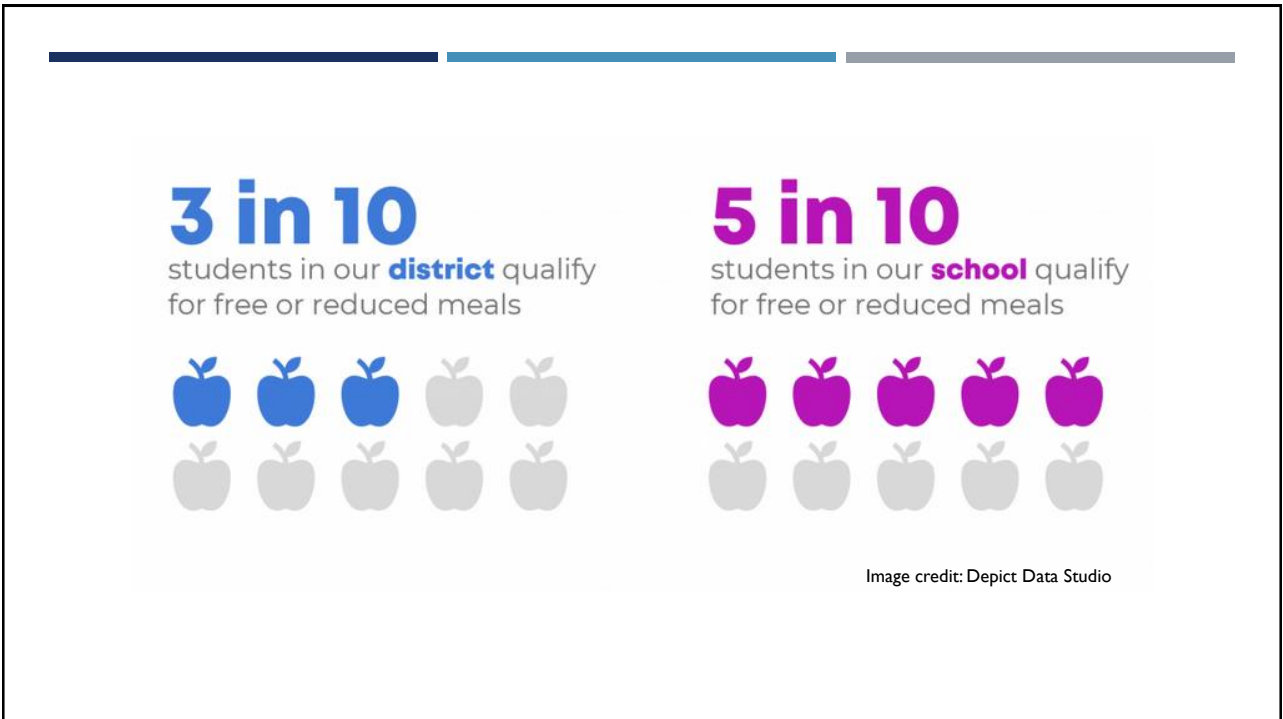World Dietary shares: (from inside to outside) 1970, 1980, 1990, 2000, 2030, 2050

- Cereals, food
- Roots and tubers
- Sugar (raw sugar equiv.)
- Pulses, dry
- Vegetable oils, oilseeds and products (oil eq.)
- Meat (carcass weight)
- Milk and dairy, excl. butter (fresh milk eq.)

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

Image credit: Full Fact

12

**Inner Ring is the ABC School
Outer Ring is the District**

- Not Eligible
- Free Lunch Eligible
- Reduced-Price Lunch Eligible

Image credit: Depict Data Studio

13

3 in 10
students in our **district** qualify
for free or reduced meals

5 in 10
students in our **school** qualify
for free or reduced meals

Image credit: Depict Data Studio

14

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

16

4. APPLY GRAPHIC DESIGN BEST PRACTICES

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

19

20

Image credit: Denver Zoo

21

22

4.APPLY GRAPHIC DESIGN BEST PRACTICES - FONTS

HEADLINE
Museo Slab 500 (Regular or CAPS)

SUBHEAD
Trebuchet Bold

BODY
Calibri

CAPTIONS, CHARTS ETC.
Calibri

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**.

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

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

23

24

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.

25

Image credit: Free Library of Philadelphia

26

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.

Image credit: Free Library of Philadelphia

27

4. APPLY GRAPHIC DESIGN BEST PRACTICES - WHITE SPACE

28
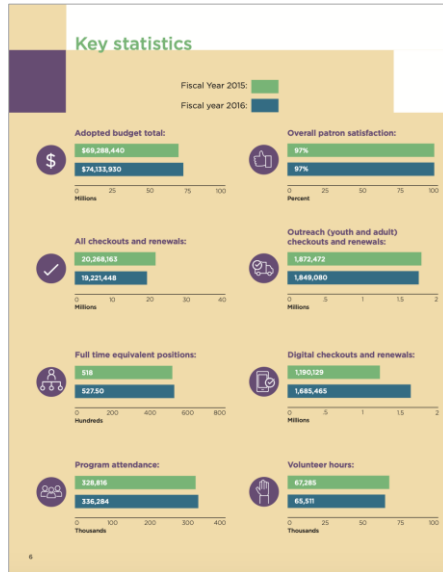
Image credit: Multnomah County Library

29

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

32

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

33

6. SHOW, DON'T TELL

34

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.

Eiffel Tower
324m

Image credit: Reuters Graphics

35
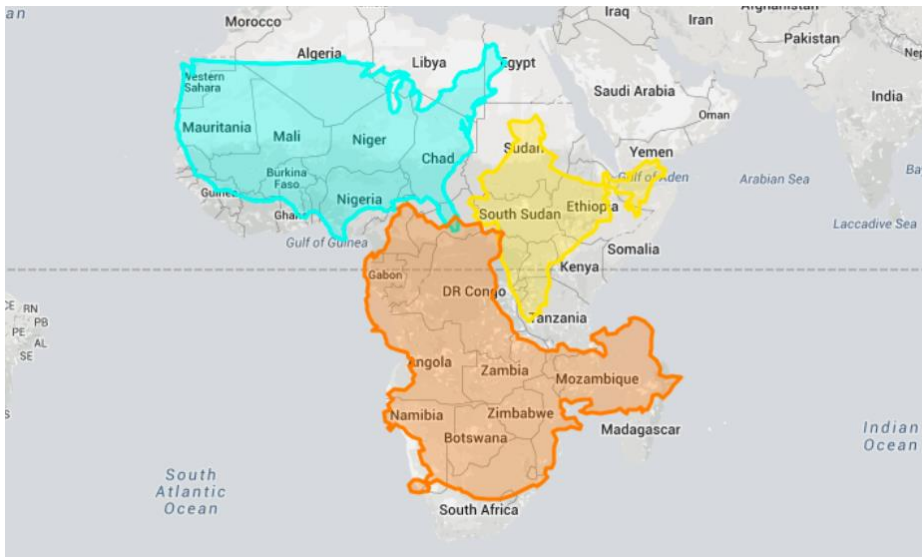
Image credit: My Modern Met

36

DATA VISUALIZATION FORMATS

Operational Report (Board or Annual Reports, Staff Updates)	Presentation	Social Media Post

37

DATA VISUALIZATION FORMATS

Operational Report (Board or Annual Reports, Staff Updates)	Presentation	Social Media Post

38

DATA VISUALIZATION FORMATS

Operational Report (Board or Annual Reports, Staff Updates)

Tool = Excel or Google Sheets

Presentation

Social Media Post

39

Pebble Pond Public Library   **December 2021**

December at a glance:

1.32 Visits Per Capita

1.72 Physical Circs Per Capita

302 Programs
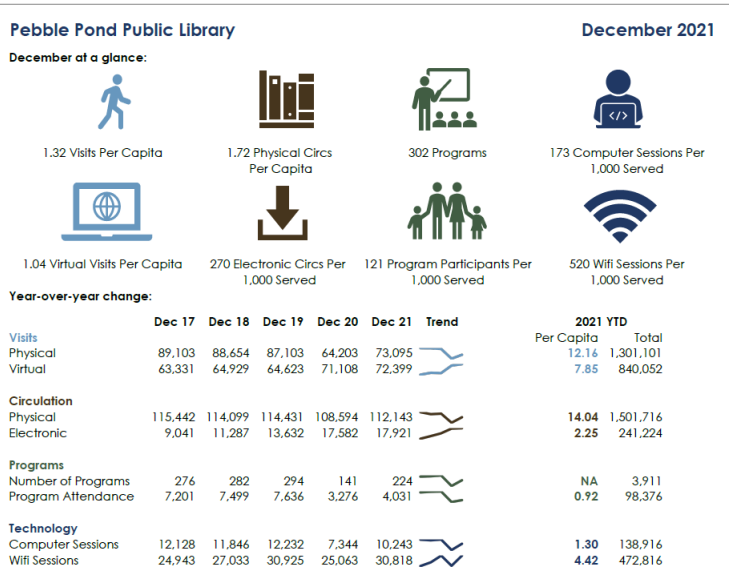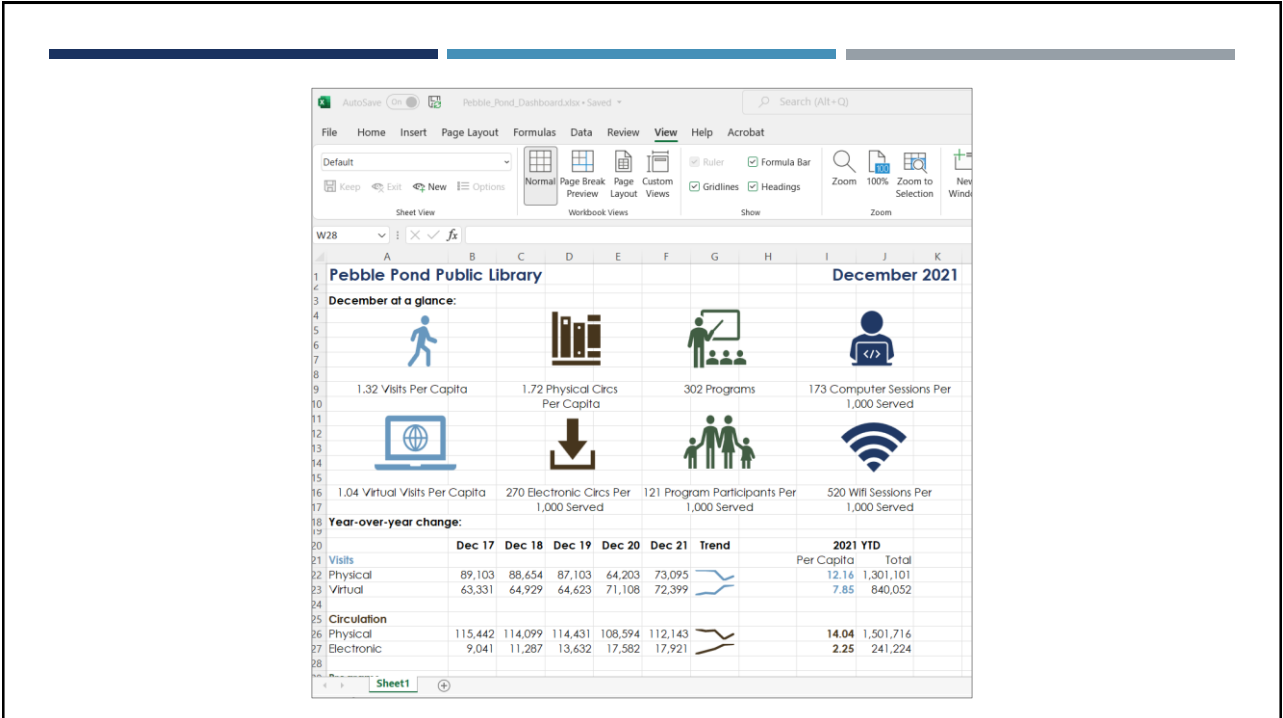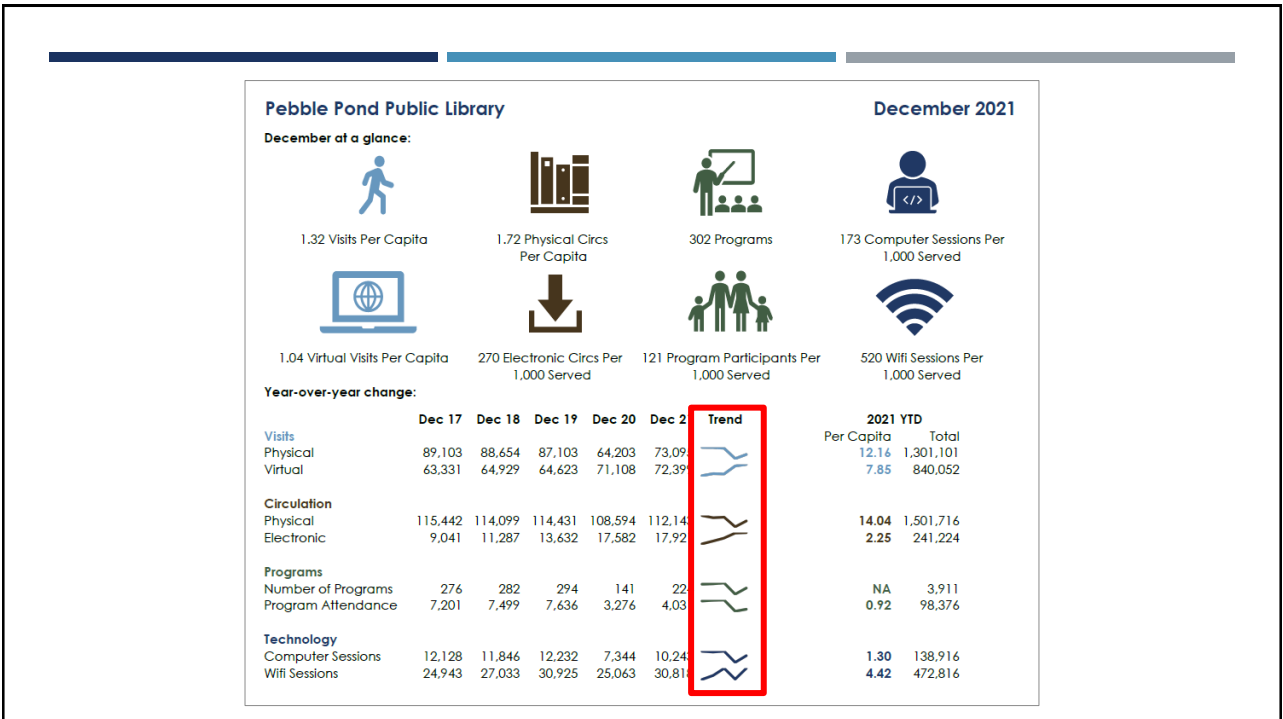
173 Computer Sessions Per 1,000 Served

1.04 Virtual Visits Per Capita

270 Electronic Circs Per 1,000 Served

121 Program Participants Per 1,000 Served

520 Wifi Sessions Per 1,000 Served

Year-over-year change:

	Dec 17	Dec 18	Dec 19	Dec 20	Dec 21	Trend	Per Capita	Total
							2021 YTD	
Visits								
Physical	89,103	88,654	87,103	64,203	73,095		12.16	1,301,101
Virtual	63,331	64,929	64,623	71,108	72,399		7.85	840,052
Circulation								
Physical	115,442	114,099	114,431	108,594	112,143		14.04	1,501,716
Electronic	9,041	11,287	13,632	17,582	17,921		2.25	241,224
Programs								
Number of Programs	276	282	294	141	224		NA	3,911
Program Attendance	7,201	7,499	7,636	3,276	4,031		0.92	98,376
Technology								
Computer Sessions	12,128	11,846	12,232	7,344	10,243		1.30	138,916
Wifi Sessions	24,943	27,033	30,925	25,063	30,818		4.42	472,816

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	
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43

SPARKLINES – EXCEL OR GOOGLE SHEETS
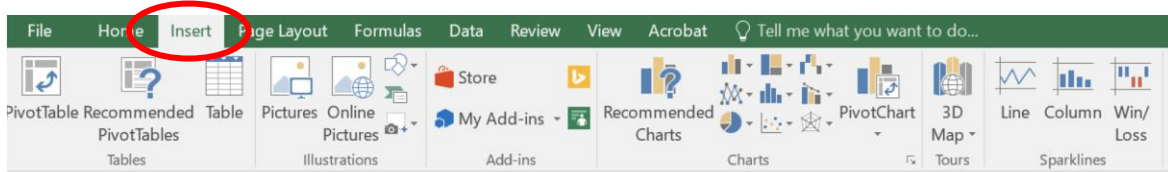
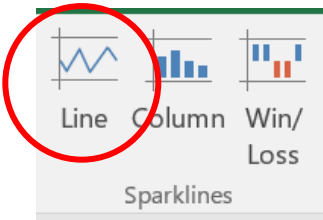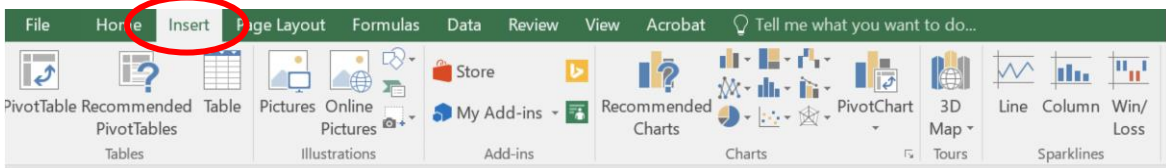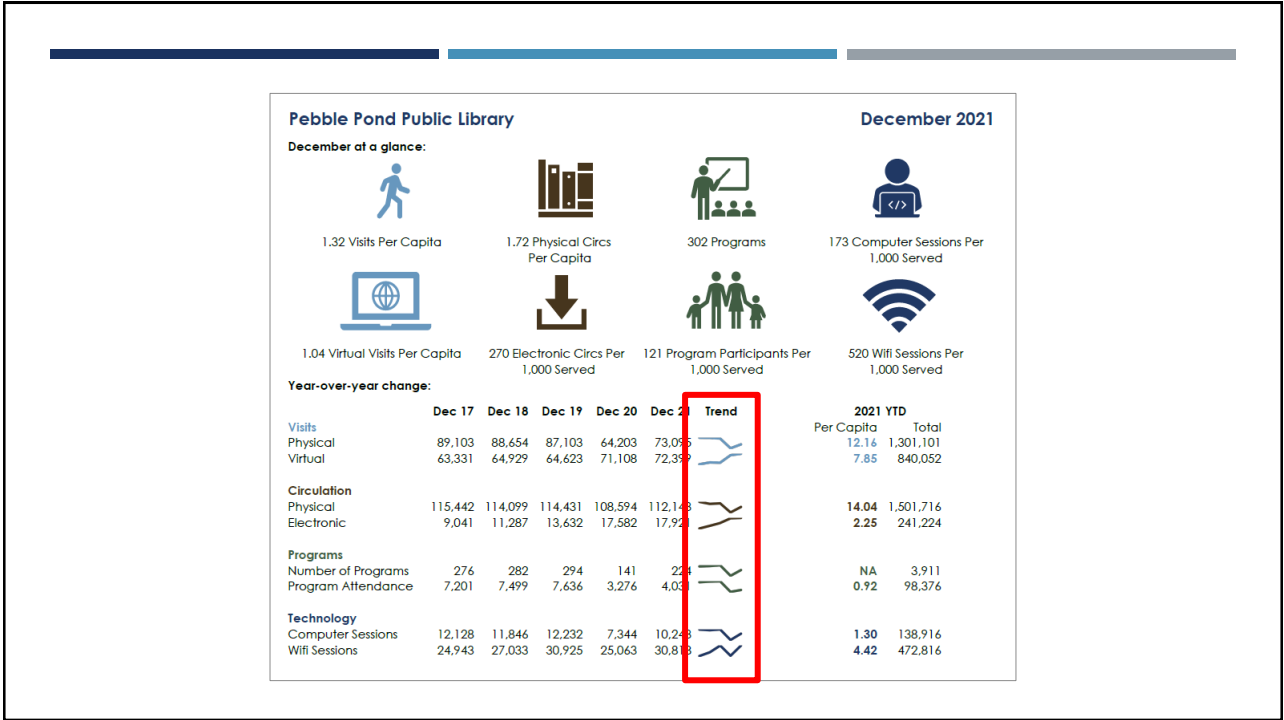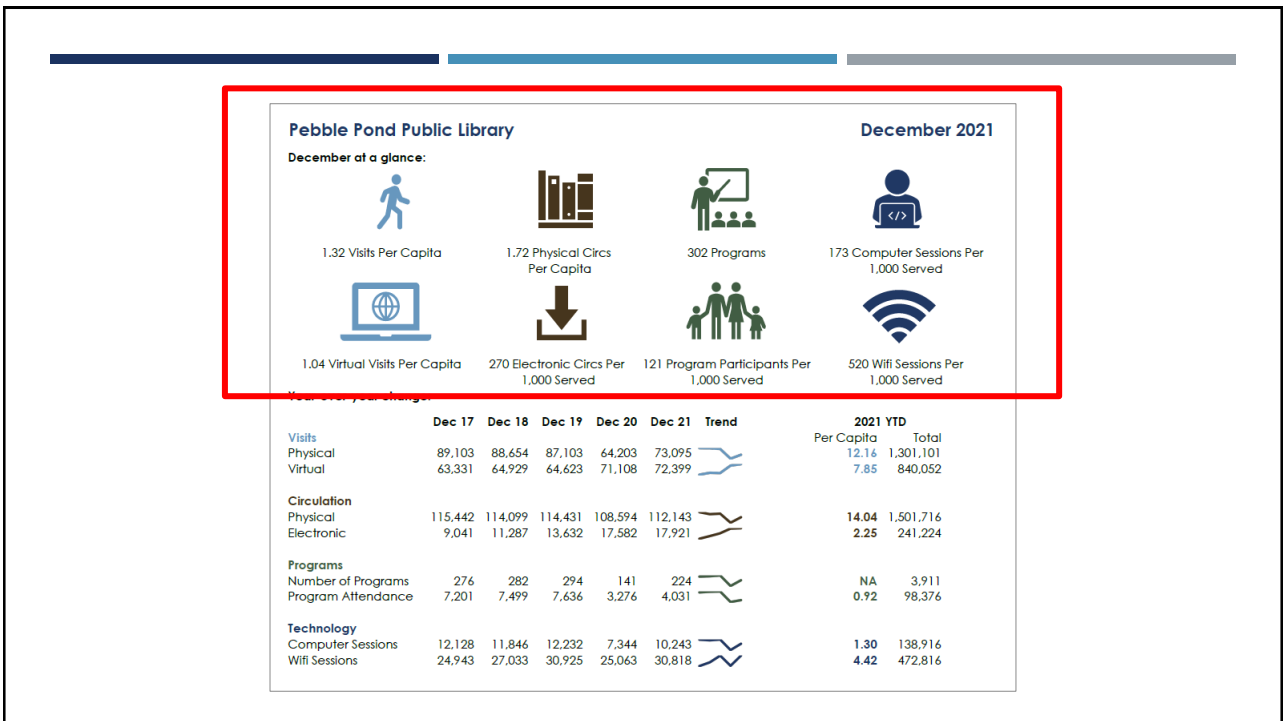
44

SPARKLINES – EXCEL OR GOOGLE SHEETS
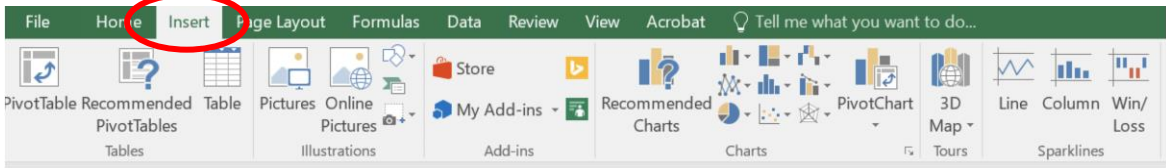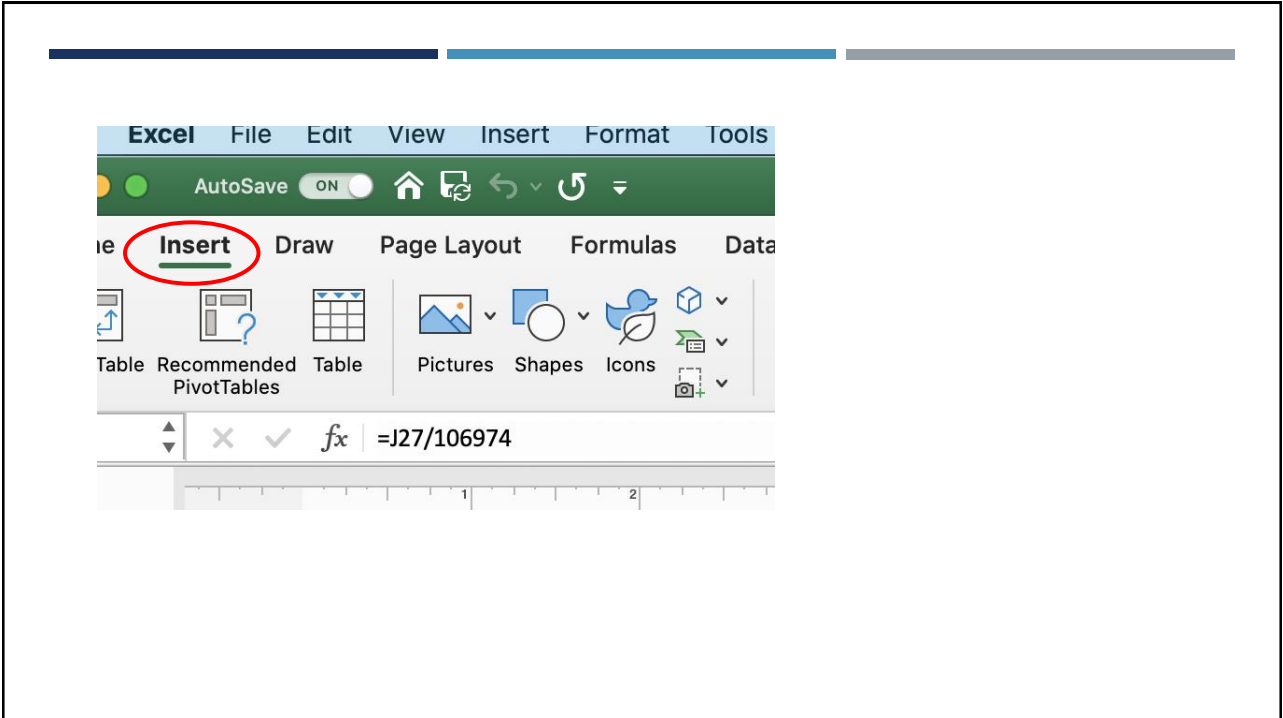
45

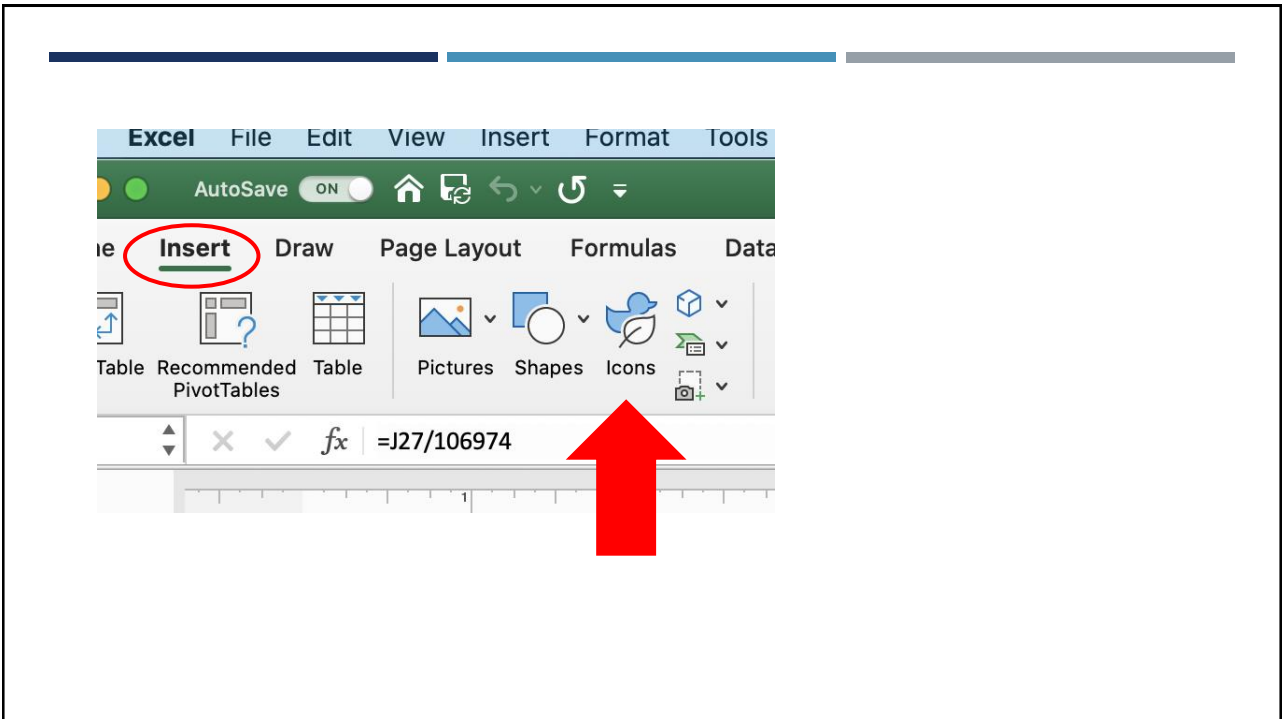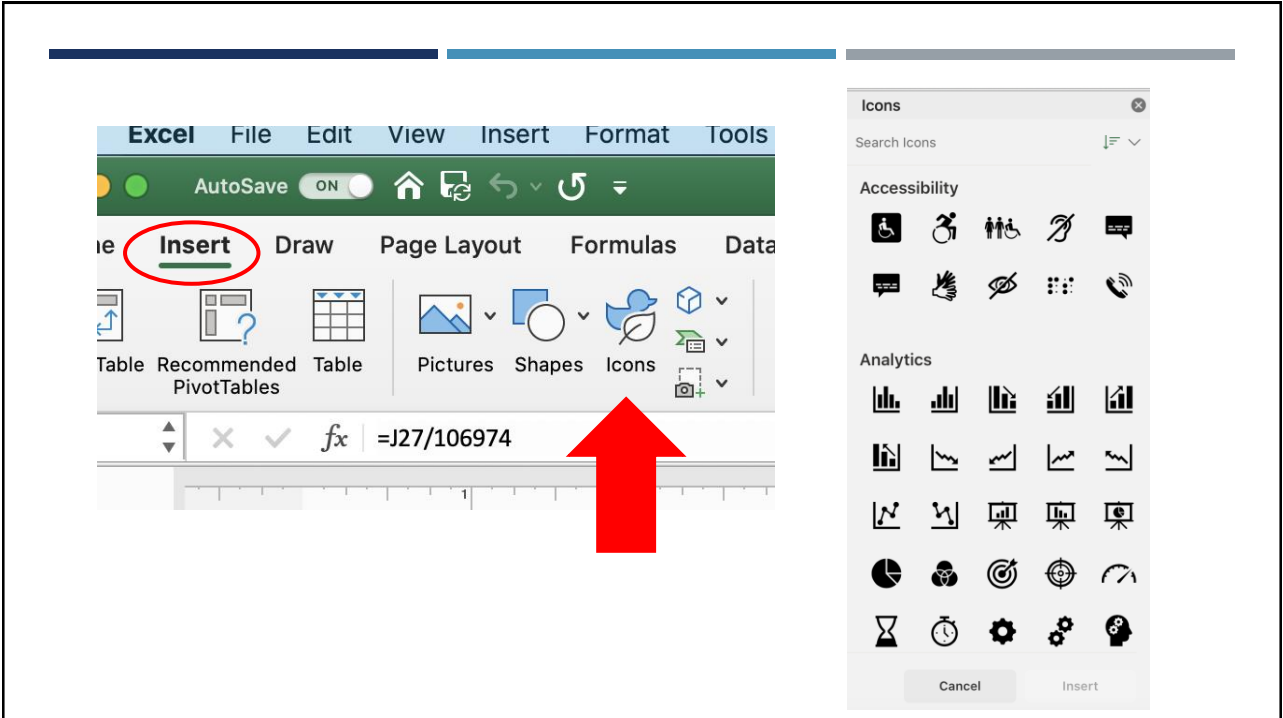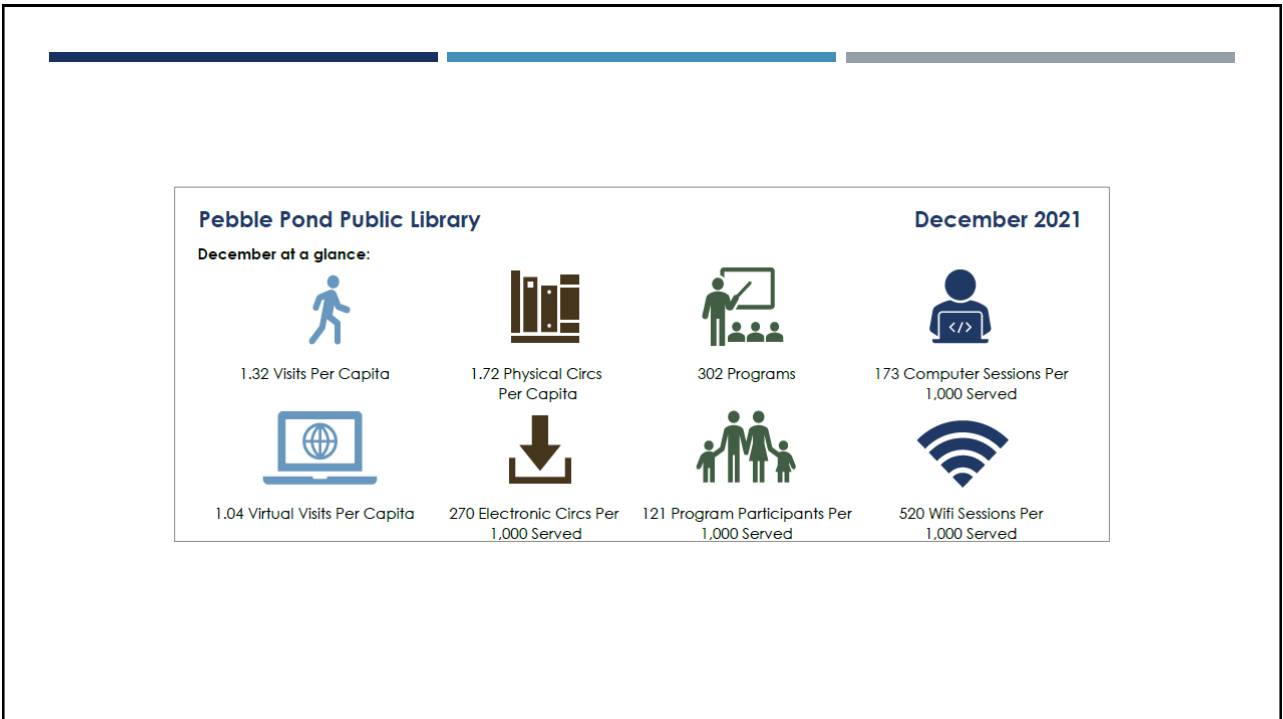SPARKLINES – EXCEL OR GOOGLE SHEETS
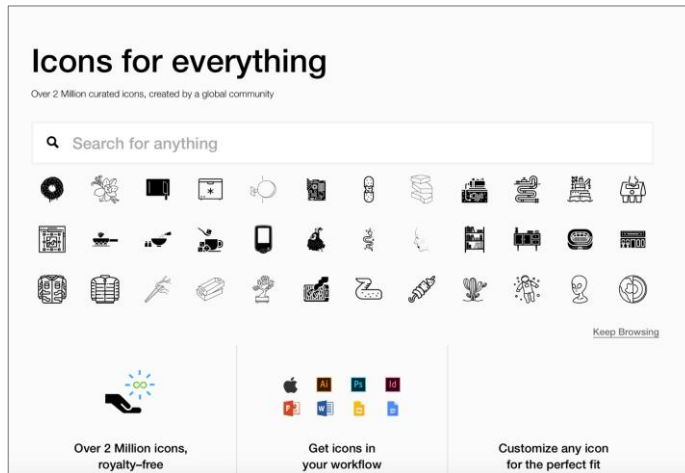
46

47

48

49

50

51

52

ICONS FOR GOOGLE SHEETS – NOUN PROJECT

53

DATA VISUALIZATION FORMATS

| Operational Report (Board or Annual Reports, Staff Updates) | Presentation | Social Media Post |

54

DATA VISUALIZATION FORMATS

Operational Report (Board or Annual Reports, Staff Updates)	Presentation Tools = Excel, Google Sheets, Canva	Social Media Post

55

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

56

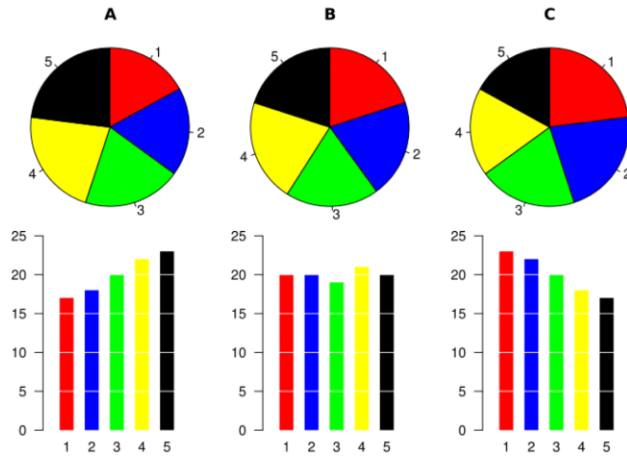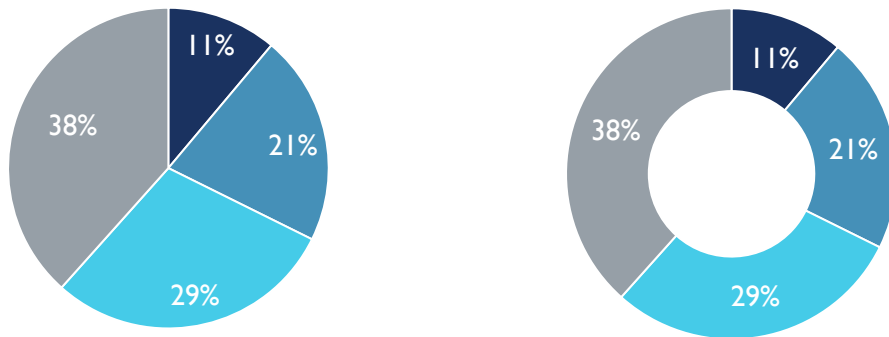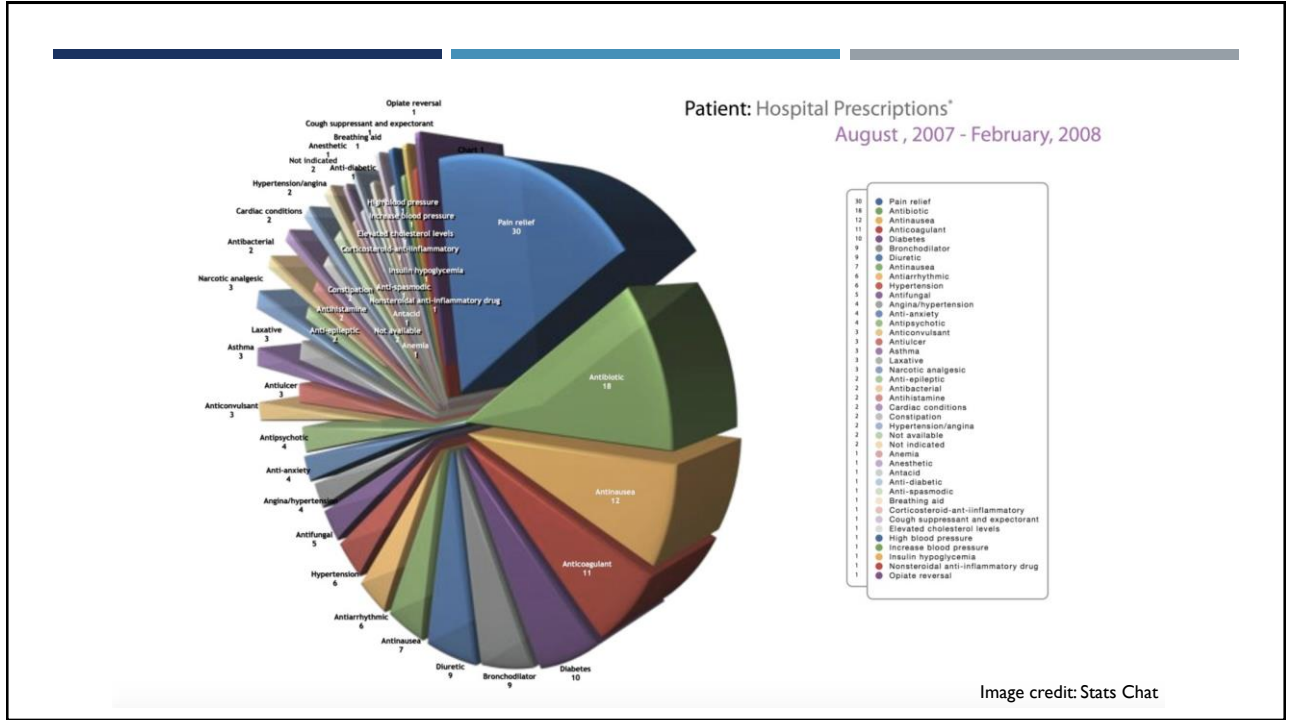# 1. CHOOSE THE APPROPRIATE CHART

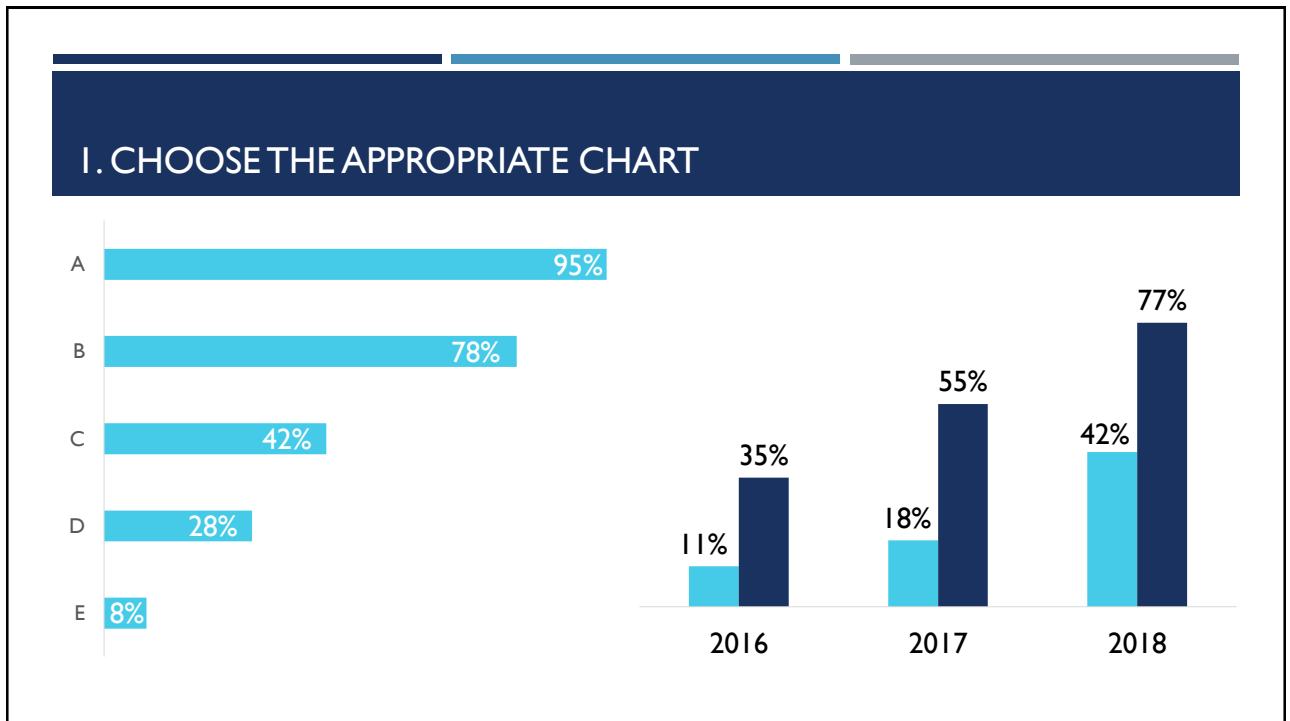Image credit: Data is Beautiful/Reddit
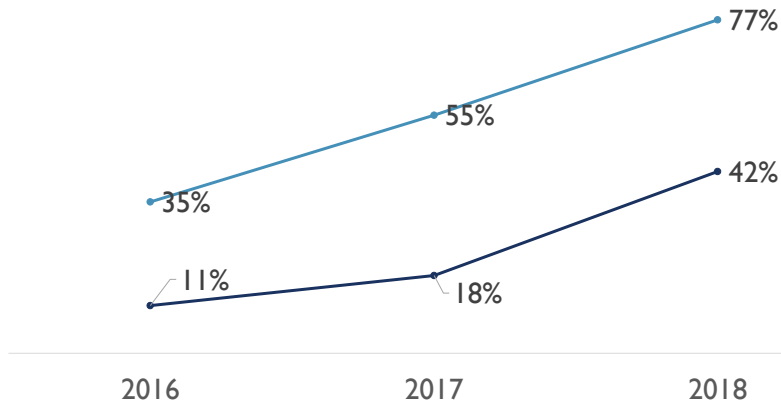
57

1. CHOOSE THE APPROPRIATE CHART

58

Patient: Hospital Prescriptions
August , 2007 - February, 2008

Image credit: Stats Chat

59

1. CHOOSE THE APPROPRIATE CHART

60

1. CHOOSE THE APPROPRIATE CHART

61

DEPICT DATA STUDIO'S CHART CHOOSER TOOL

62

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

63

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

64

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

65

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

66

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

67

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

68

2. REMOVE CLUTTER

Percentage of Respondents Selecting Choices A, B, and C, 2015-2018

- Choice A
- Choice B
- Choice C

69

3. EXCEL DOESN'T ALWAYS KNOW BEST

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

- College graduate
- Some college
- High school or less

70

3. EXCEL DOESN'T ALWAYS KNOW BEST

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

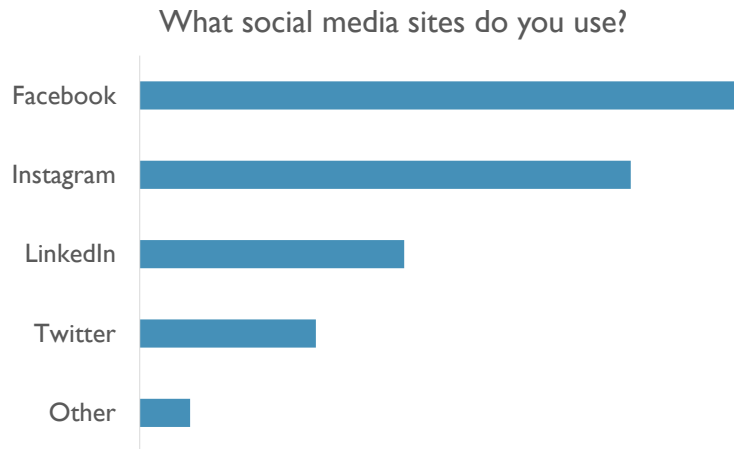| 42%	33%	25%

■ High school or less ■ Some college ■ College graduate

71

3. EXCEL DOESN'T ALWAYS KNOW BEST

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

Color

100%
80%
60%
40%
20%
0%
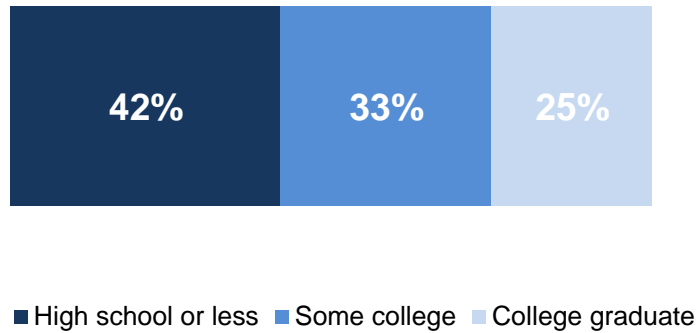
■ College graduate
■ Some college
■ High school or less

72

3. EXCEL DOESN'T ALWAYS KNOW BEST

What social media sites do you use?

73
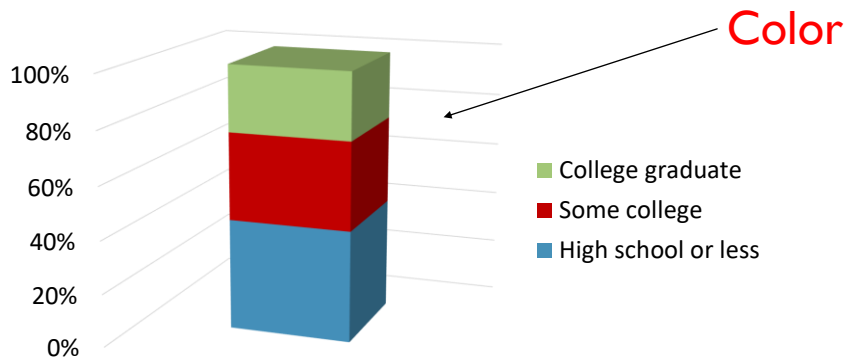
3. EXCEL DOESN'T ALWAYS KNOW BEST

What social media sites do you use?
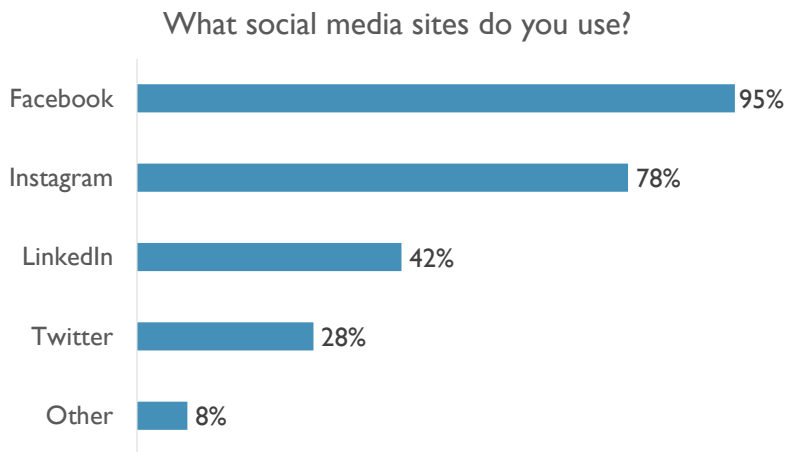
74

4. USE TITLES AND FORMATTING TO MAKE A POINT

What social media sites do you use?
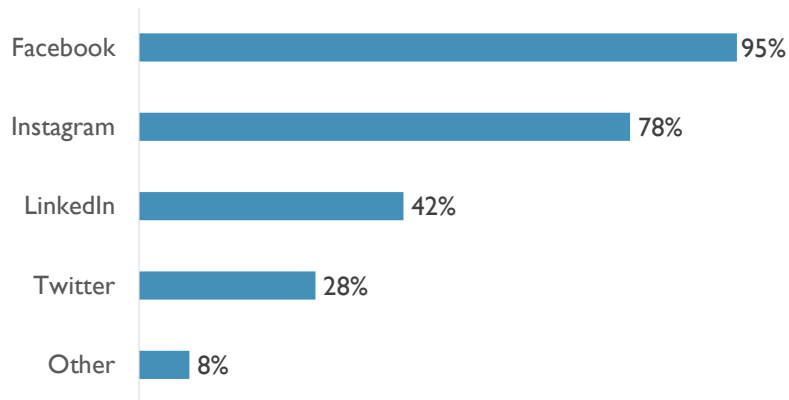
- Facebook — 95%
- Instagram — 78%
- LinkedIn — 42%
- Twitter — 28%
- Other — 8%

75

4. USE TITLES AND FORMATTING TO MAKE A POINT

Most of our library patrons use Facebook.

- Facebook — 95%
- Instagram — 78%
- LinkedIn — 42%
- Twitter — 28%
- Other — 8%

76

4. USE TITLES AND FORMATTING TO MAKE A POINT
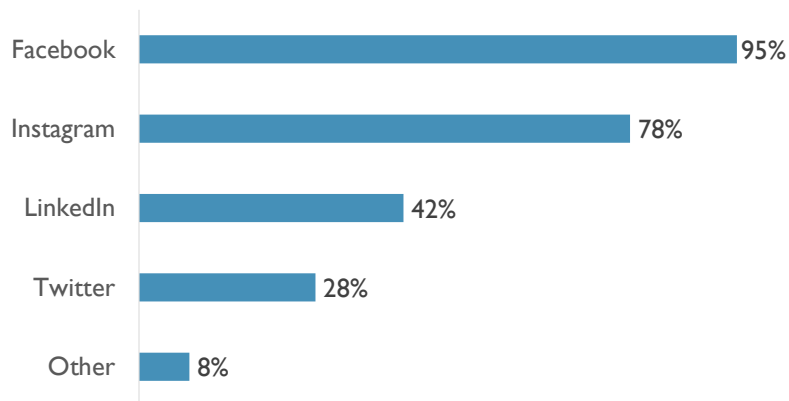
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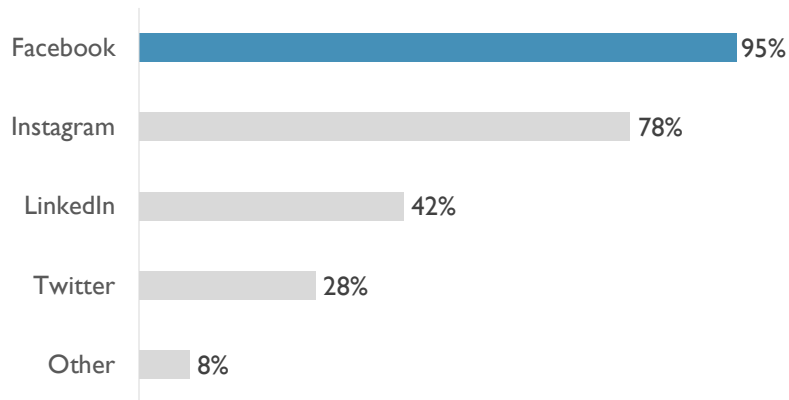
77

4. USE TITLES AND FORMATTING TO MAKE A POINT

Less than 3 in 10 of our patrons use Twitter.
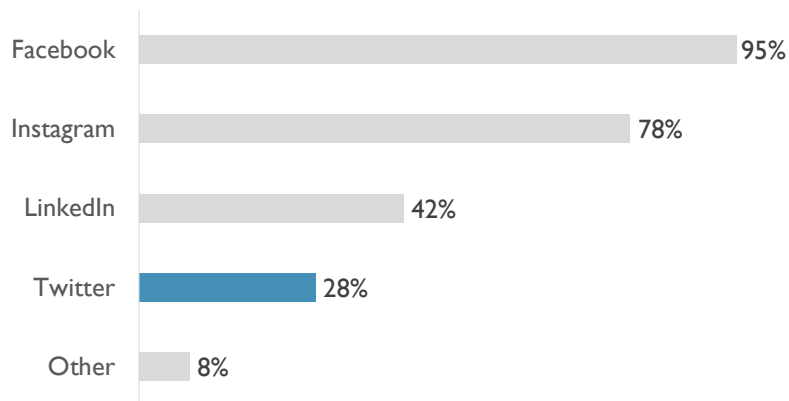
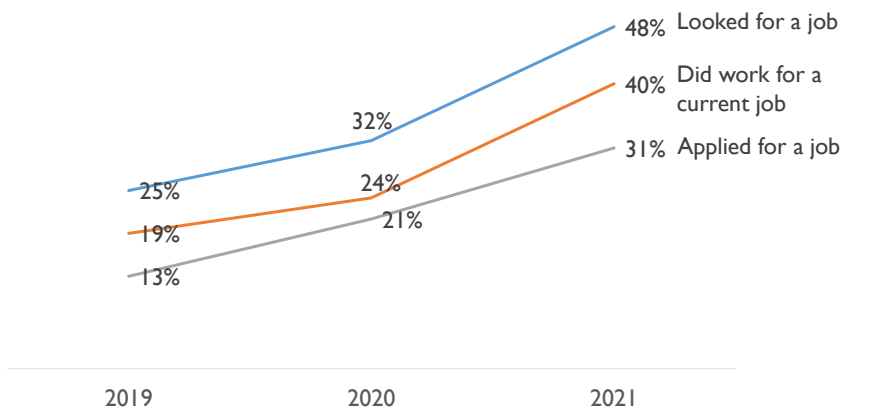|	
Facebook	95%
Instagram	78%
LinkedIn	42%
Twitter	28%
Other	8%

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.
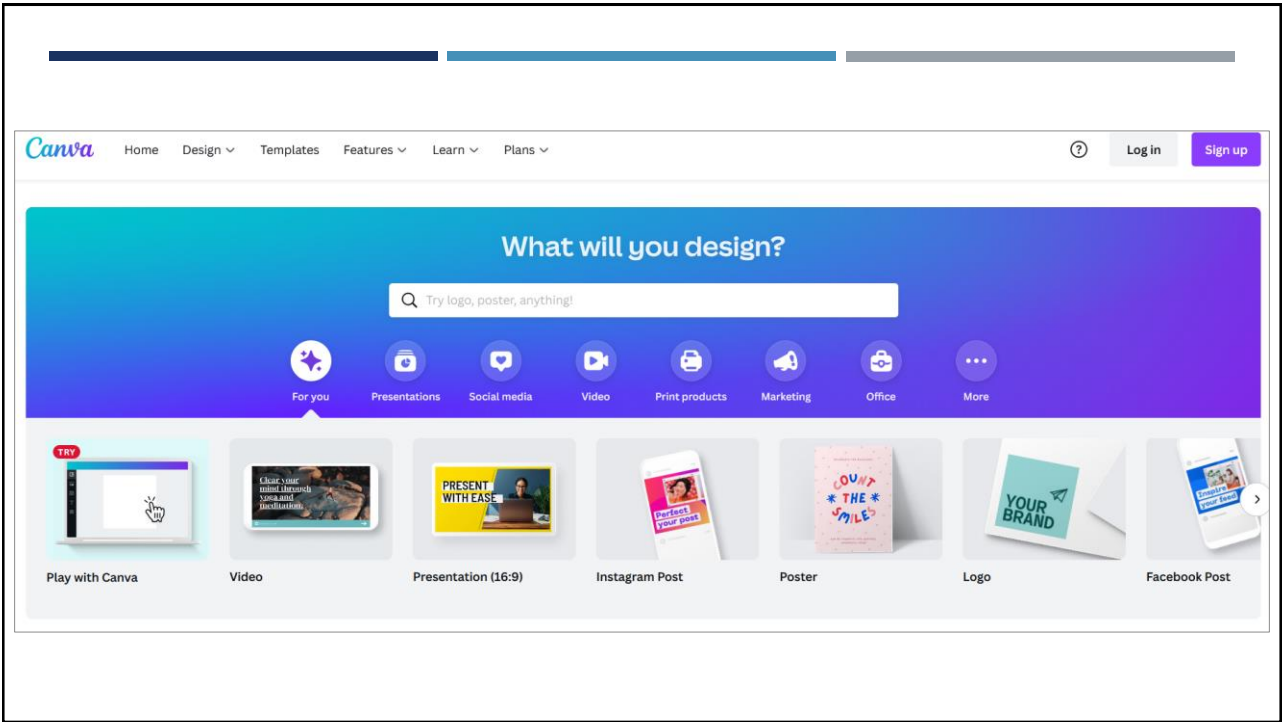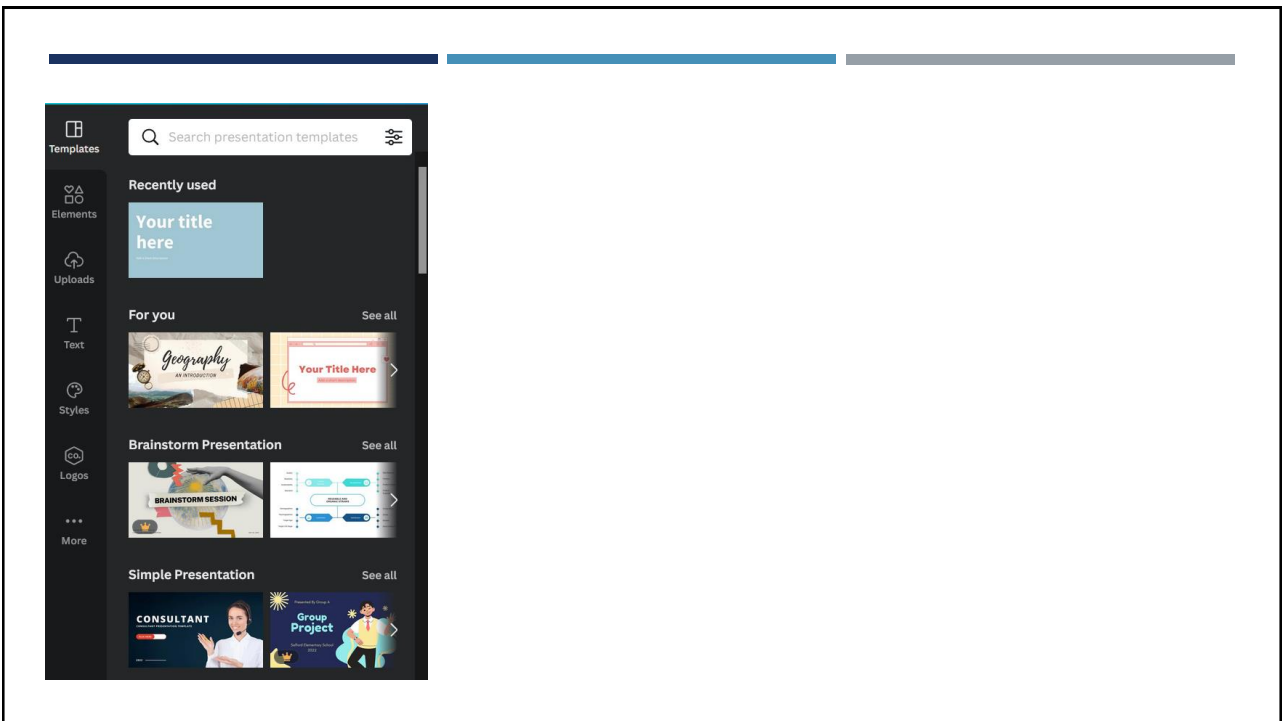
48%
40%
31%
32%
25%
24%
21%
19%
13%

2019   2020   2021

— Looked for a job   — Did work for a current job   — Applied for a job

79

4. USE TITLES AND FORMATTING TO MAKE A POINT

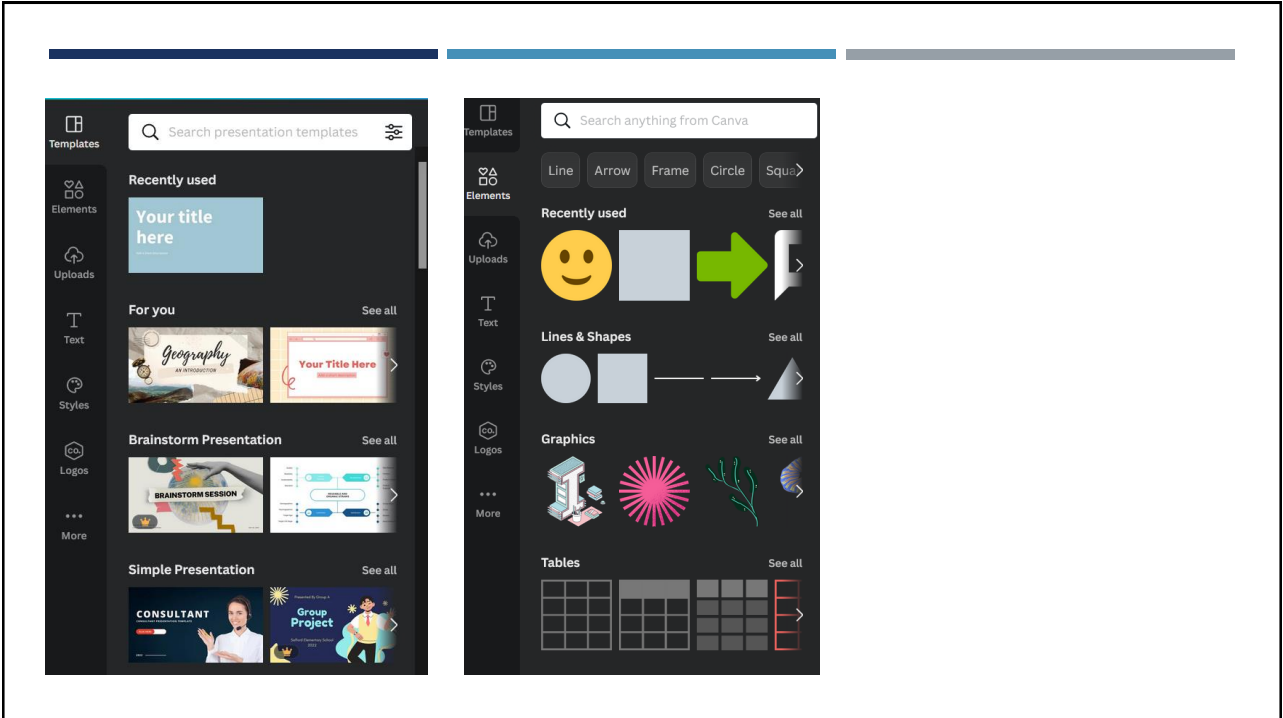The percentages of library computer users accomplishing work-related tasks have increased steadily since 2019.
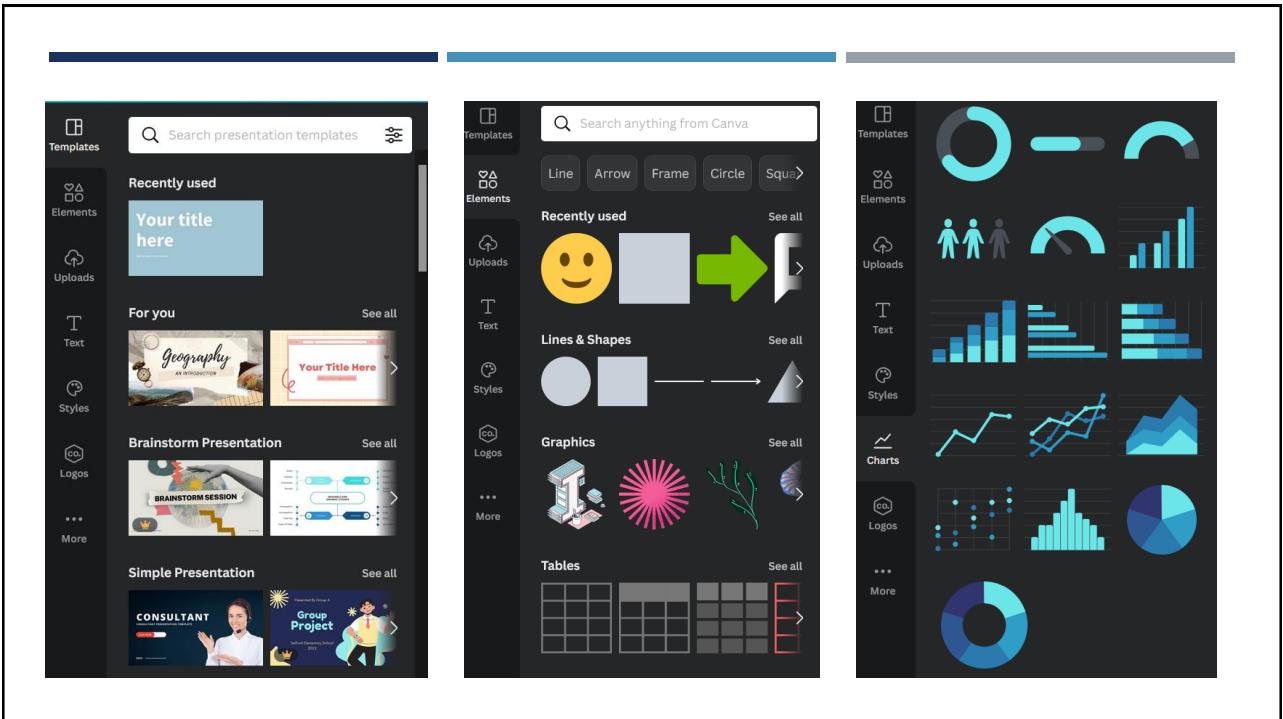
48% Looked for a job
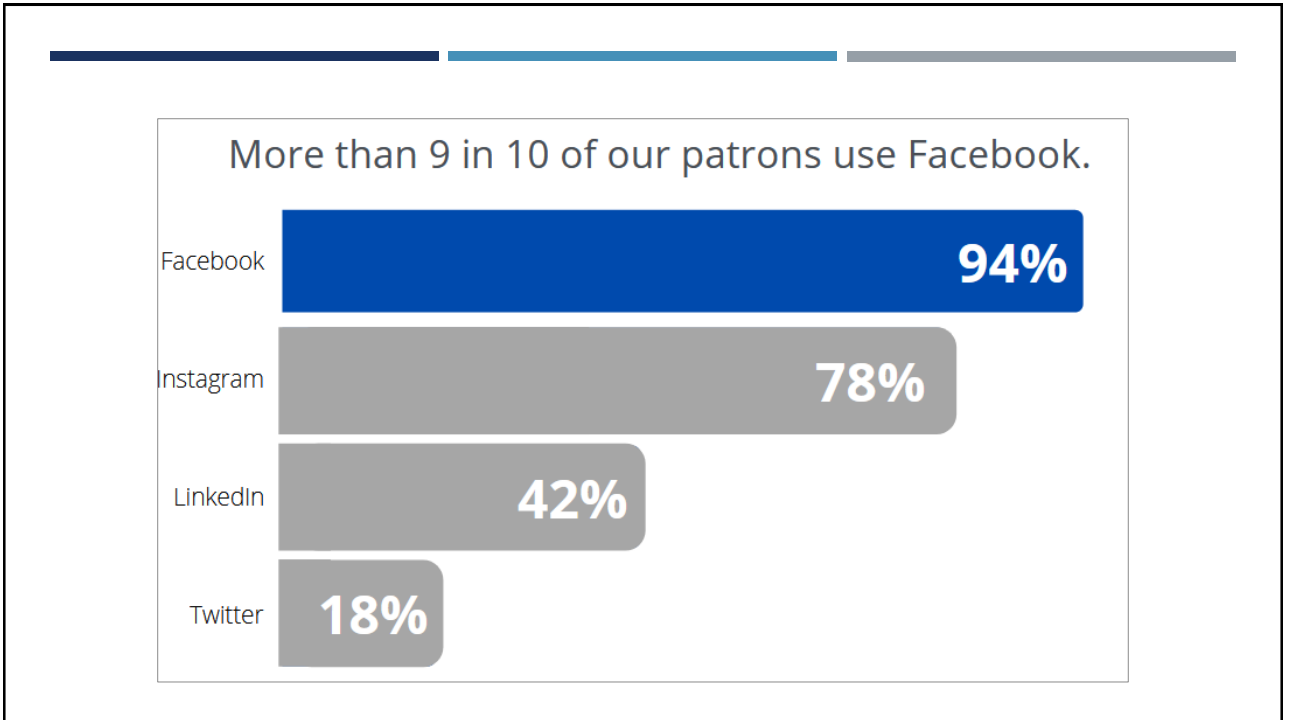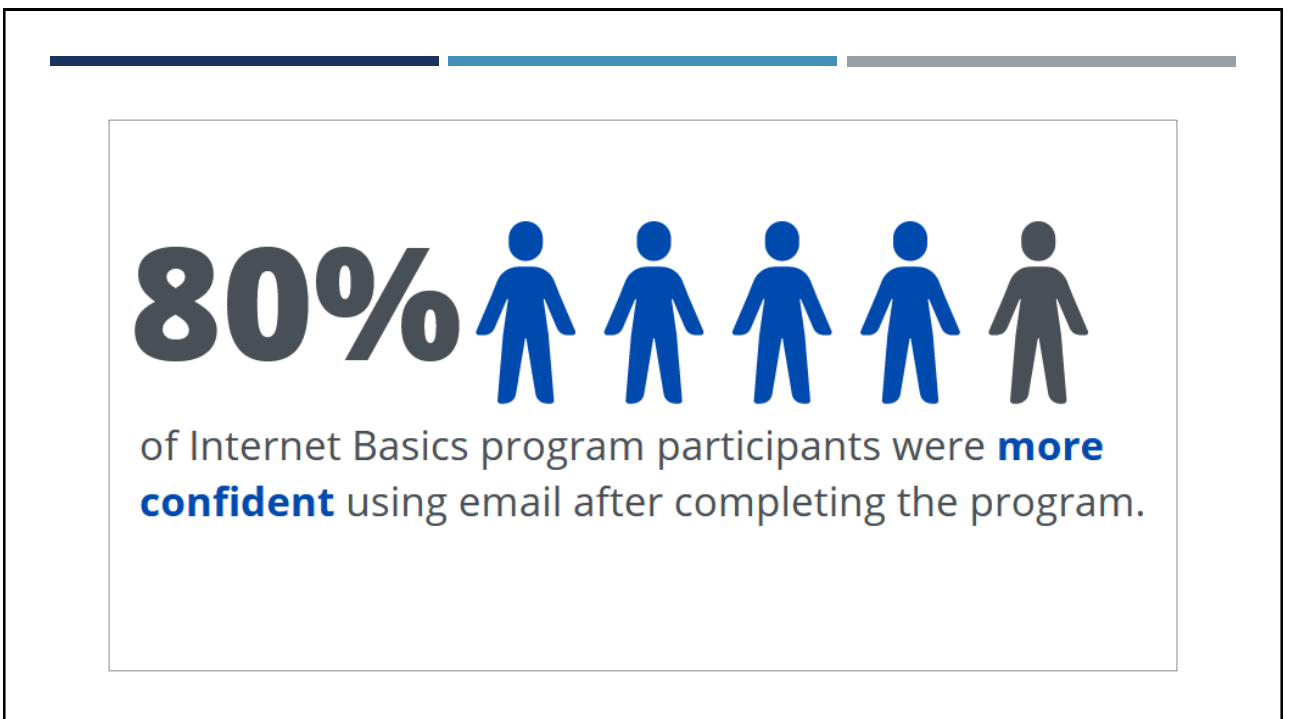40% Did work for a current job
31% Applied for a job
32%
25%
24%
21%
19%
13%

2019   2020   2021

80

81

82

83

84

More than 9 in 10 of our patrons use Facebook.

Facebook 94%
Instagram 78%
LinkedIn 42%
Twitter 18%

85

80% of Internet Basics program participants were **more confident** using email after completing the program.
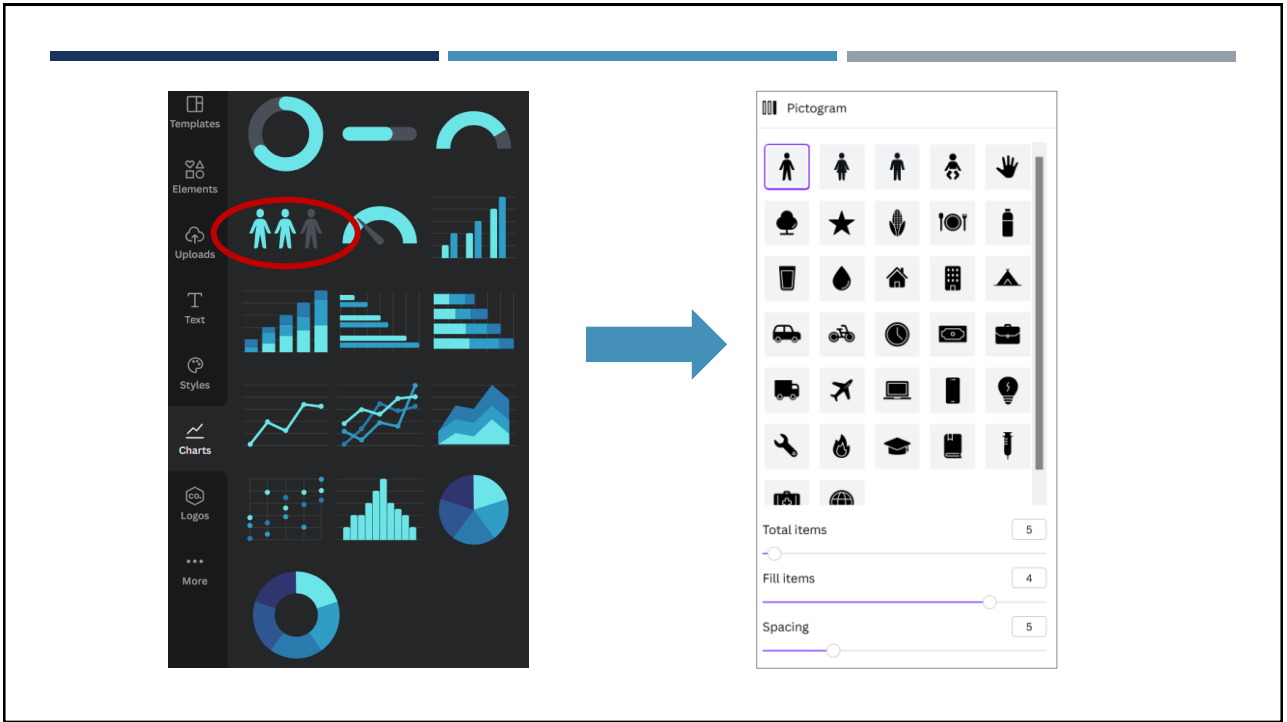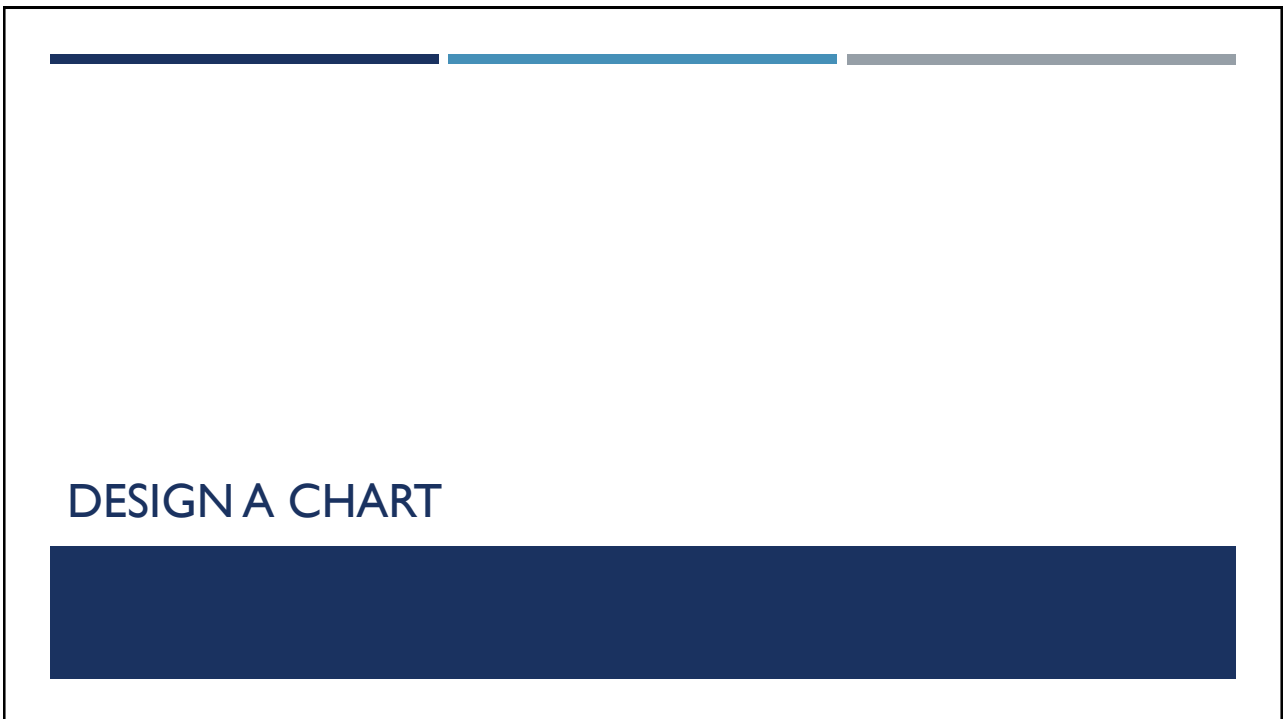
86

87

DESIGN A CHART
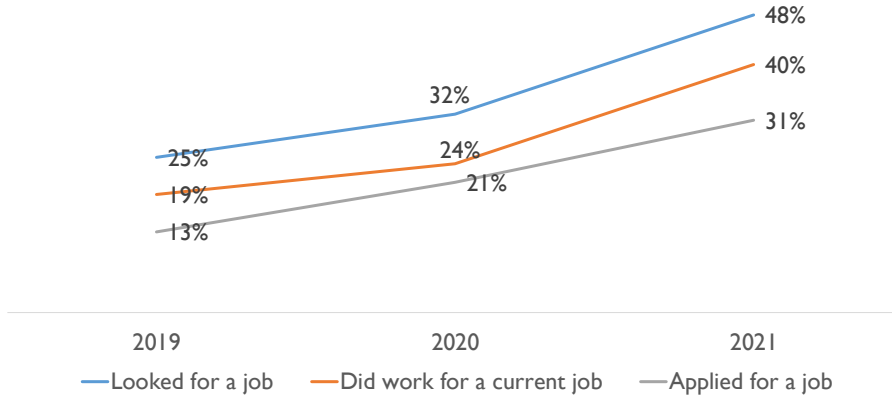
88

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

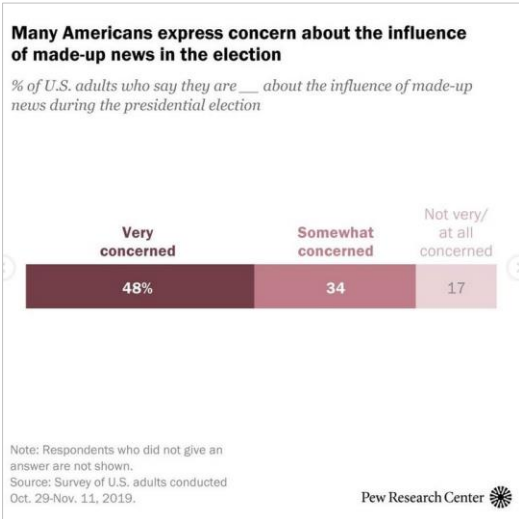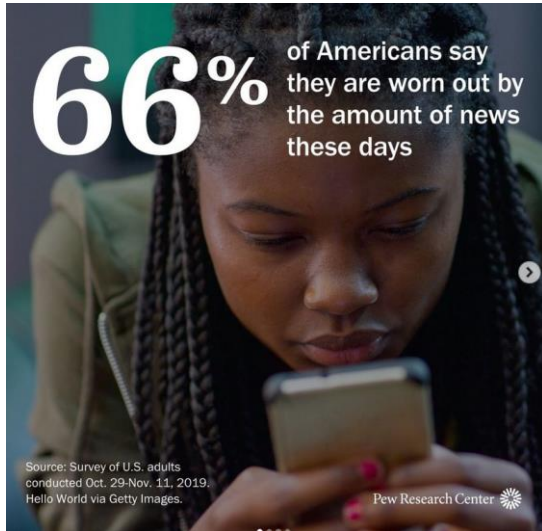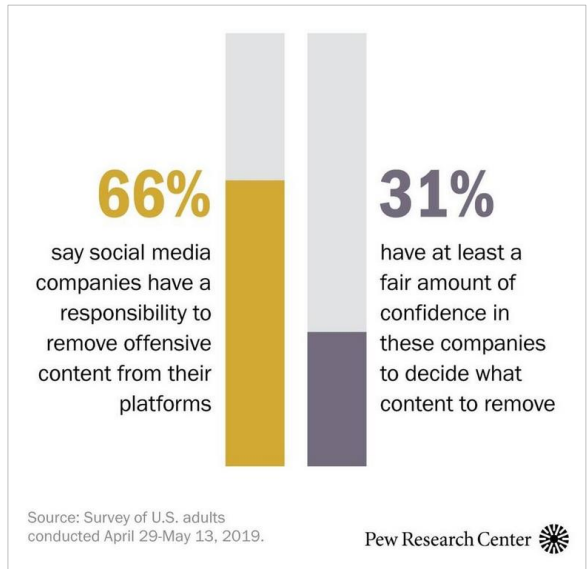Image credit: @pewresearch

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

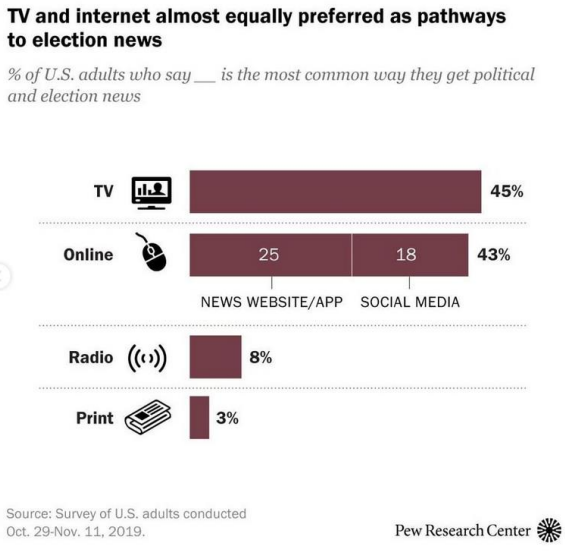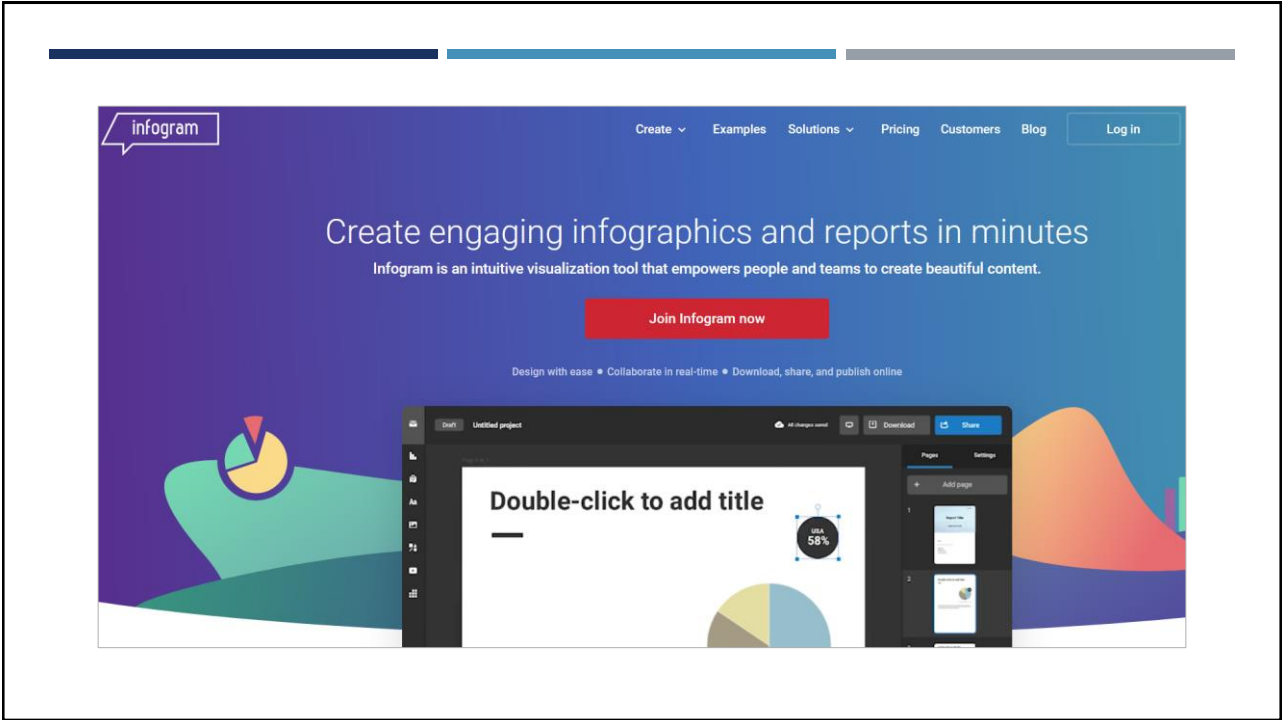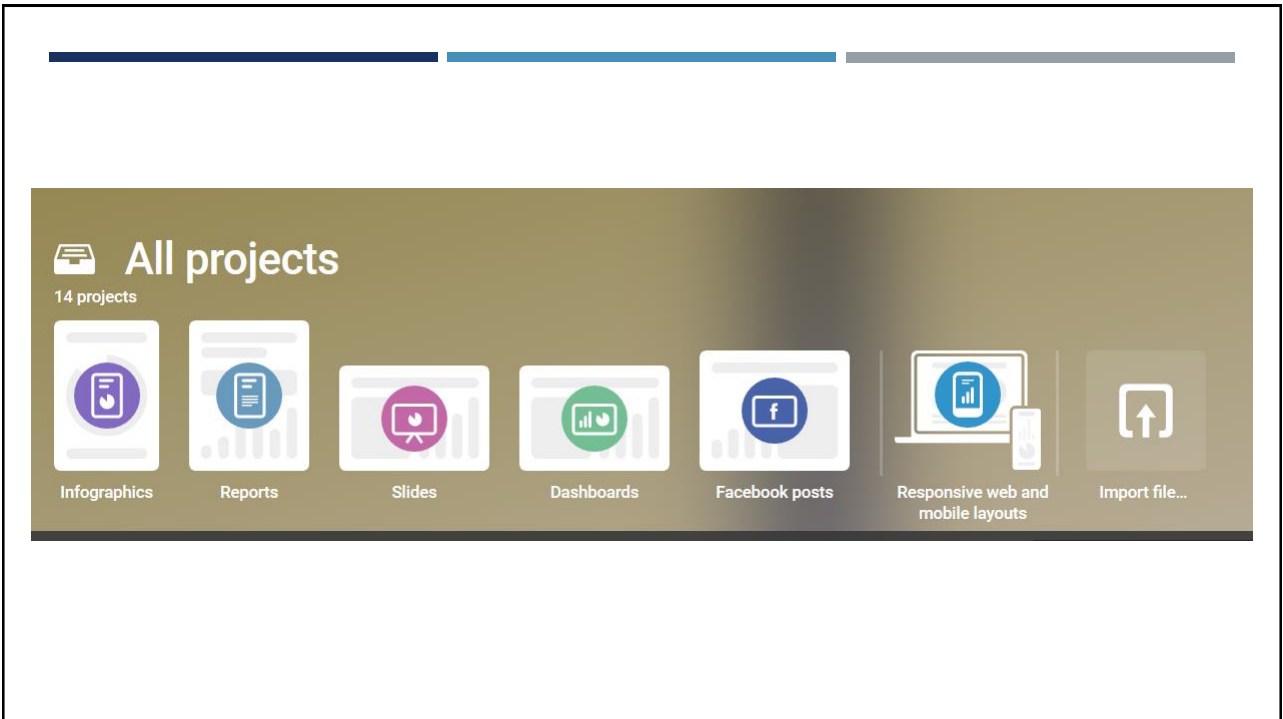Image credit: @pewresearch

92

Image credit: @pewresearch

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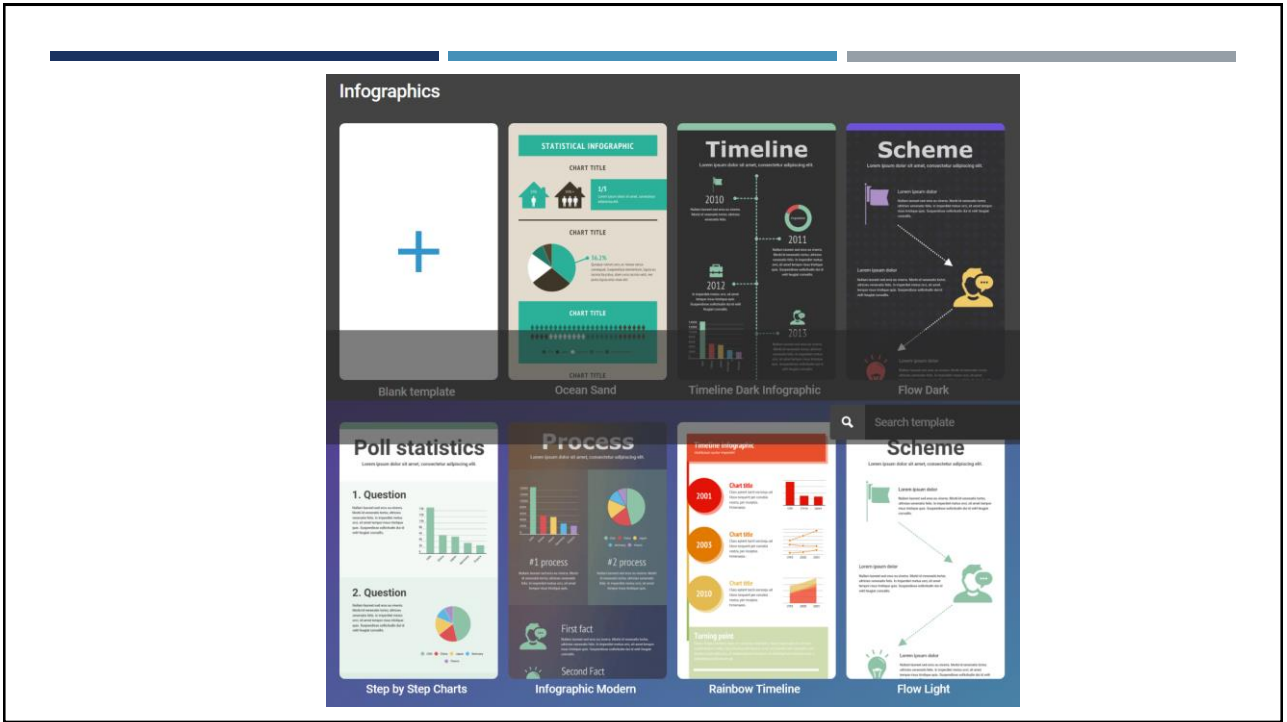
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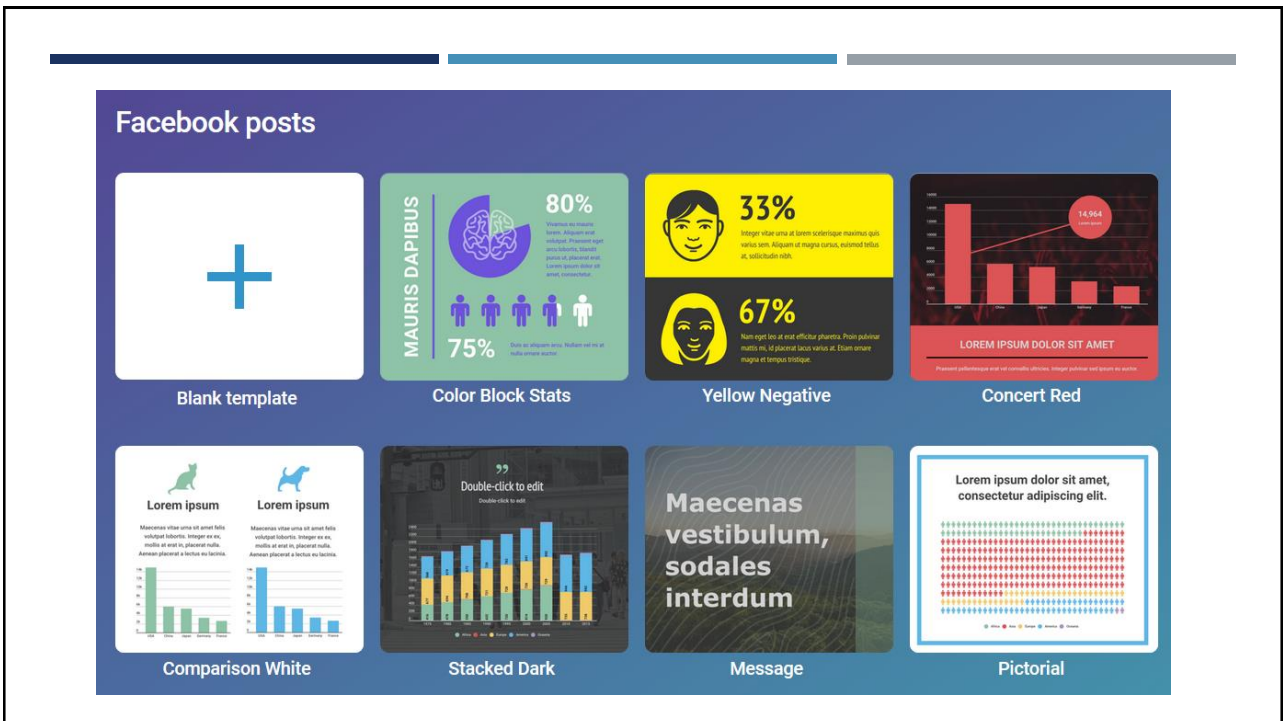
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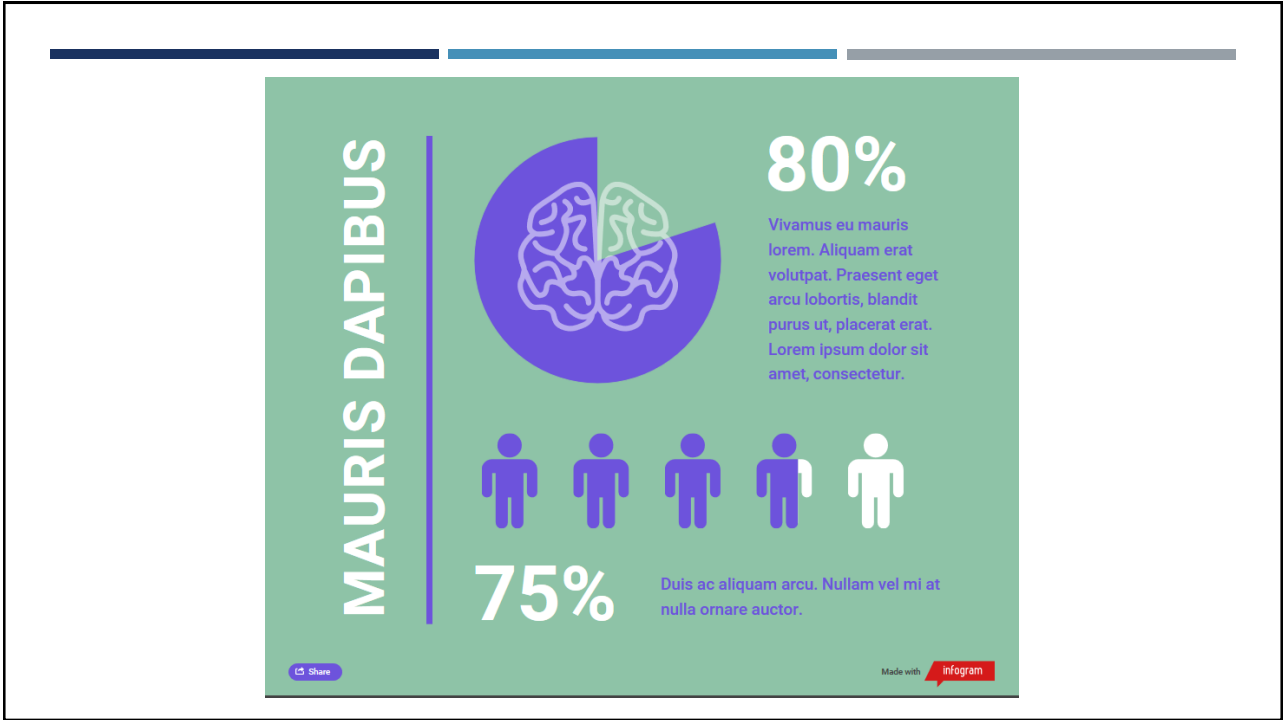
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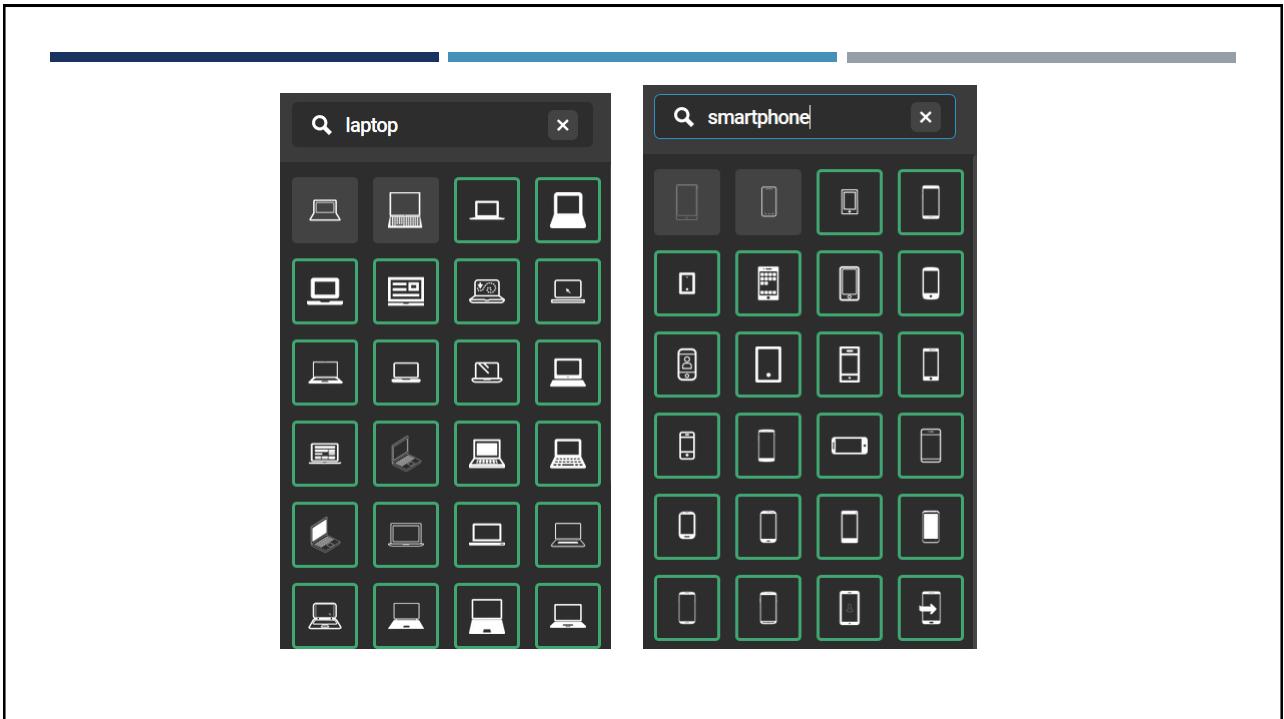
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↱	A	B	C	D	E	F	G	H
1		**Group A**						
2	**Value or percentage**	75%						
3	**Number of icons**	5						
4	**Legend**	Title A						
5	**Pictorial bar text**	75%						
6								
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101

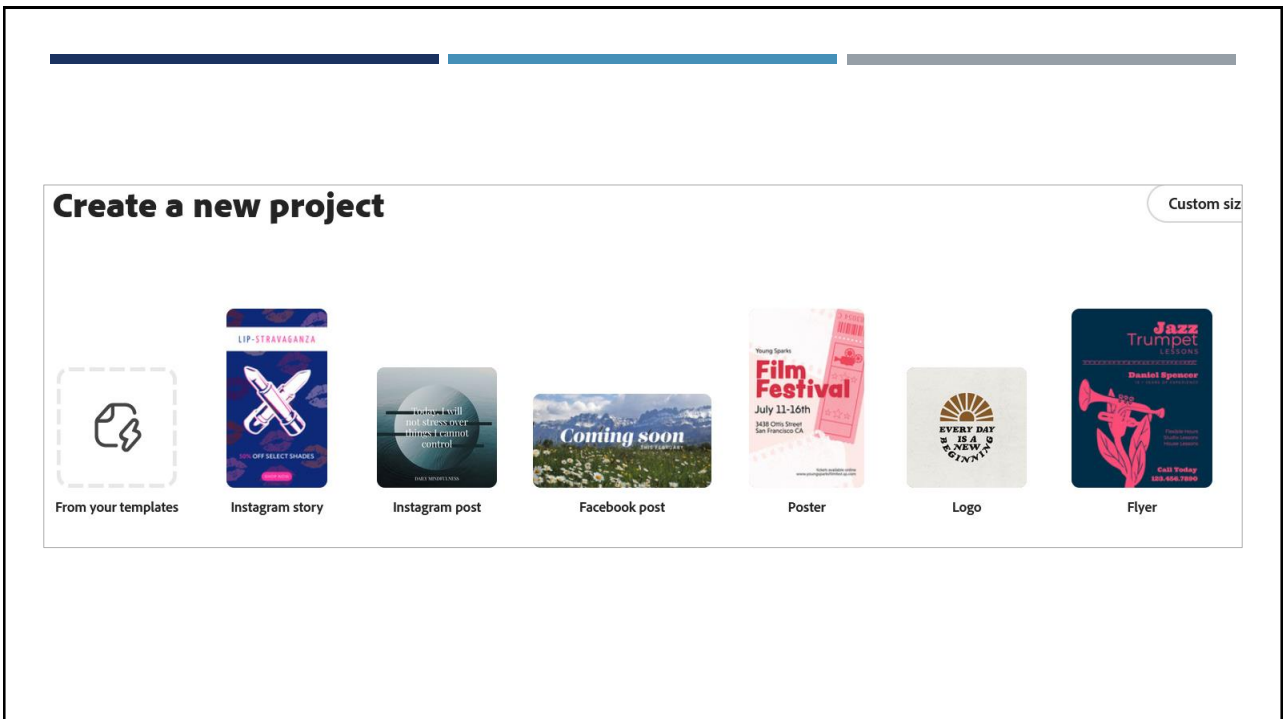PEBBLE POND PUBLIC LIBRARY

90%
of technology program participants learned new computer skills.

4 in 5 technology program participants felt more confident using a computer.
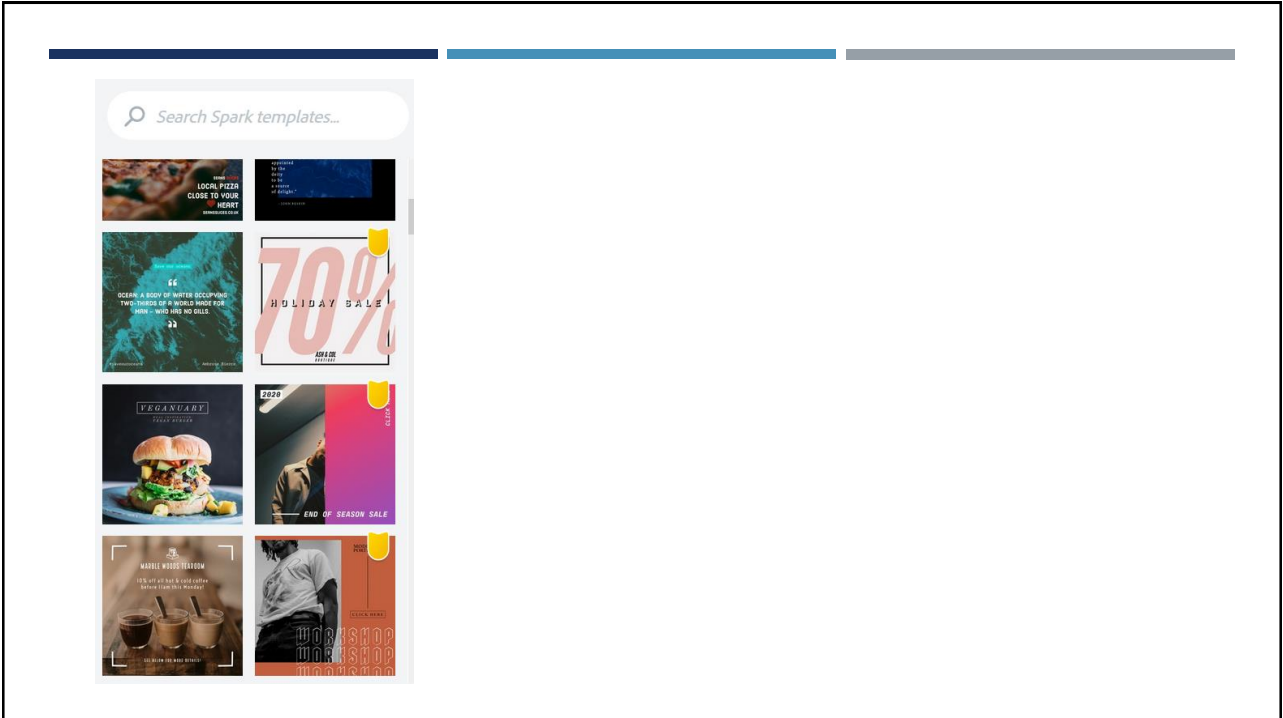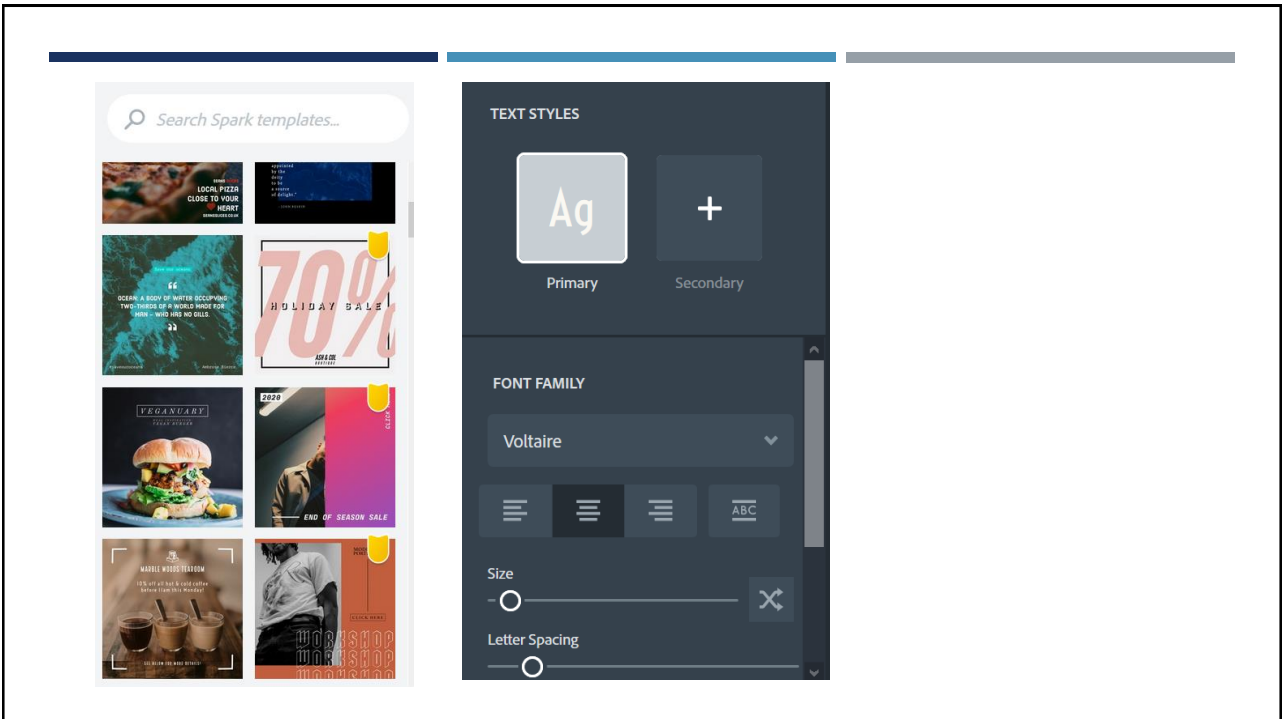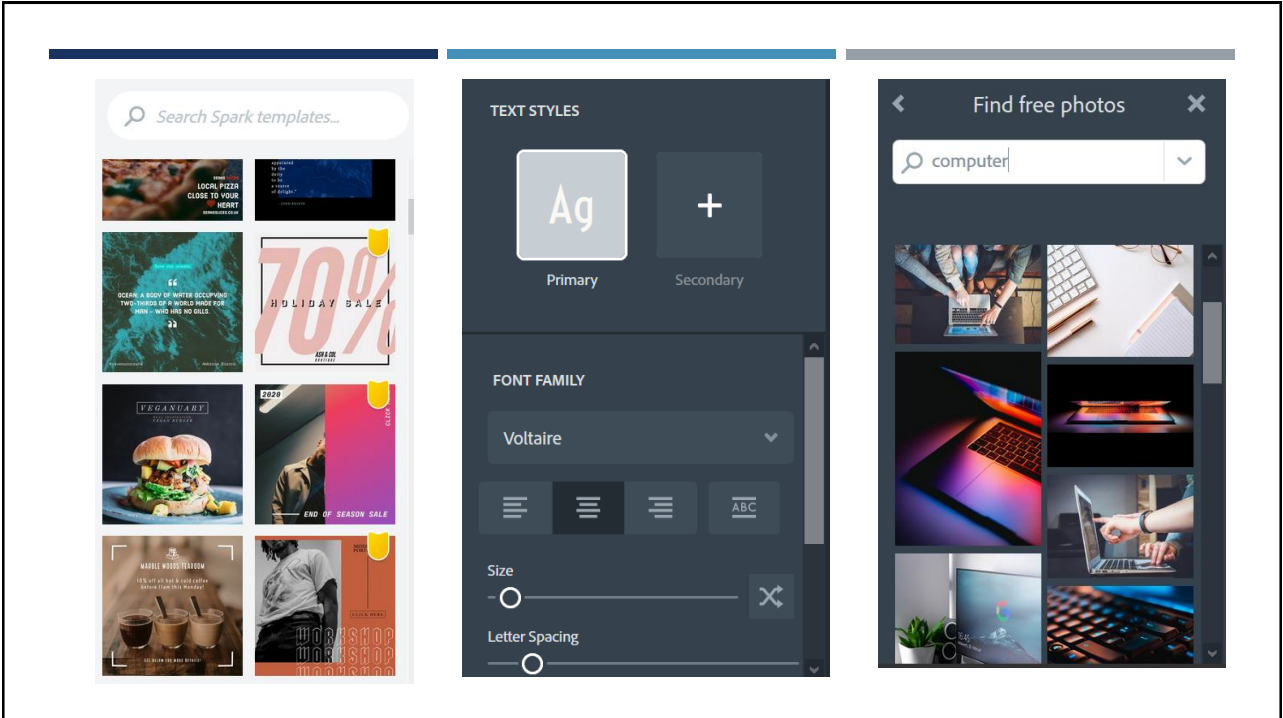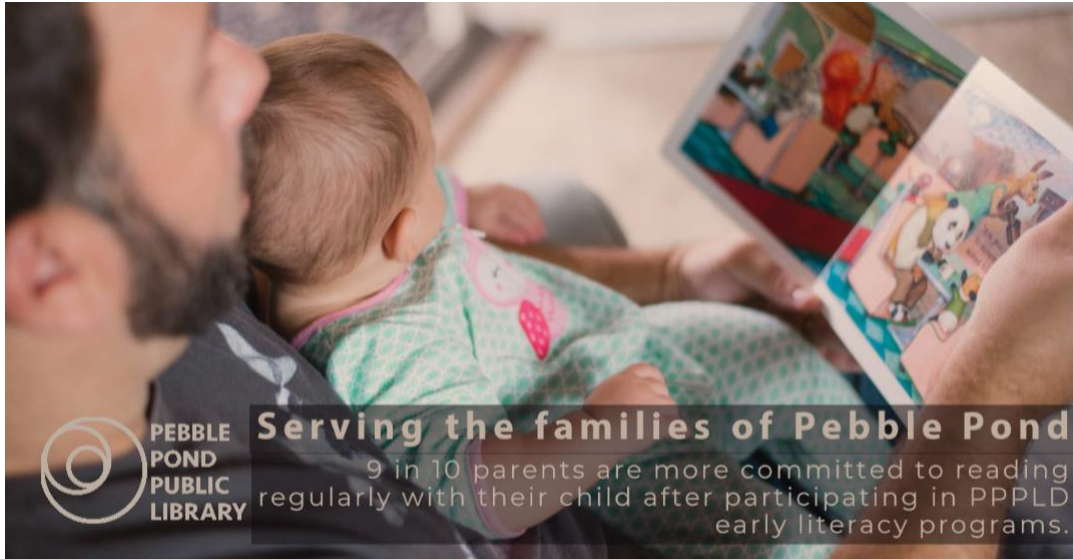
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1,532 people attended PPPL
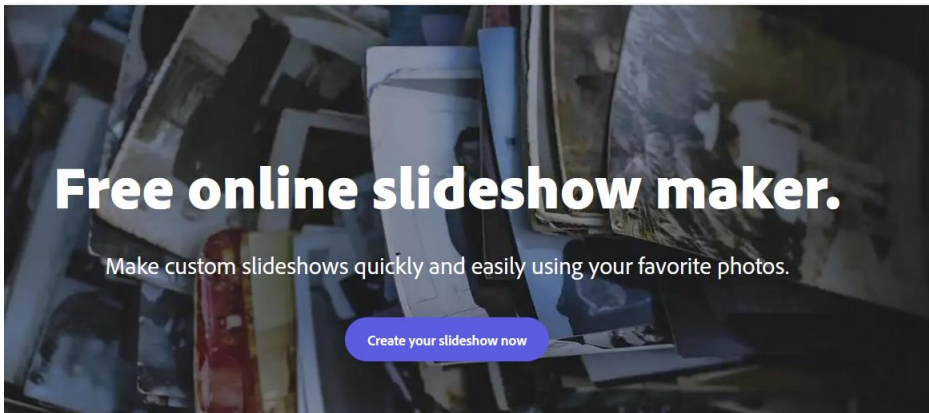job skills programs in 2019.

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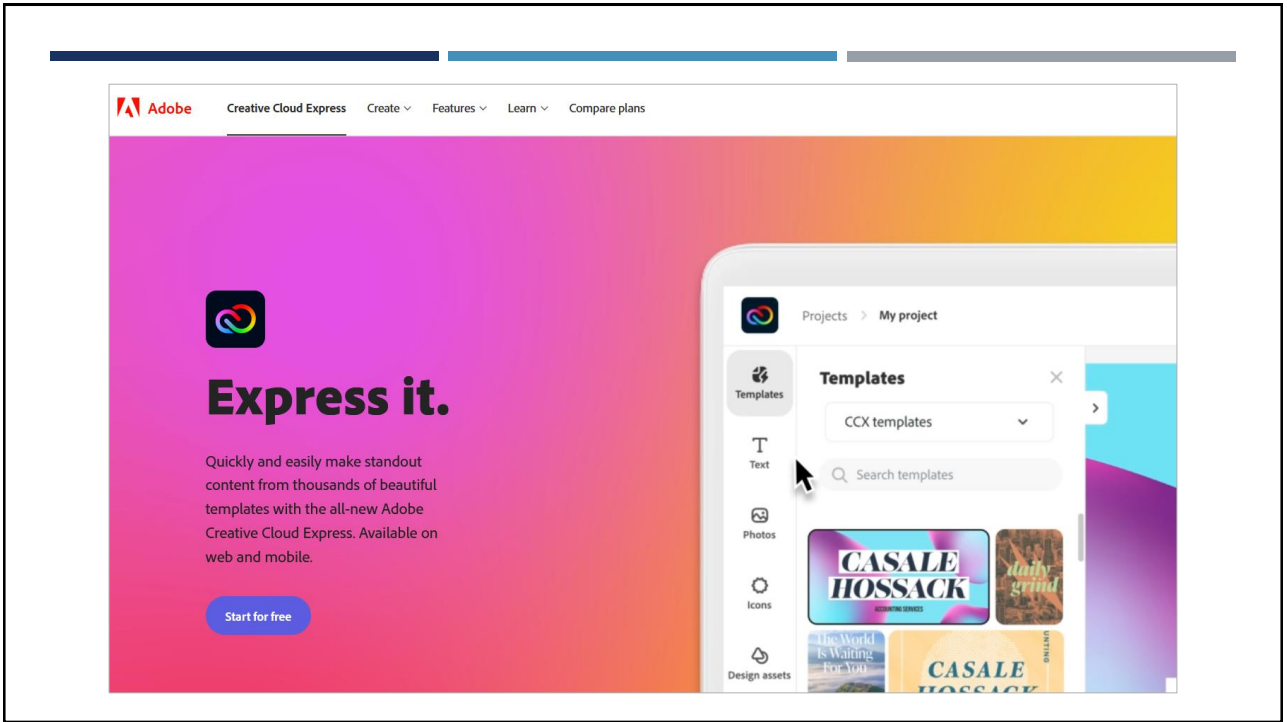
Serving the families of Pebble Pond
9 in 10 parents are more committed to reading regularly with their child after participating in PPPLD early literacy programs.
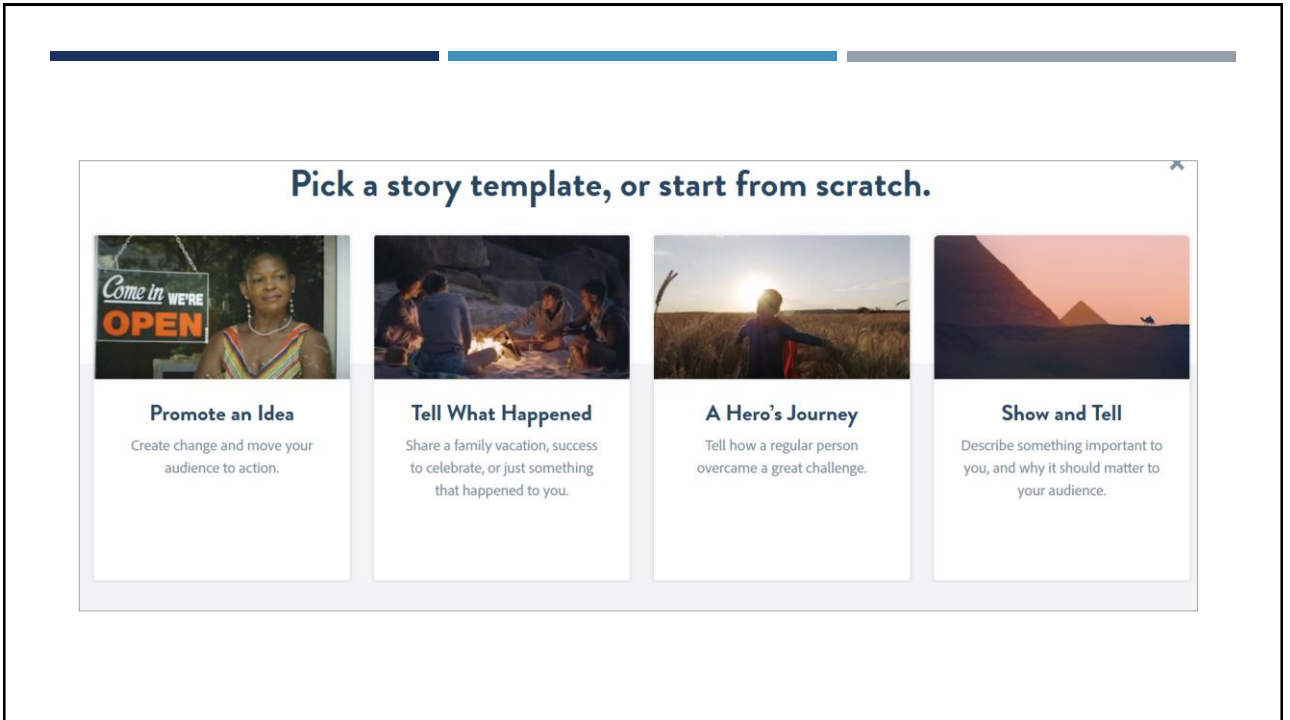
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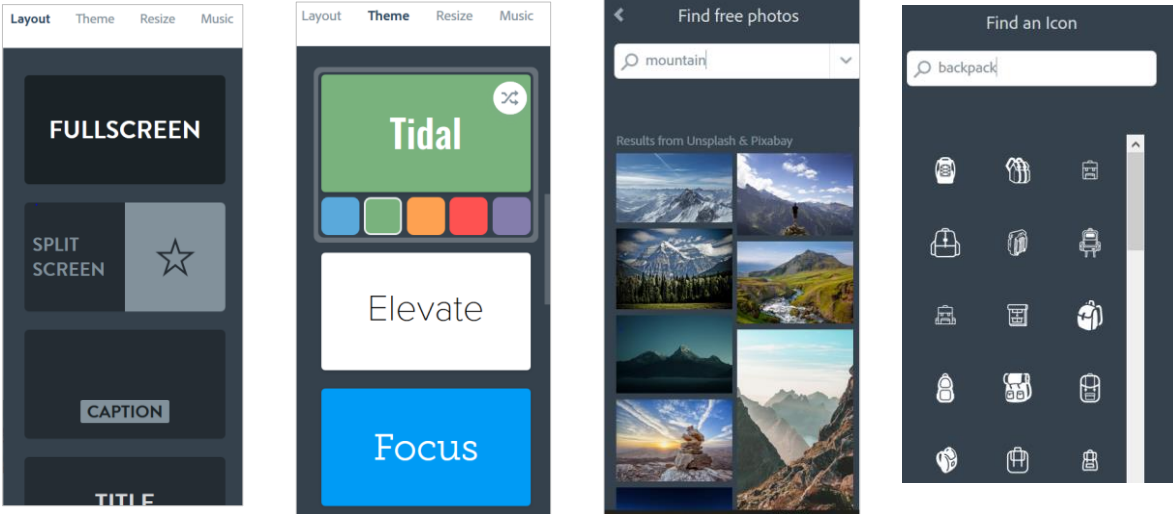
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Tell how a regular person overcame a great challenge.

Show and Tell
Describe something important to you, and why it should matter to your audience.

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Tell us about the hero and their world before the quest begins.

SP Adobe Spark

0:02

Call to adventure   Challenge   Climax   Resolution
2   3   4   5

112

ADOBE CREATIVE CLOUD EXPRESS

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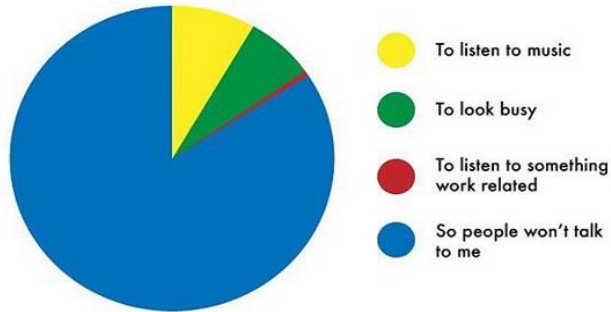
117

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

- To listen to music
- To look busy
- To listen to something work related
- So people won't talk to me

Civilized.

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