Visualization in Lesson Planning: Your Turn

In the chat there is a link to breakout room slides. Please use the two slides that match your breakout room number. For example, breakout room 1 will use the first two slides labeled "breakout room 1". You will see a visualization on each of your room's two slides.

For each visualization try to come up with as many different lesson goals or mathematics topics that this visual might be used to teach. Try to come up with more than one grade level!

Breakout Room 1

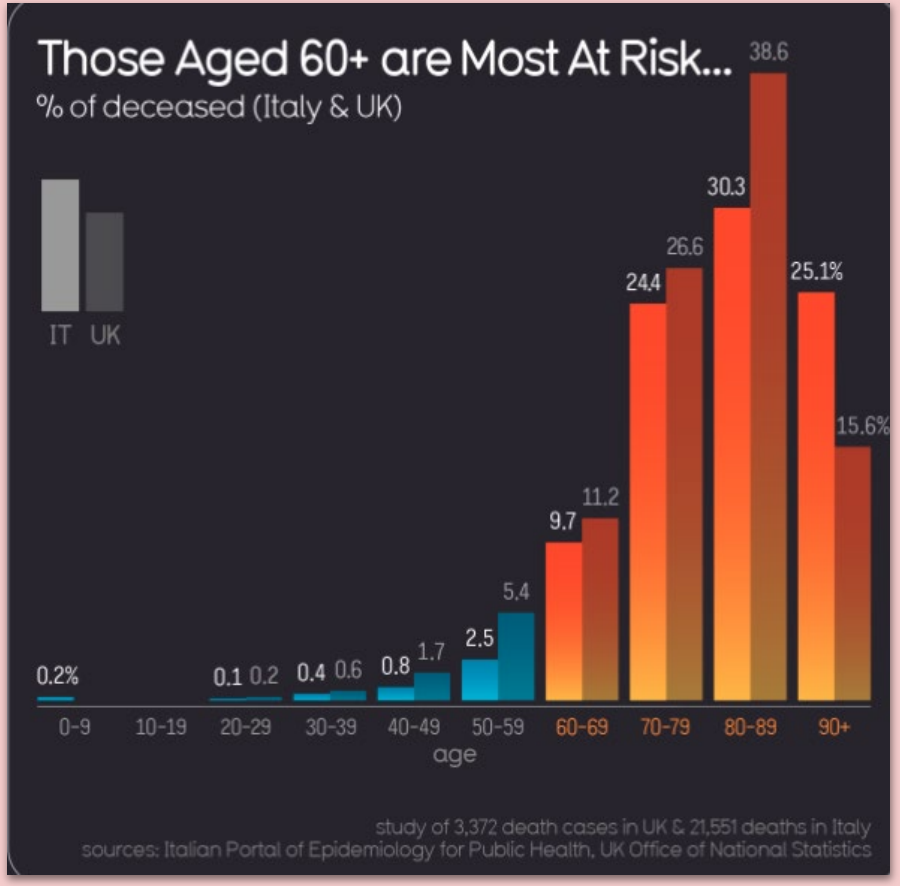
This example would be ideal for Jr High level students to adult level.

Data chat to analyze the material.

It is more open ended and globally known.

Middle school and beyond can find averages and percentages.

Has more STEM connects involved



Breakout Room 1

More of a lower elementary level chart.

This visual will lead to a fantastic discussion on kindness. (Empowering the marginalized and vulnerable)

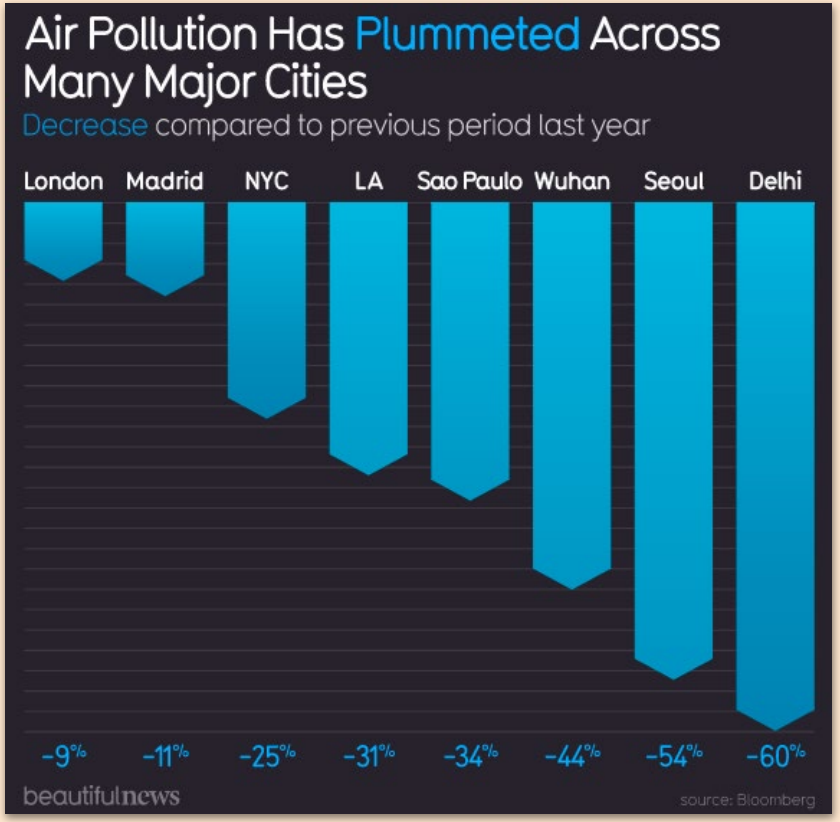
Breakout Room 2

-working with percentages (middle school)

-addition and subtraction (3rd/4th grade)

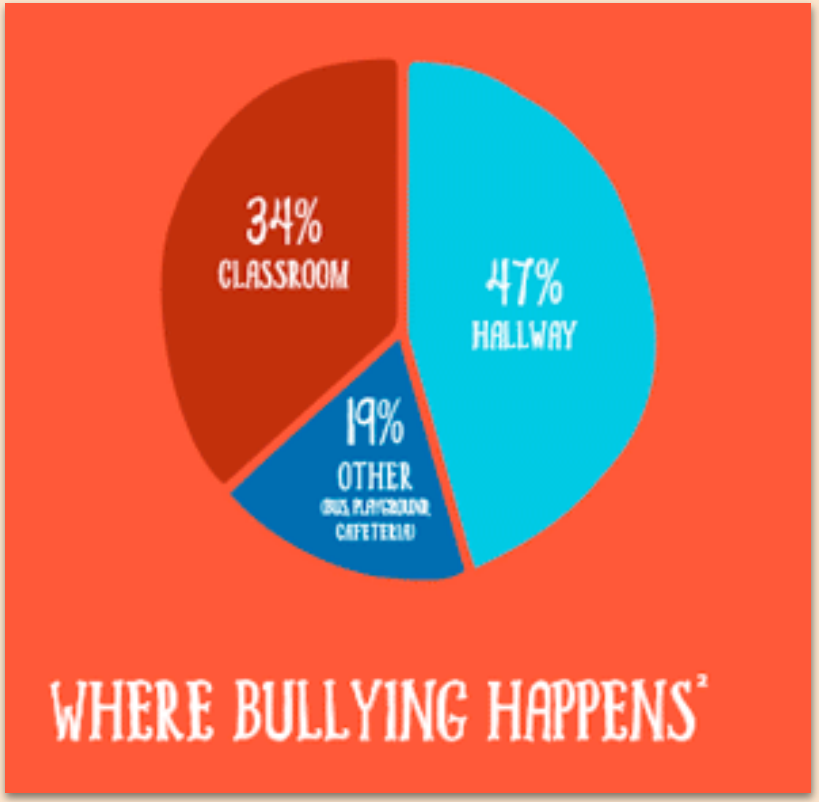
-working with integers

Science topics: pollution causes



Breakout Room 2

- percentages
- geometry / degrees in the circle - then students gather data to make their own pie chart
- translate to other kinds of graphs



Breakout Room 3

MATH: lessons on finding averages

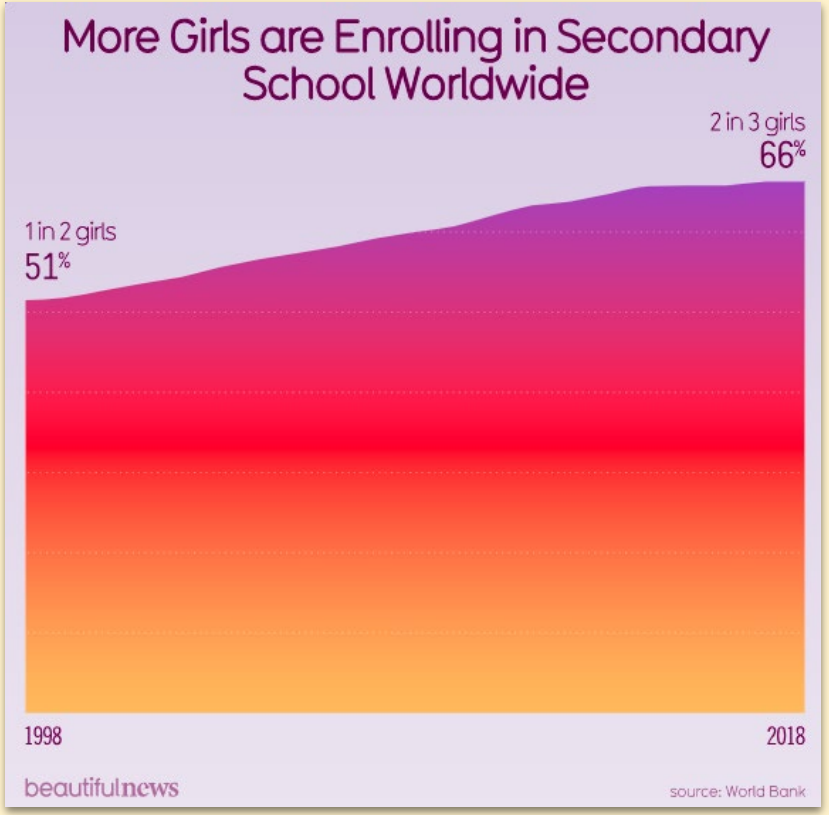
Humanities: research countries and types of clothing/shoes that are appropriate for them

https://cerikids.org/news/more-pair-boots-family

Breakout Room 3

Math: Writing an algebraic function of percentage of girls enrolled over time:

Humanities: What are factors influencing enrollment?



Breakout Room 4

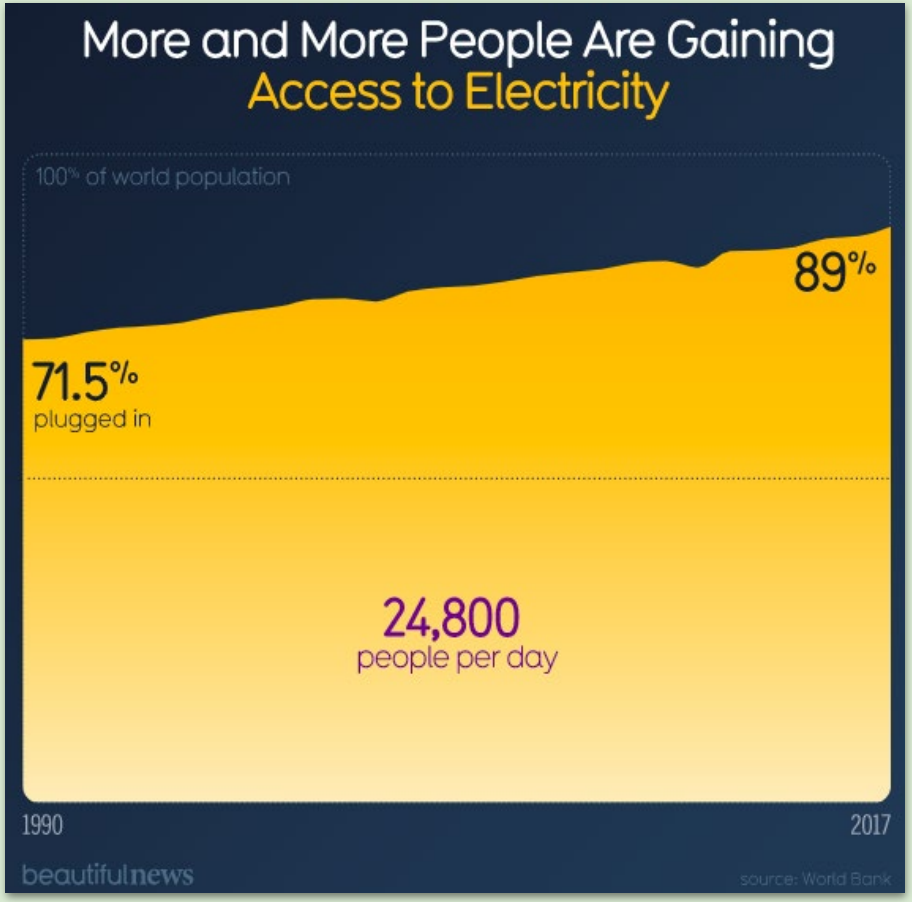
Percentages

Time-line

Why are there lows?

Research economic/electrical problems during that specific time

Science- effects of energy transfer (access/resources)



Breakout Room 4

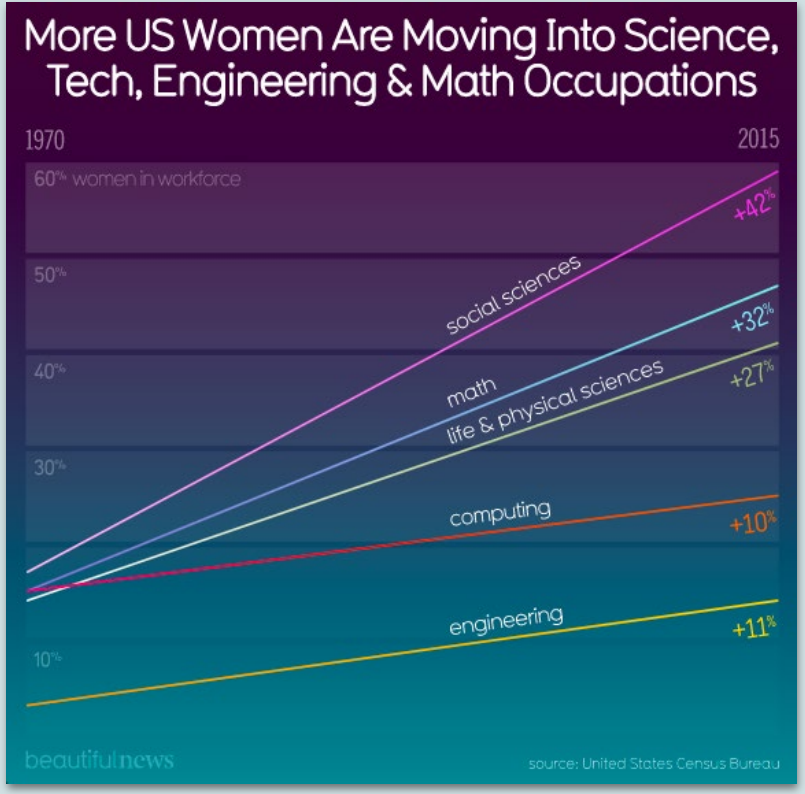
Percentages - fractions - decimals; middle grades

Part/whole (9 blue plus one black = 10/10): lower grades

Science: Recycling, why different substances are recycled at different percentages? Problem solve and generate alternatives or solution for their community. Tabulate results and compare new data to infographic.

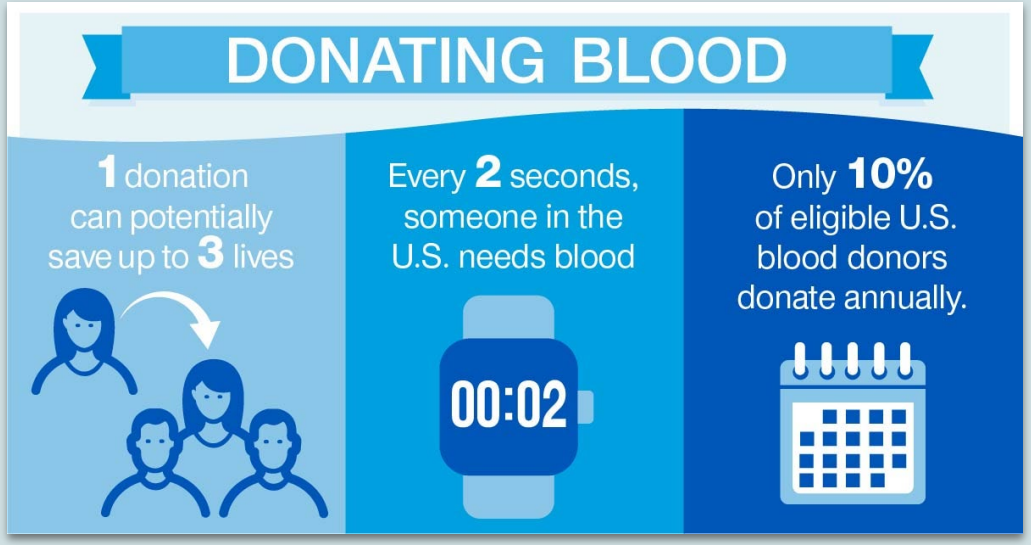
Breakout Room 5

- Positive slope 7-8
- Percent of change 7-8
- Ratios/Proportions 6-8
- Future career discussion K-12
- Compare globally/to men 6-12



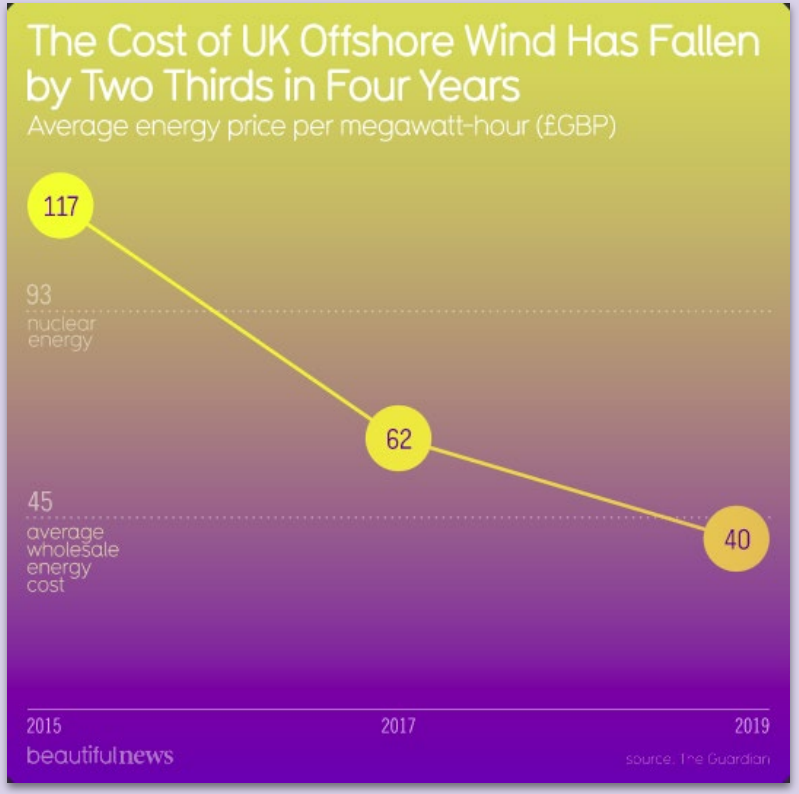
Breakout Room 5

- Ratios/Proportions 6-8
- Unit conversions / dimensional analysis 6-12
- “Annually” K-12
- Are there better representations for this data? Data analysis/display creation 6-12
- How much blood could you give annually? 6-12
- Calendar math K-12
- Time K-12



Breakout Room 6

Slope, energy costs effects, extrapolate, Predict, other energy sources, income towards cost, equation writing

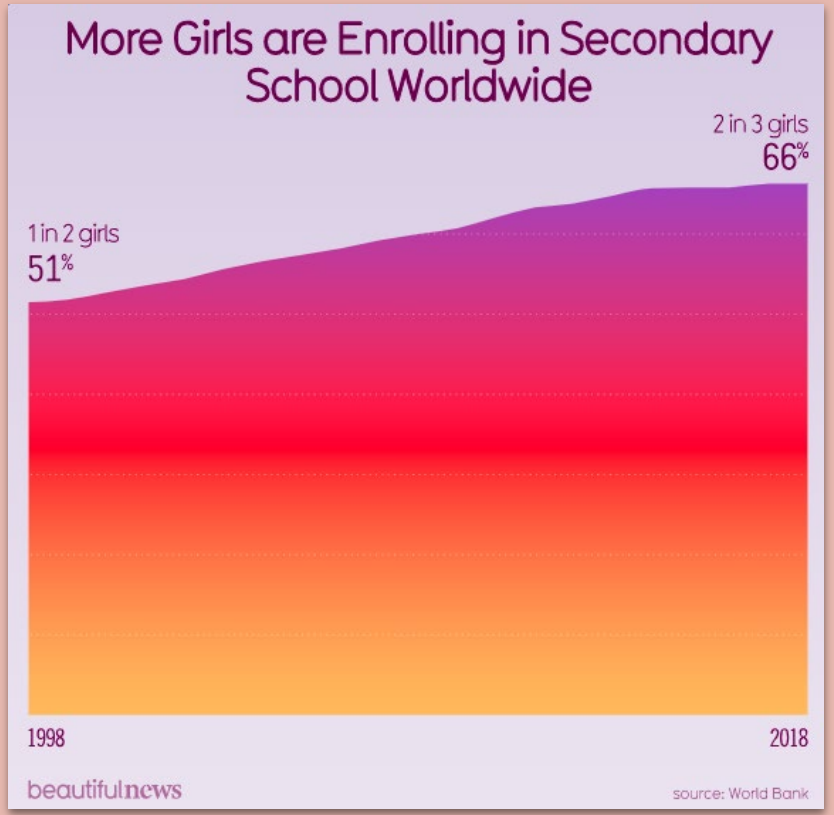


Breakout Room 6

Ratio, proportionality, %change, line graph & interpret,

Breakout Room 8

- Percentages
- Ratios
- Fractions
- Convert from percent to fraction
- Interpreting charts



Breakout Room 8

- Ratios
- Division
- Create a frequency table

https://cerikids.org/news/more-pair-boots-family

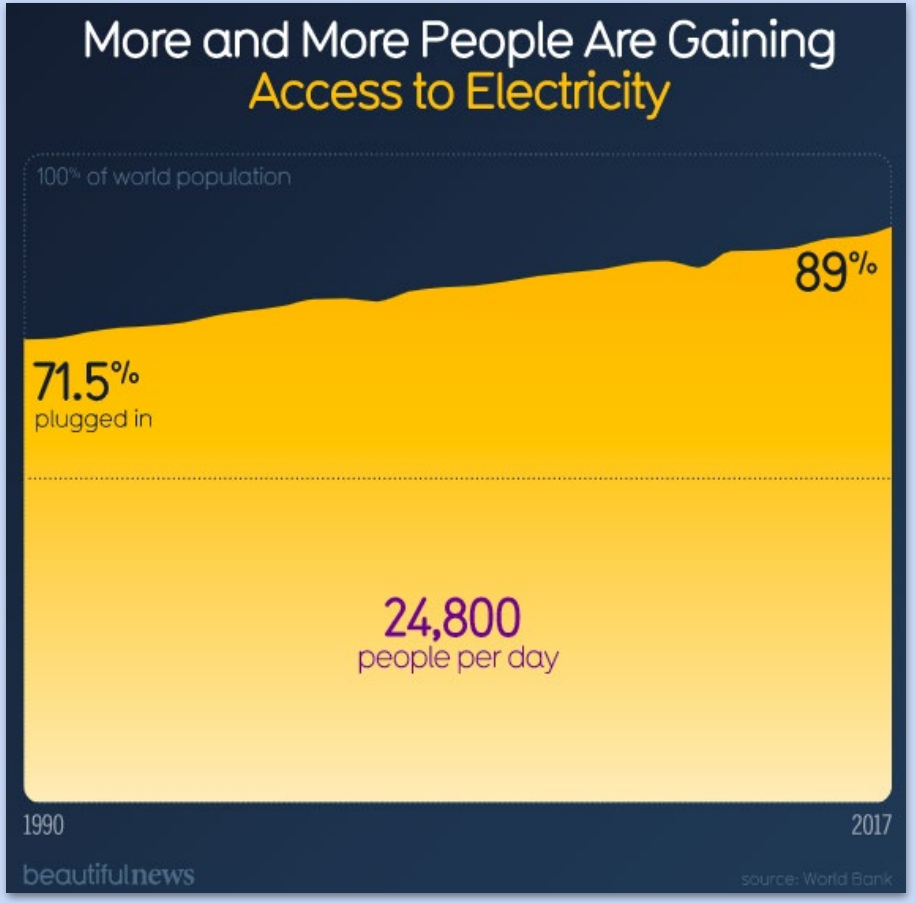
Breakout Room 9

What does “access” mean?

How has technology changed access?

Sources of electricity - fossil fuel v renewables

Possible linear models (HS) or decimals and percent changes, costs (Elem)



Breakout Room 9

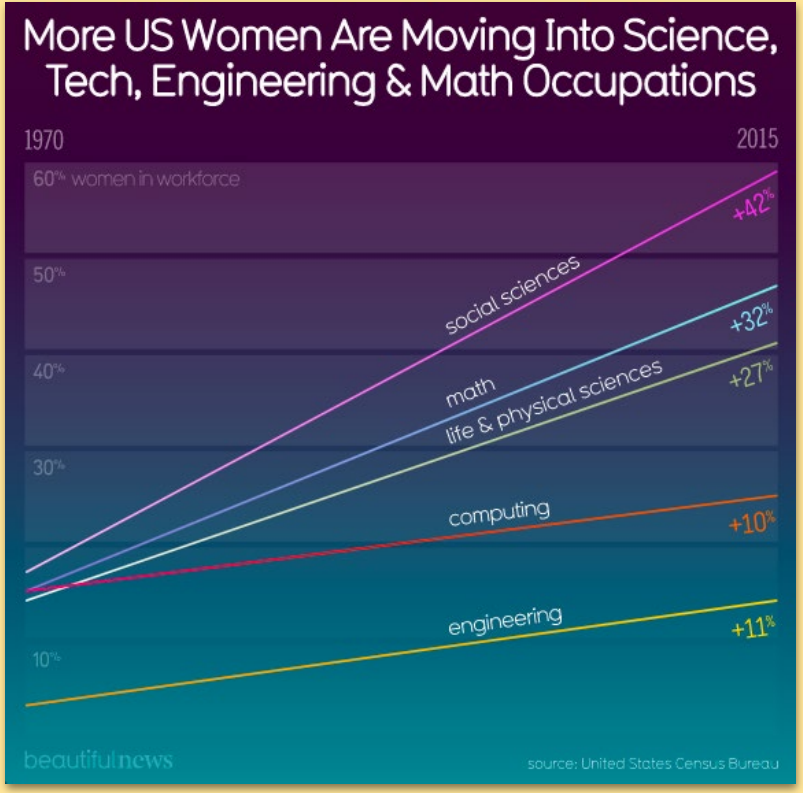
Context?

Fractions → Decimals

Equivalences - what volume of each type of material is represented here?

Breakout Room 10

Slope/rate of change
Writing equations
Systems of equations
Percent increase vs. Absolute increase
Make predictions (future data points)



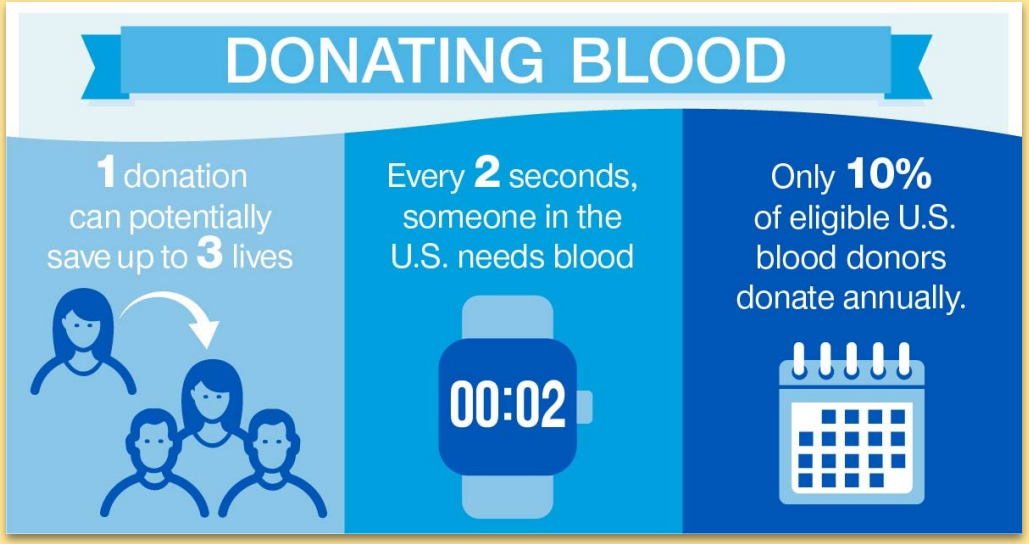
Breakout Room 10

Ratio/proportion

Linear Model

Unit conversions

Finding how many people represent 10% of a sample



Breakout Room 11

6th gr

Compare %

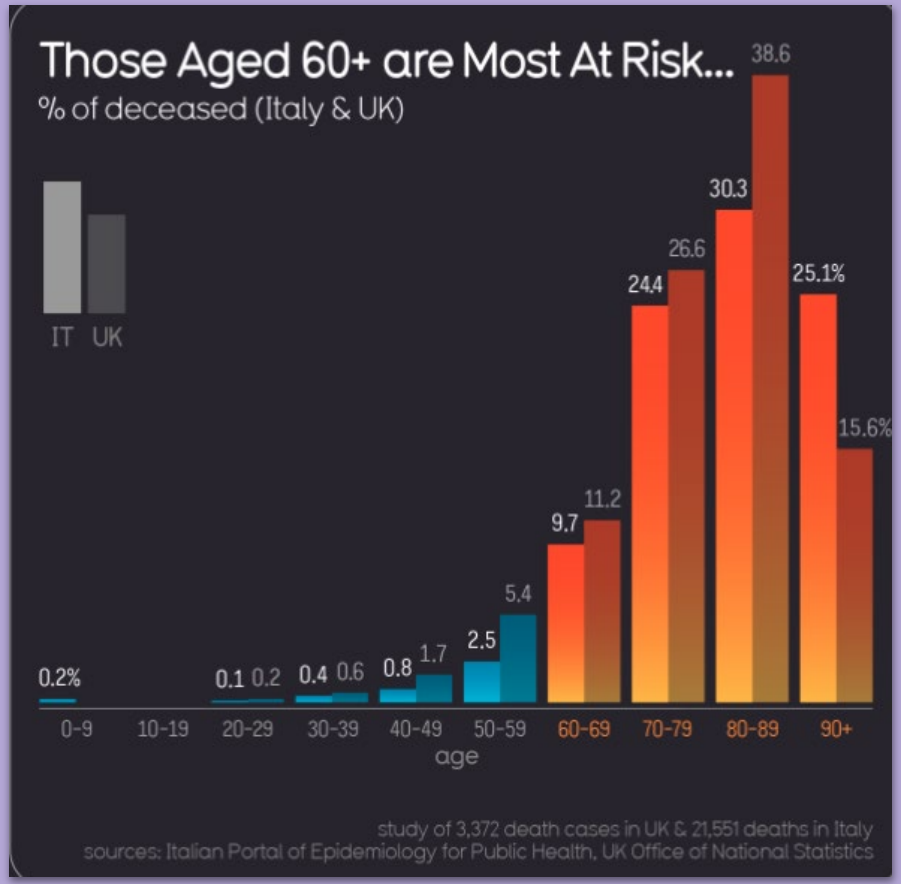
Dot plots

7th gr

% increase

9th & 10th grade pre-Algebra & Algebra

Exponential functions



Breakout Room 11

4th-6th gr
Fractions
Probability
Proportions

Takeaways

Simple graphs can inspire young minds to verbally express themselves on a topic they wouldn't normally comprehend. They could have that magical "A HA" moment.

What is one takeaway you have from this session?

Please respond on this Jamboard.