

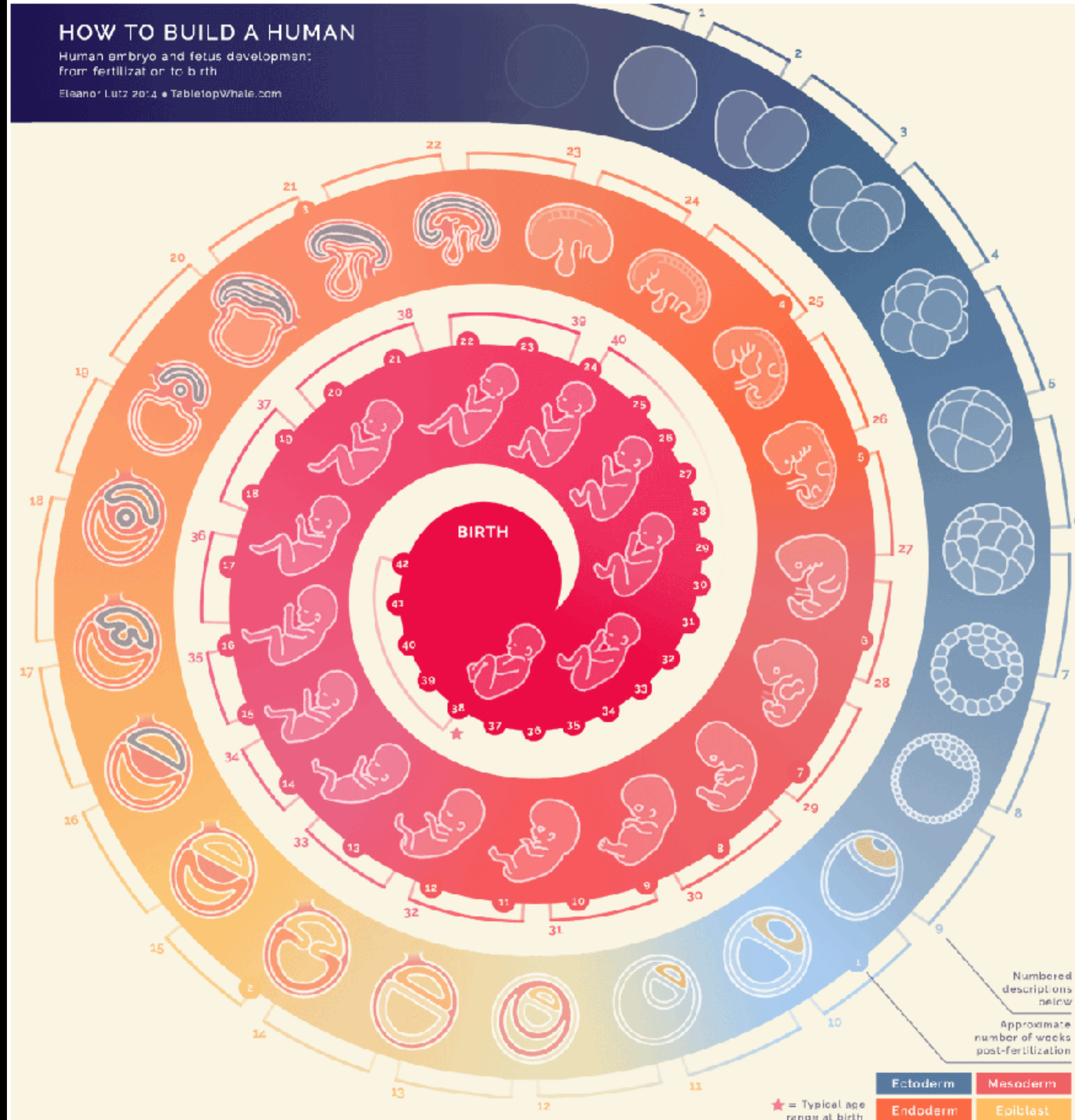
Motion.Infographics

ART430

HOW TO BUILD A HUMAN

Human embryo and fetus development:
from fertilization to birth

Eleanor Lutz 2014 • TabletopWhale.com



1. Fertilized egg

2. 2-cell stage

3. 4-cell stage

4. 8-cell stage

5. Compacted 8-cell

6. Morula

7. Blastocyst

8. ICM growth

9. Bilaminar germ disk

10. Amniotic cavity/yolk sac

11. Implantation complete

12. Extraembryonic mesoderm

13. (Zoom)

14. Hypoblast cells replaced

15. Mesoderm immigration

16. Ectoderm formation

17. Primary neurulation

18. Secondary neurulation

19. Neurulation complete

20. (Rotate view)

21. Embryonic folding

22. Primitive gut tube forms

23. (Inside to outside view)

24. Major blood vessels form

25. Upper limb bud forms

26. Lower limb bud forms

27. Hand plate forms

28. Webbed fingers and toes

29. Fingers/toes separate

30. Gonads differentiate by sex

31. Eyelids form

32. Iris develops

33. Second trimester

34. Taste pores develop

35. Fetus weighs about 100g

36. Vernix caseosa covers skin

37. Lanugo replaced by vellus

38. HPA axis established

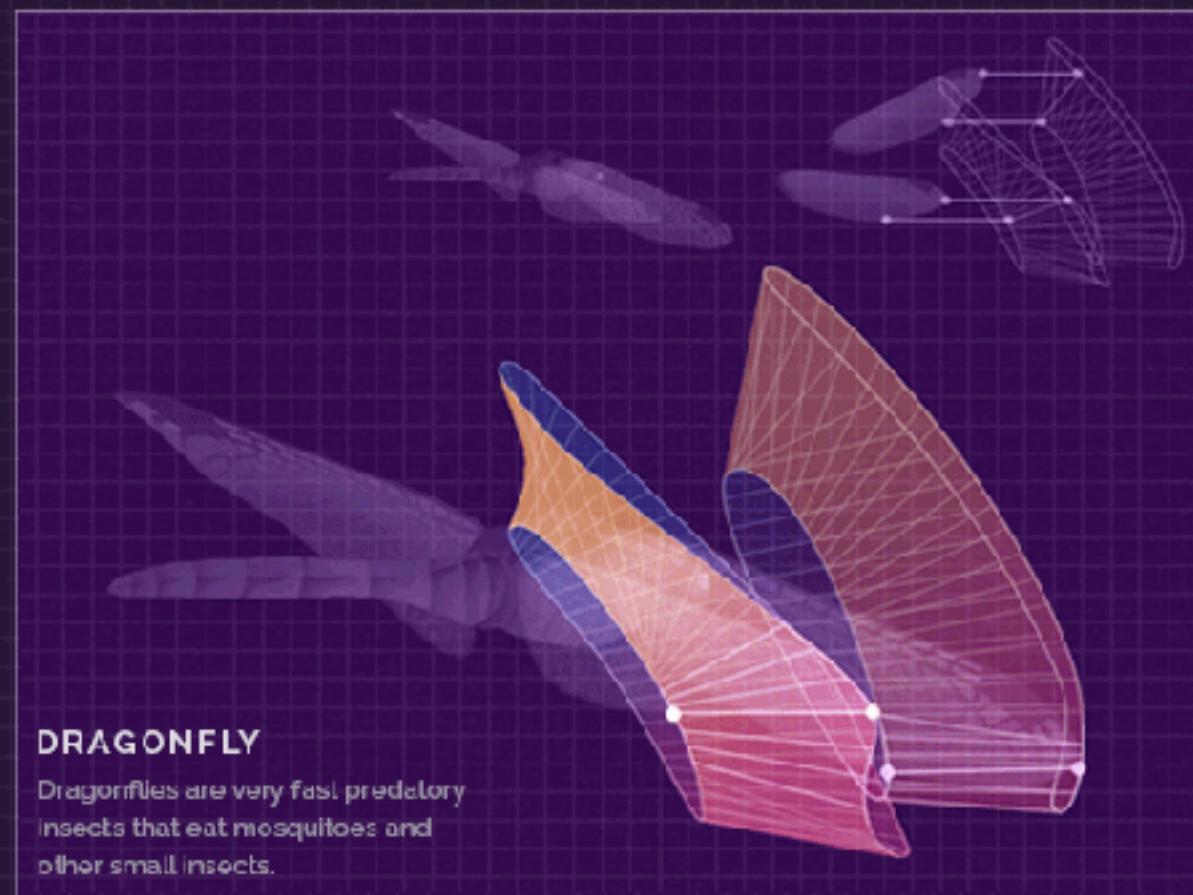
39. Fetus weighs about 500g

40. Potential survival if born

FLIGHT VIDEOS DECONSTRUCTED

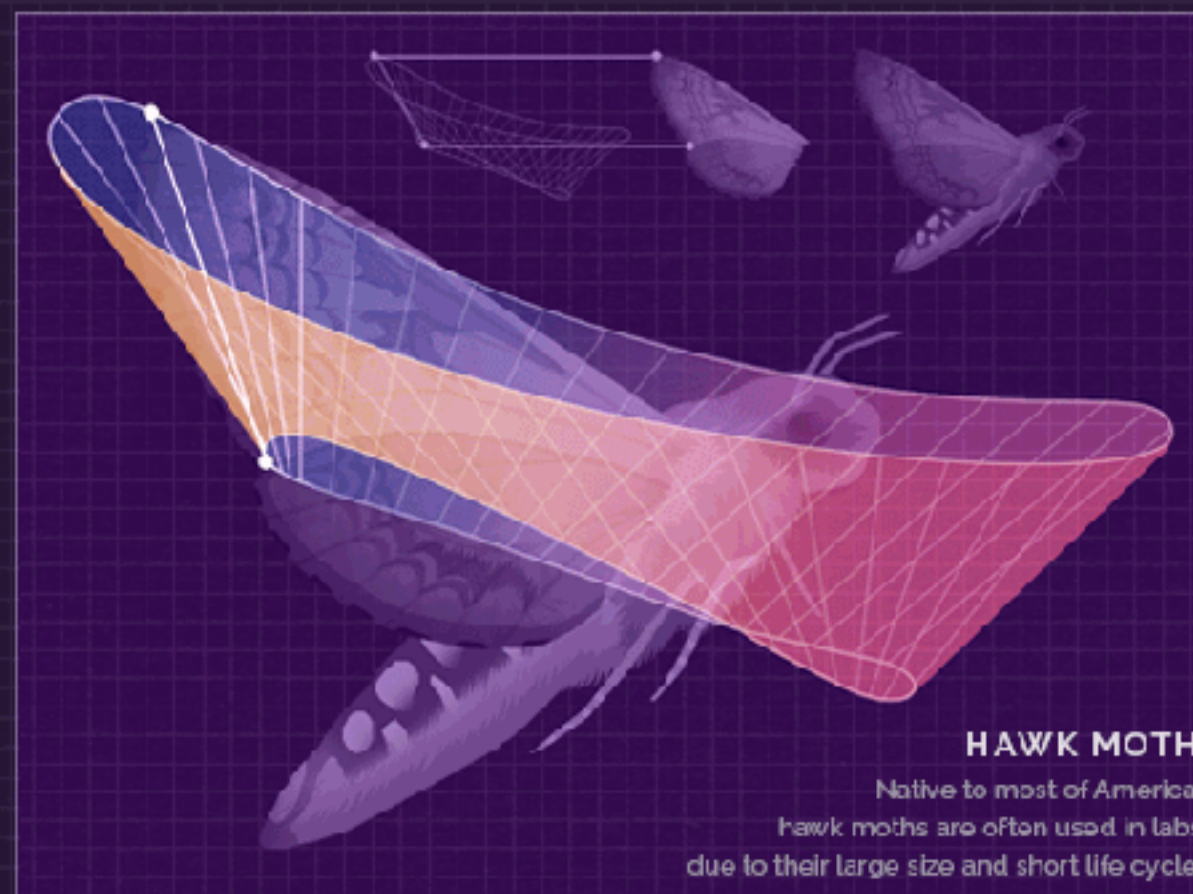
This illustration shows the wingbeats of five different flying species. Each frame is based on traced body positions taken from slow-motion videos of real animals. Specific points on the wings were marked at each of the 15 frames and connected using imaginary curves.

NOTE: This illustration is an observational exercise only. It does not represent any peer-reviewed, scientifically accepted information.



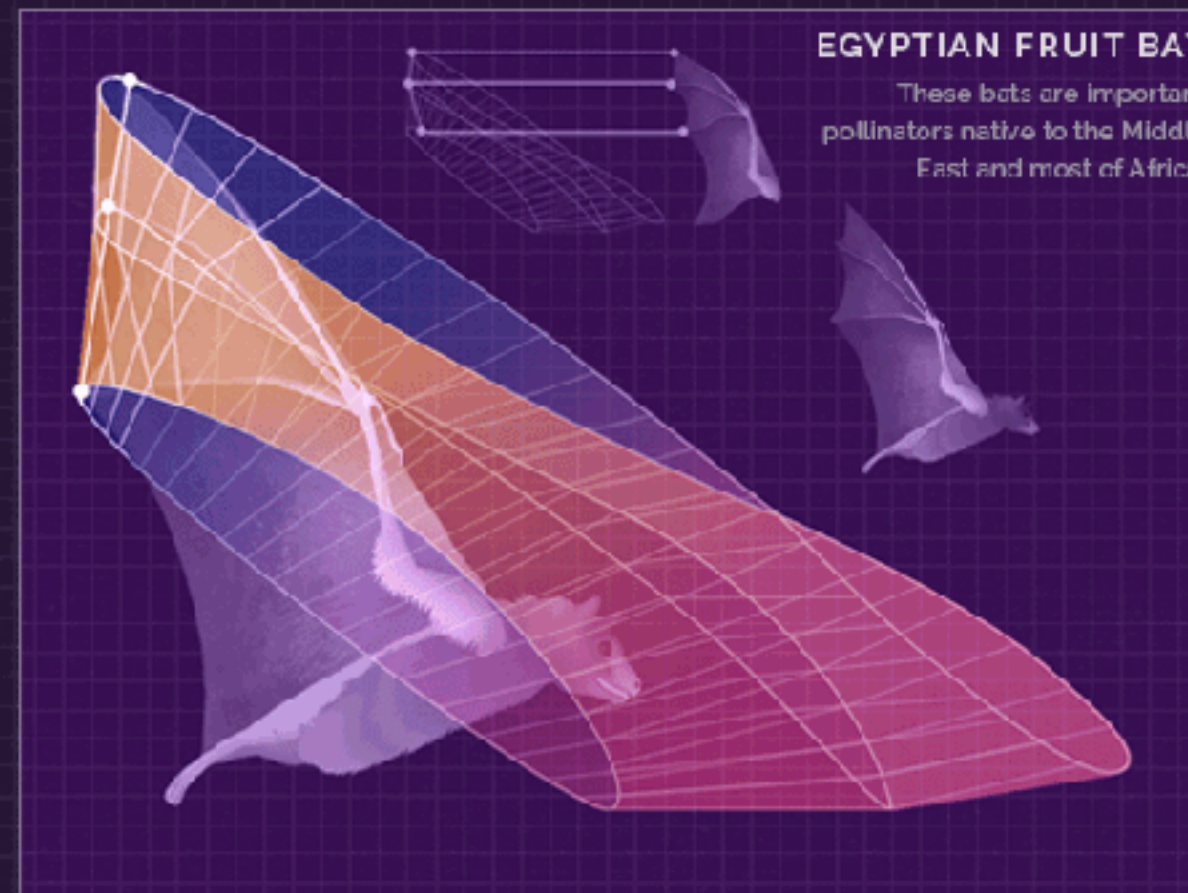
DRAGONFLY

Dragonflies are very fast, predatory insects that eat mosquitoes and other small insects.



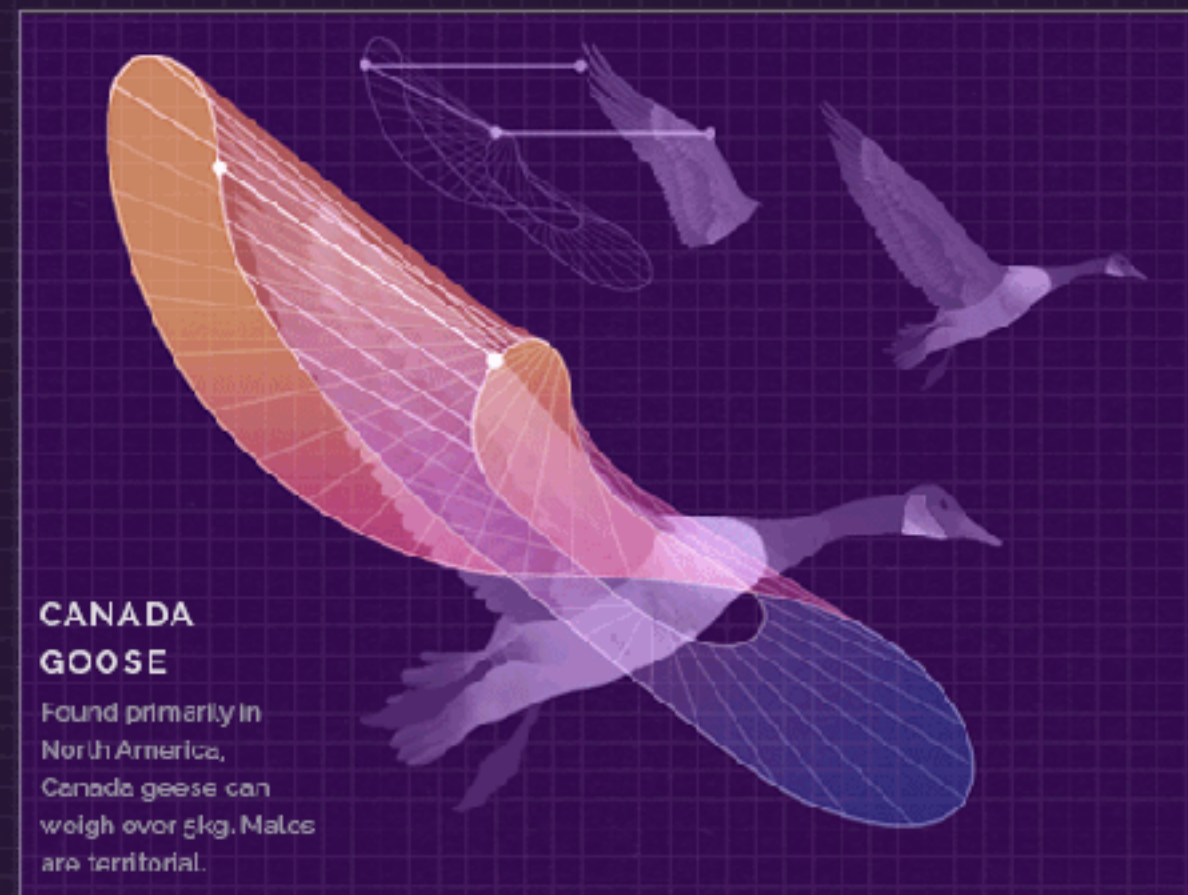
HAWK MOTH

Native to most of America, hawk moths are often used in labs due to their large size and short life cycle.



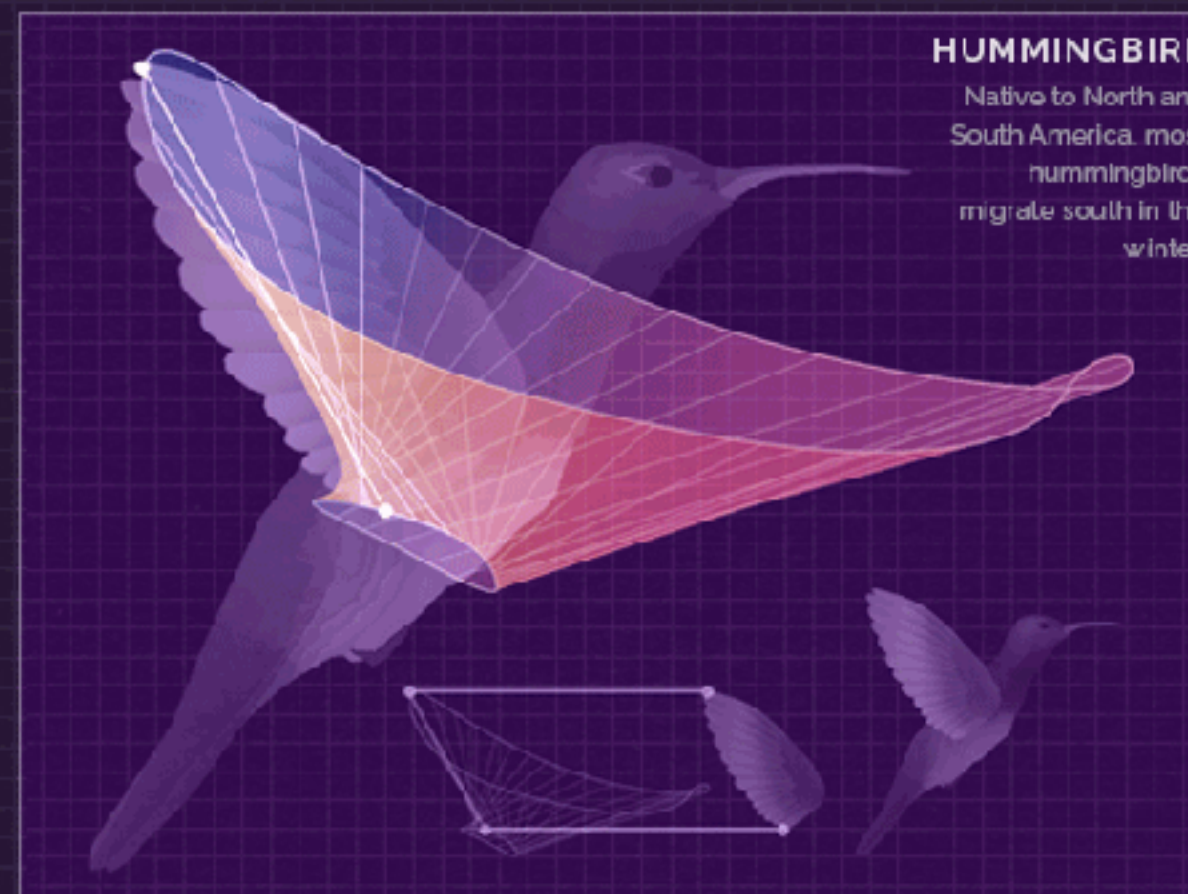
EGYPTIAN FRUIT BAT

These bats are important pollinators native to the Middle East and most of Africa.



CANADA GOOSE

Found primarily in North America, Canada geese can weigh over 5kg. Males are territorial.



HUMMINGBIRD

Native to North and South America, most hummingbirds migrate south in the winter.

PLANET EARTH CONTROL DECK

@2015 ELEANOR LUTZ
TABLETOP WHALE.COM



VIEW SCREENS

AS WE MOVE AROUND THE SUN THROUGHOUT THE YEAR, DIFFERENT STARS BECOME VISIBLE FROM THE SAME SPOT ON EARTH.

◀ LOCAL TIME
JAN 01

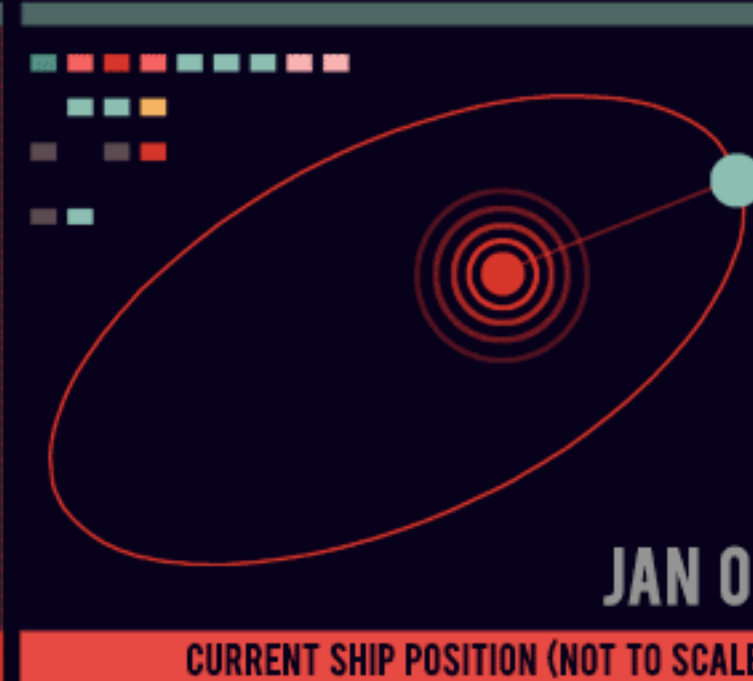
THE VOYAGER IS CURRENTLY IN INTERSTELLAR SPACE, HEADING TOWARDS THE OORT CLOUD AT A SPEED OF 540 MILLION KM A YEAR. IT CARRIES 115 PHOTOS CHOSEN TO REPRESENT THE HUMAN RACE TO ANY OUTSIDERS.

BASIC INFORMATION ABOUT THE EARTH:		
AXIAL TILT	23.4393 DEGREES	
SHIP GRAVITY	9.80665 M/S ²	
SHIP DIAMETER	12,742 KM	
ATMOSPHERIC OXYGEN	21%	
ATMOSPHERIC NITROGEN	78%	
ORBIT VELOCITY	29783 M/S	
ROTATION PERIOD	23.934 HOURS	

CURRENT SHIP STATUS

ORBITING SUN

CLASS: YELLOW DWARF
SURFACE TEMP: 5500 °C
SURFACE GRAVITY: 274 M/S²
AGE: 4.6 BILLION YEARS OLD



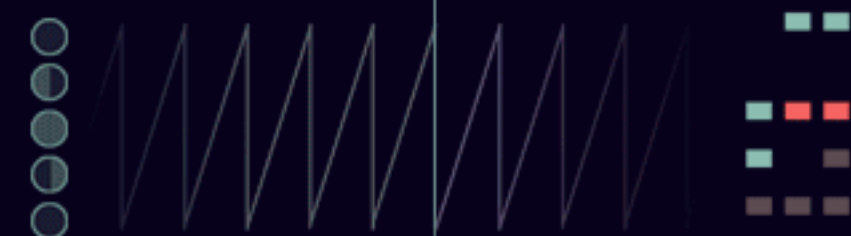
HULL TEMPERATURE	6 °C
HUMIDITY	88 %
WIND SPEED	5 KM/HR
DAY LENGTH	8.53 HRS
SHIP SURFACE AREA	510.60 MILLION KM ²
SHIP VOLUME	1.08321 TRILLION KM ³
SHIP DENSITY	5.513 G/CM ³

APPROX HUMAN CARGO	7.22 BILLION HUMANS
CORE TEMPERATURE	6000 °C
CONSTRUCTION DATE	4.5 BILLION YRS AGO

SHIP VITALS (NONSTATIC DATA FROM SEATTLE 2014)

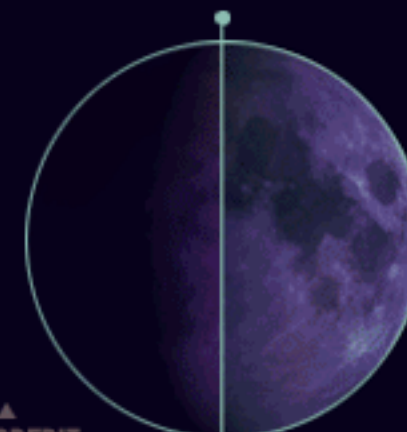
MOON GRAVITY	1.624 M/S ²
MOON SURFACE AREA	37.93669 MILLION KM ²
MOON VOLUME	21.97 BILLION KM ³
MOON DENSITY	3.344 G/CM ³

CURRENT PHASE OF THE MOON

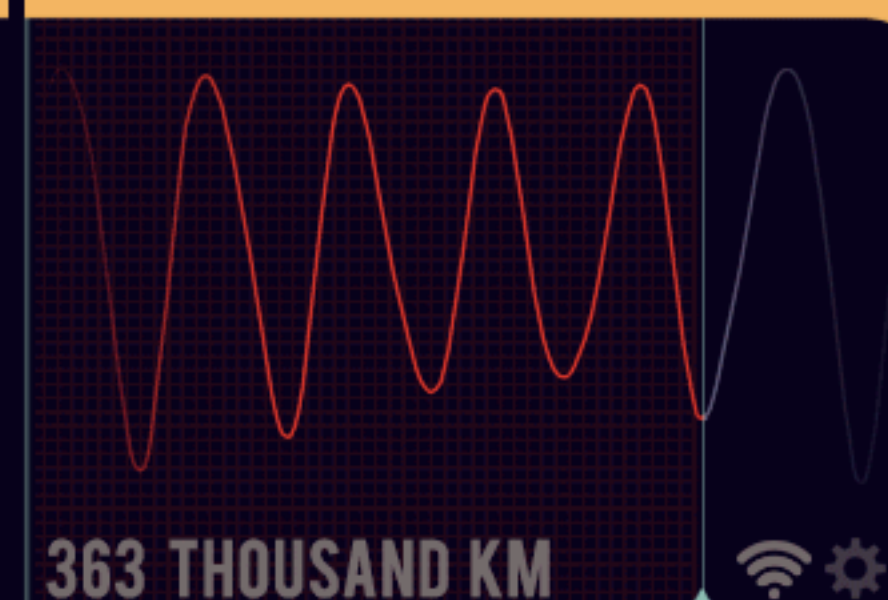


ADDITIONAL INFORMATION ABOUT THE MOON

DIAMETER 3,475 KM



LONG RANGE SCAN



SATELLITES

ONE MOON

1,235 MANMADE SATELLITES
► PRIMARY PURPOSE:
542 CIVIL/COMMERCIAL
357 GOVERNMENT
336 MILITARY
(APPROX COUNT, 07/2014)

Ingredients

Engaging **topic**

New, **surprising** information

Visually appealing and distinctive

Simple, focused message

Quick and **easy to read**

Clear, **easy to understand** data visualizations

Credible data sources

Easy to share

In a strong motion graphic, animation combines with short-form text, voiceover, an original score, and sound design to **form a story**. Whether it introduces a new product or service, educates an audience on a critical issue, asks for action, or is just intended to inspire, all of these components need to work harmoniously to create a cohesive experience for the viewer. A successful motion graphic **leaves the viewer feeling both informed and excited to learn more.**

<https://killerinfographics.com/motion-graphics>

34

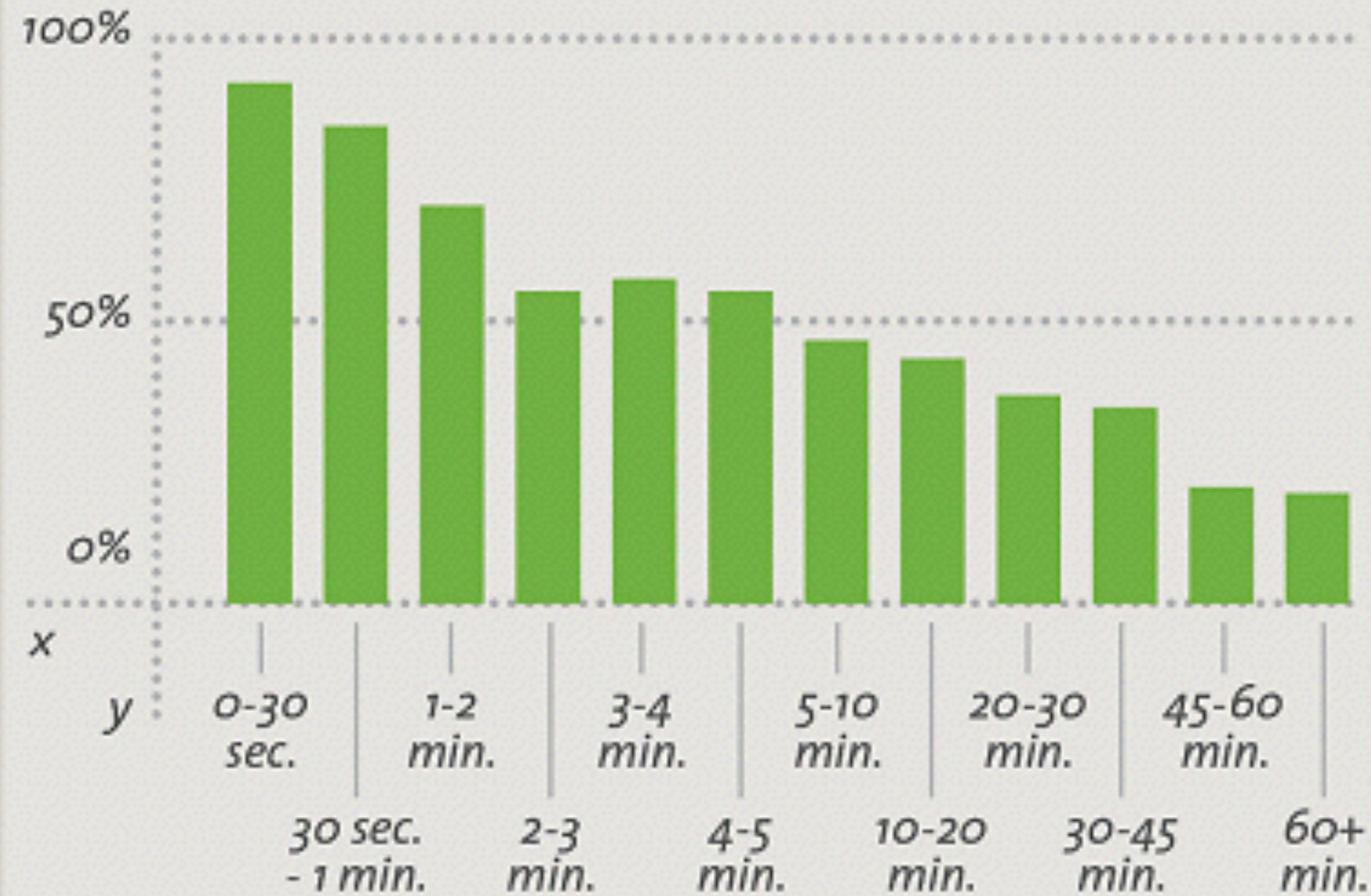
"Why should everyone in Pakistan have to suffer for one doctor's foolish decision to rid the nation of a mass murderer?"

General
The Original, Smooth Blend

TRY IT TODAY!

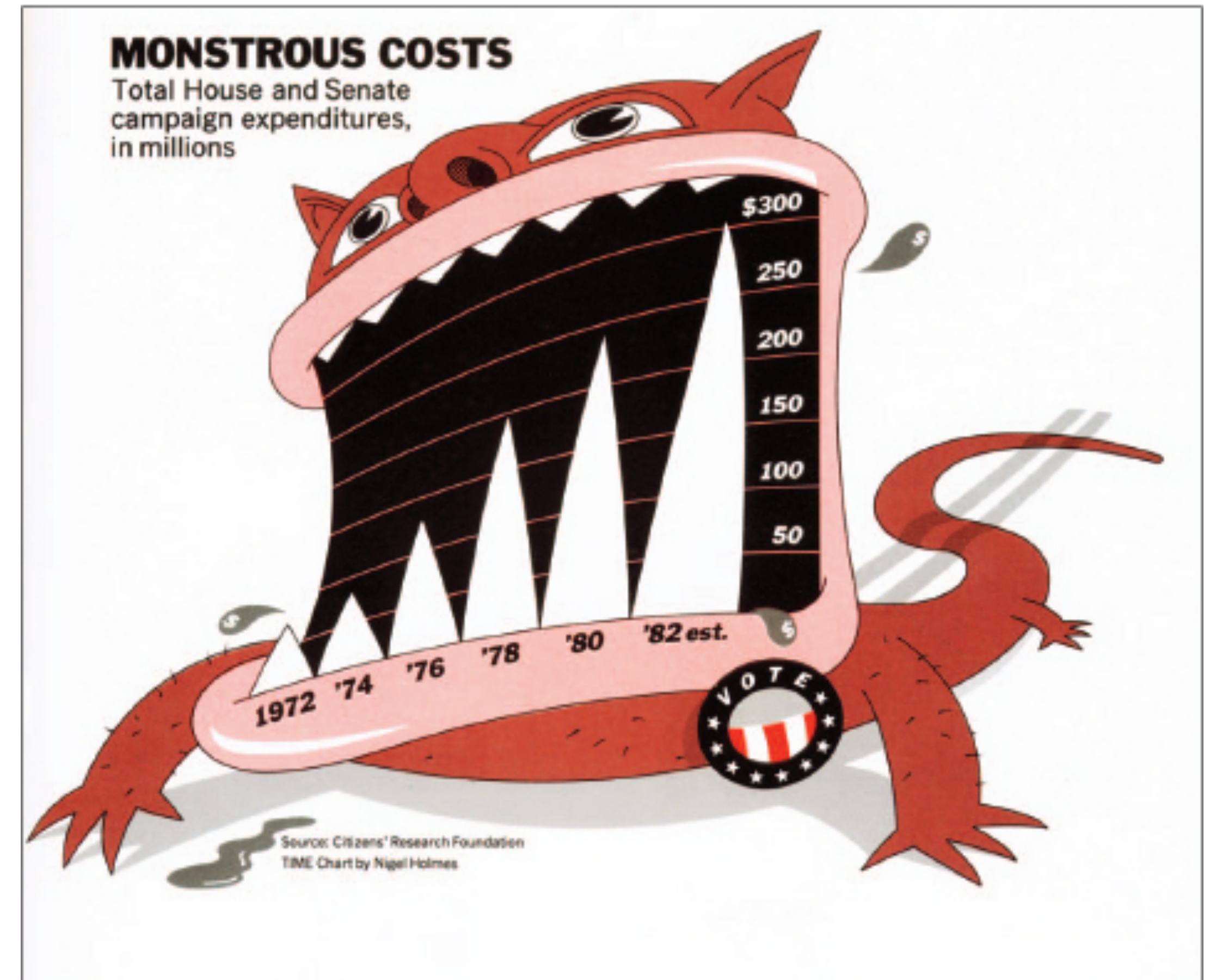
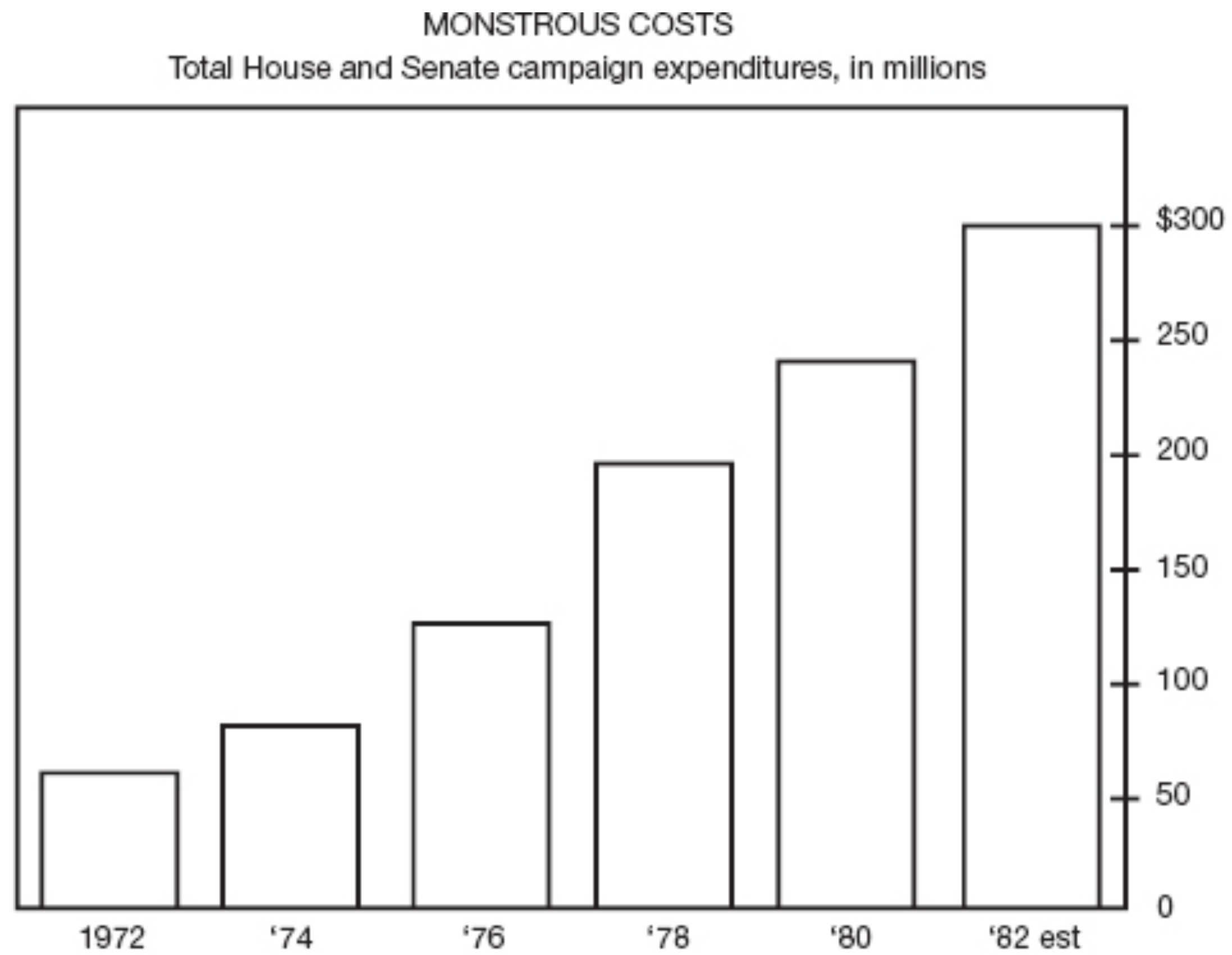


ATTENTION SPAN BY DIFFERENT VIDEO LENGTHS



From this chart one can clearly see the attention span degradation for longer videos. The “y” coordinate represents how much of the video was watched, as a percentage. The “x” coordinate represents different video length brackets.

Psychologists say that the average human sustained attention span is 20 minutes. But for online videos, it seems to be about 60 seconds.

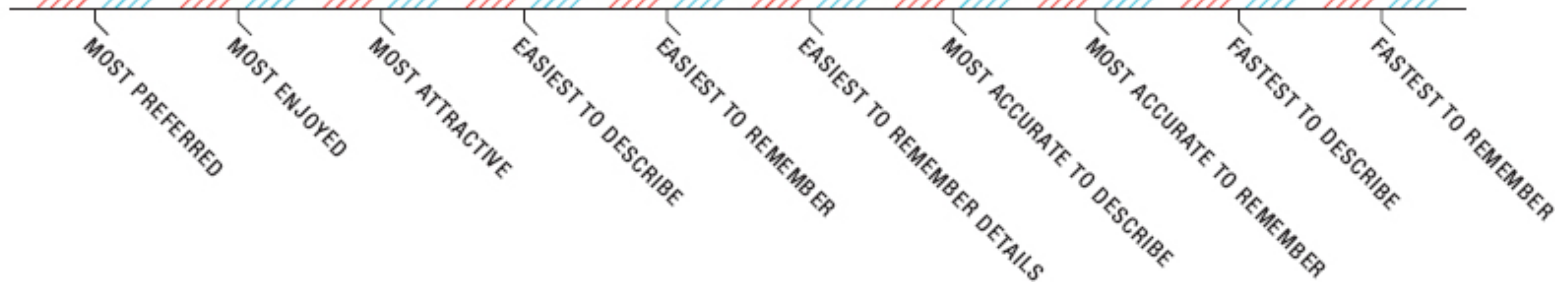


Nigel Holmes

KEY  HOLMES  PLAIN

COUNT OF RESPONSES

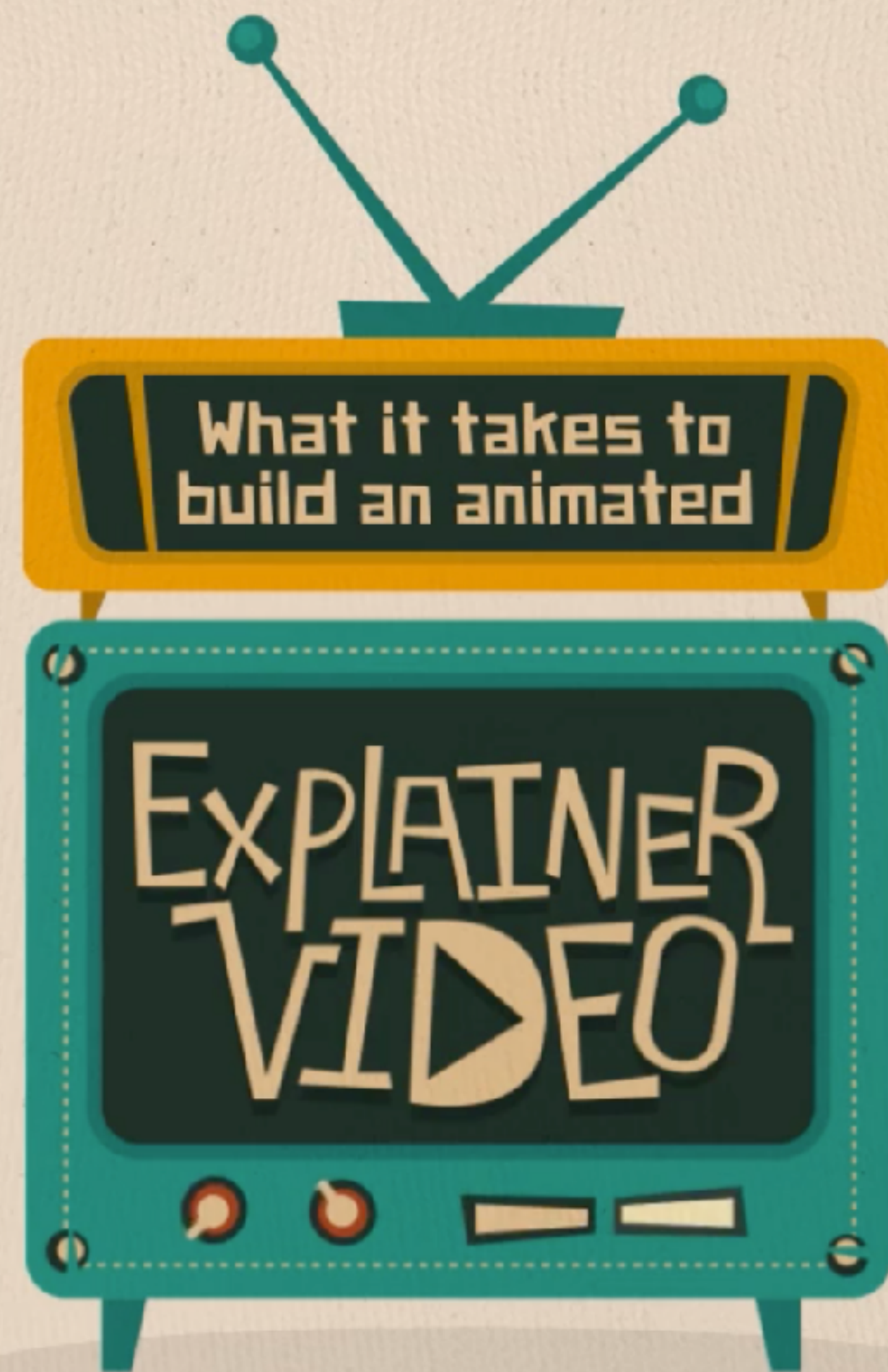
20 —
18 —
16 —
14 —
12 —
10 —
8 —
6 —
4 —
2 —



<https://www.easel.ly/animated-infographics>

BIGGER





Phase I: Data Collection

Influences the quality of your final work.

Research and collect raw data on topic.

Reliable research is a vital component. Use validated references with up-to-date info.

Research Methods

Primary research (i.e. interviews, surveys, case studies, etc).

Secondary research (i.e. reading trade journals, studies, work of other researchers)

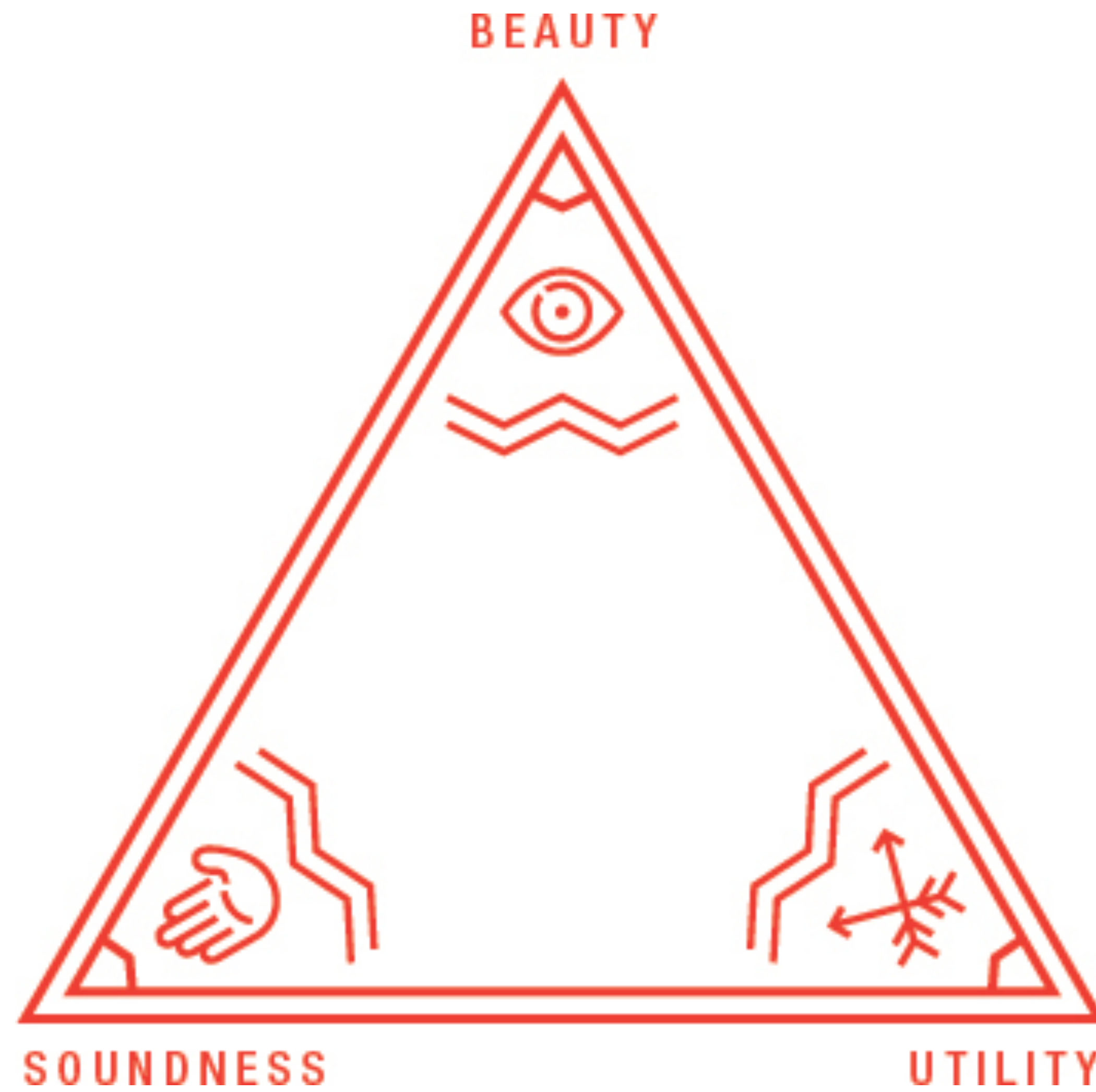
Other sources (market research, focus groups, customer interview, survey)

Target Audience

What is the purpose behind this video infographic?

Who are going to benefit with my videos?

What do I want them to do after watching my videos?



Phase II: Structure Methods

The **utility** of an infographic is measured by how it enables a brand to reach its objectives.

What is the best way to organize the data?

Analyze and structure research findings.

Remember your objective.



Phase III: Extract Meaning

A **sound** infographic has meaning and integrity.

What is the overarching message?

What details are the most important details to communicate your message?

End this phase by creating a script for the **narrative** of your story.

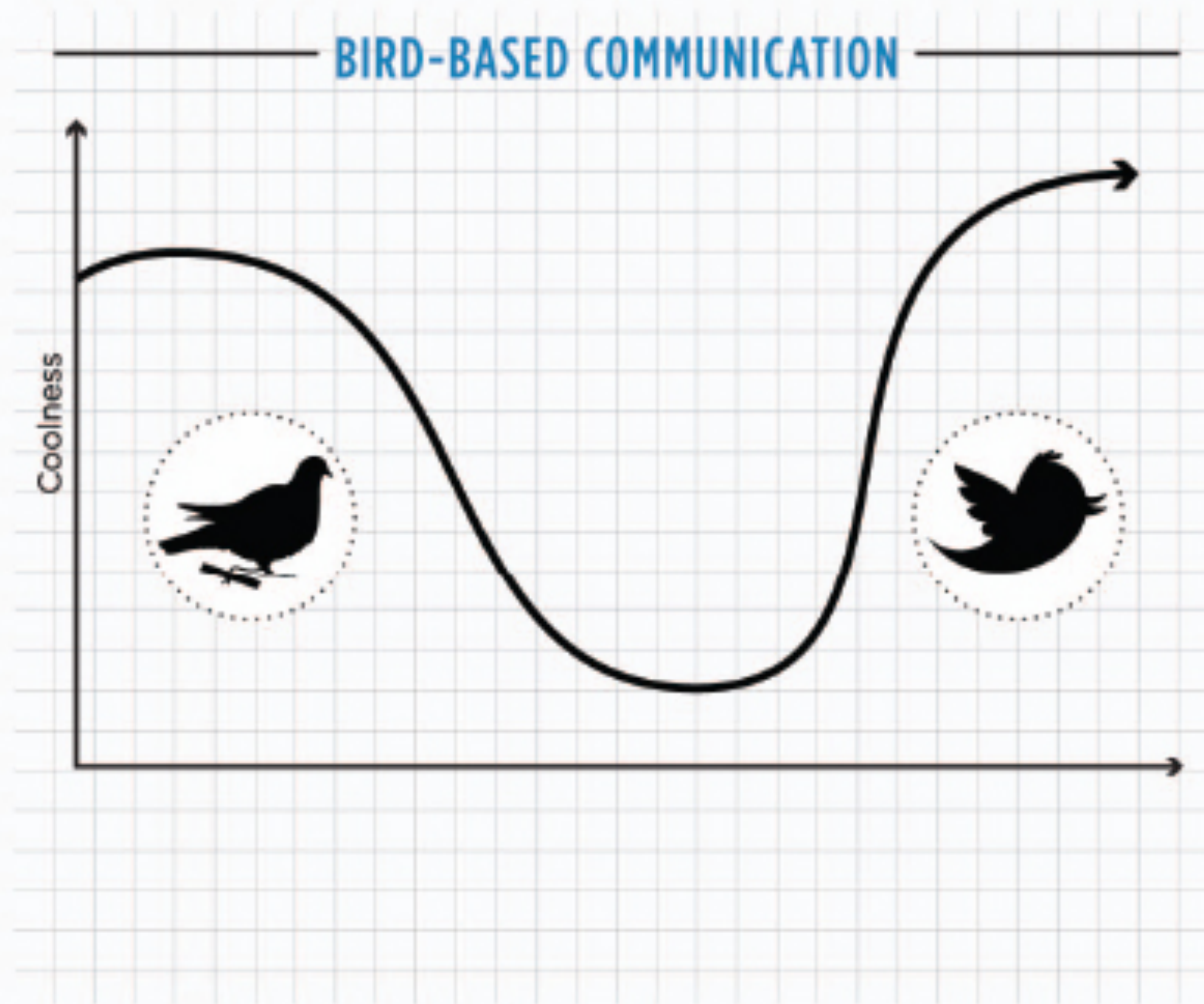


Phase IV: Visualization

How can you use visuals and time-based media to best communicate your message?

- iconography
- visual metaphor
- framing mechanisms





Comebacks come in many shapes and sizes. 

Narrow Your Focus

Less is More.

Seek to answer **one question**.

The more specific, the stronger
the connection.

People relate data to their own lives.

01

THE ILLUSTRATED GUIDE TO

POPSICLES



STEP 1

CUT WATERMELON

PUREE IN BLENDER

5 CUPS
OR 40 OUNCES

STEP 2



STEP 3

POUR INTO CUPS

ADD LIME CIRCLES

USE SMALL
CRAFT SPOONS

STEP 4

PUSH SPOONS
THROUGH THE
CENTER



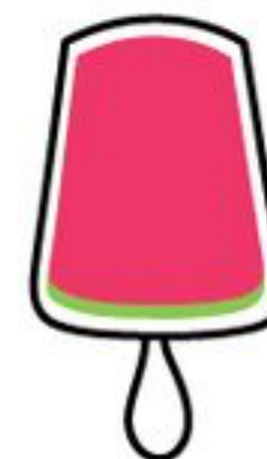
FREEZE IT

STEP 5

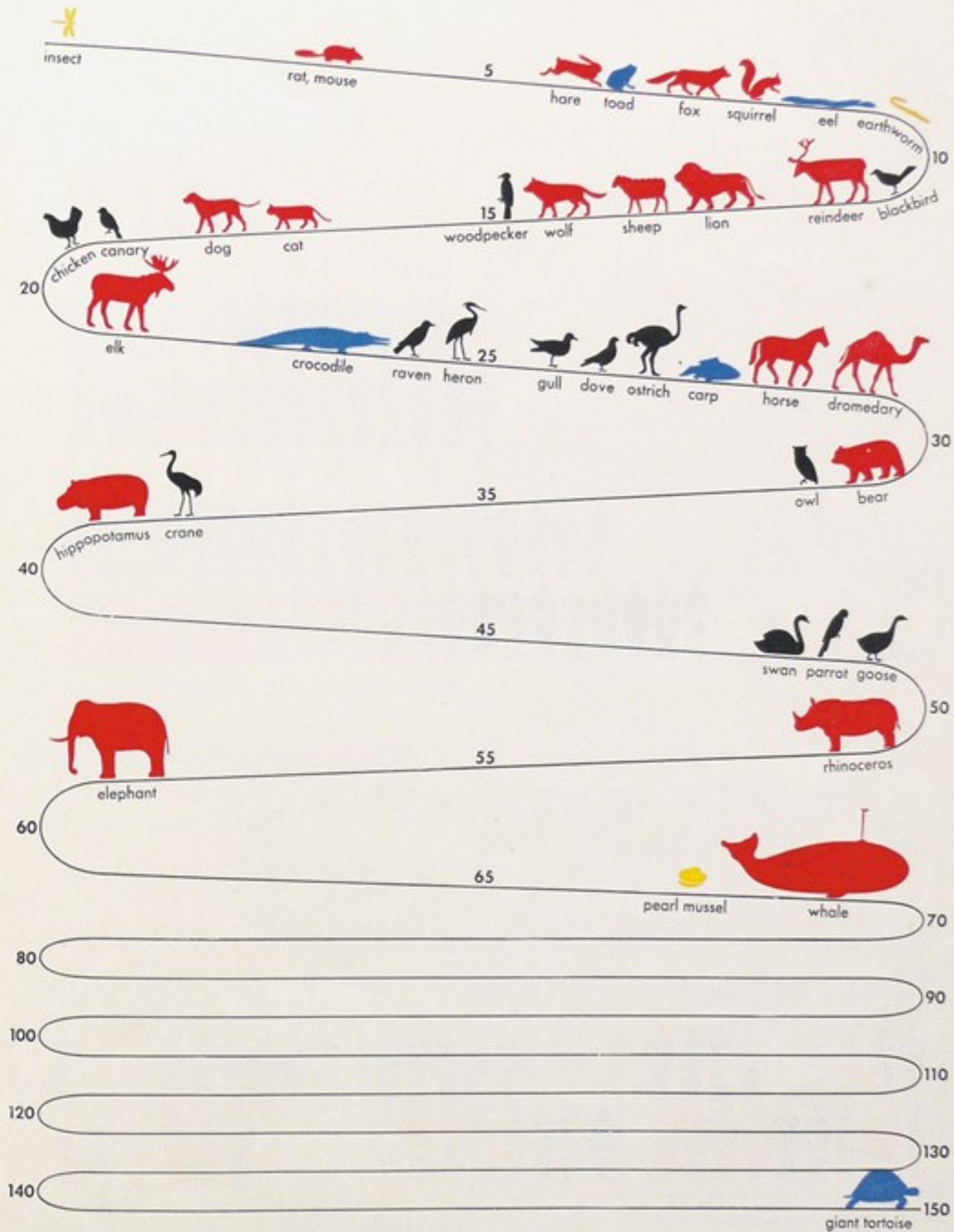
FREEZE IN FRIDGE
FOR 2 HOURS

ENJOY

STEP 6



How Long Do Animals Live?



red: mammals black: birds blue: other vertebrates yellow: invertebrates

Average ages which certain animals may be expected to reach, based on reports of zoos and estimates of biologists. Individuals have been reported as far older. (Data from Field Museum of Natural History.)

Prepared for Compton's
Pictured Encyclopedia
a International Foundation
for Visual Education

Keywords

Use callouts or large-scale keywords to draw attention.

Highlight important data or use to evoke an emotional response.

HOW TO THINK VISUALLY

using visual analogies

by Anna Vital

charts and diagrams



pie chart



venn diagram



concentric diagram



circular chart



bubble chart



bubble race chart



line chart



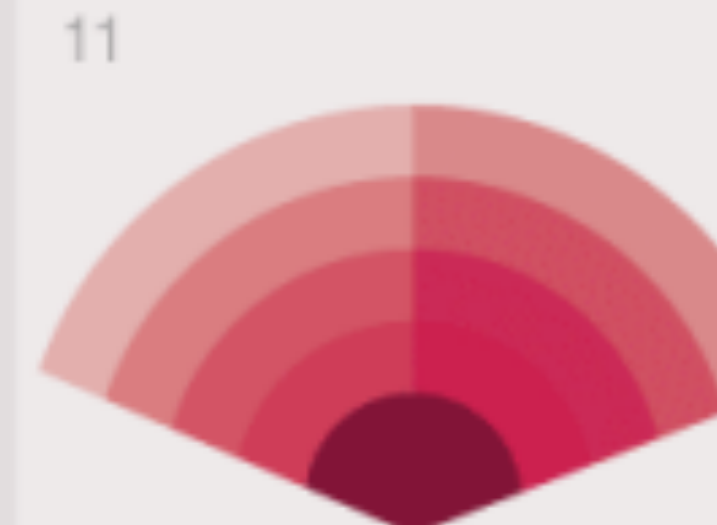
area chart



scatter plot



sunburst chart



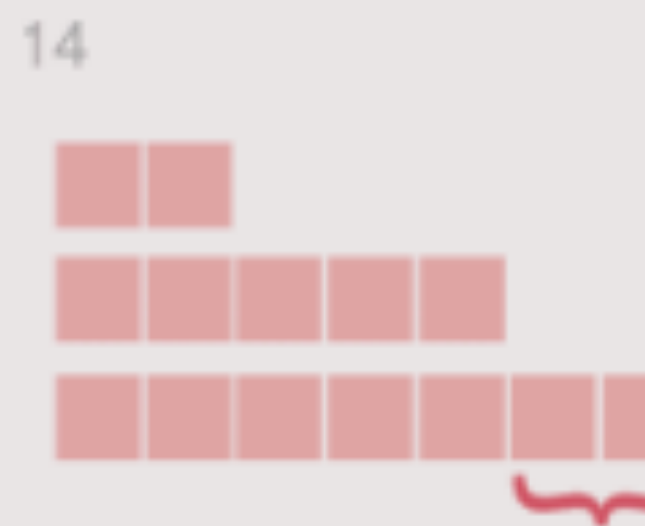
fan chart



windrose chart



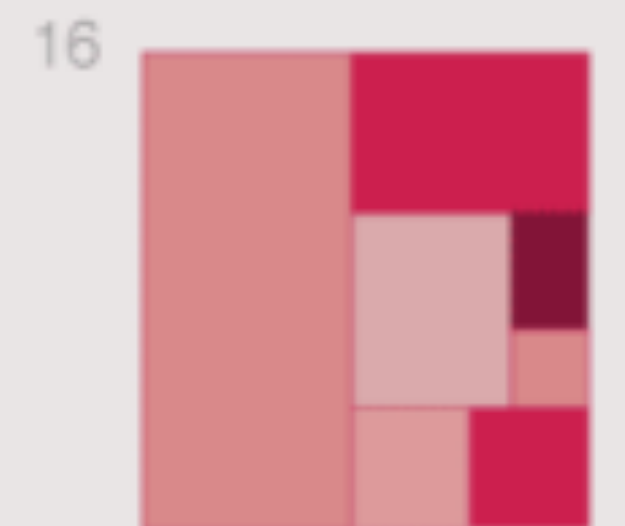
bar chart



tape diagram



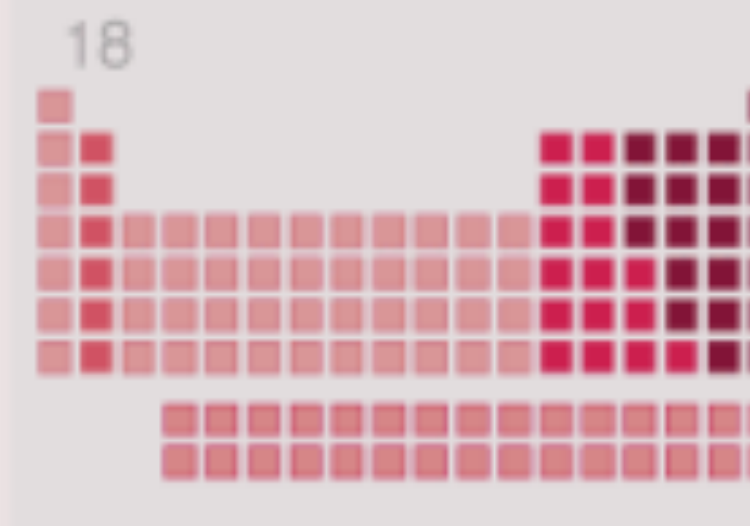
gantt chart



tree map



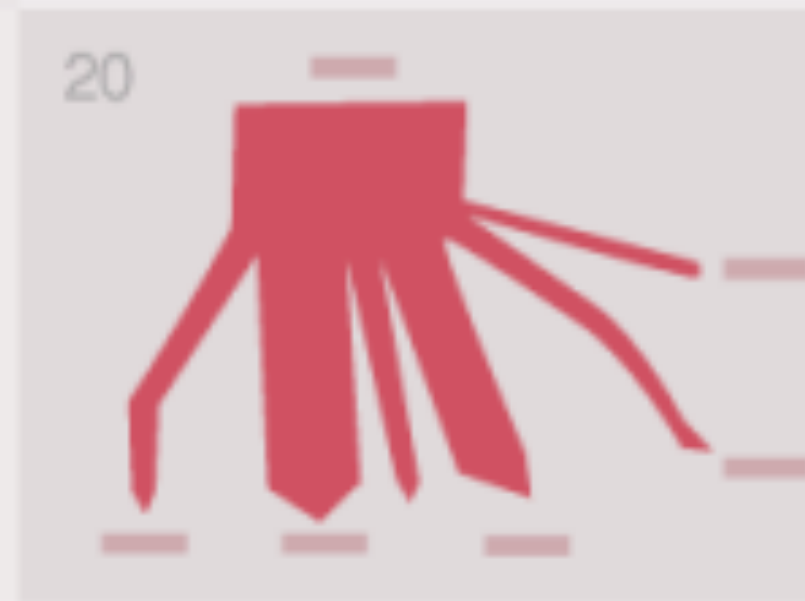
grid



periodic table



arc diagram



sankey chart



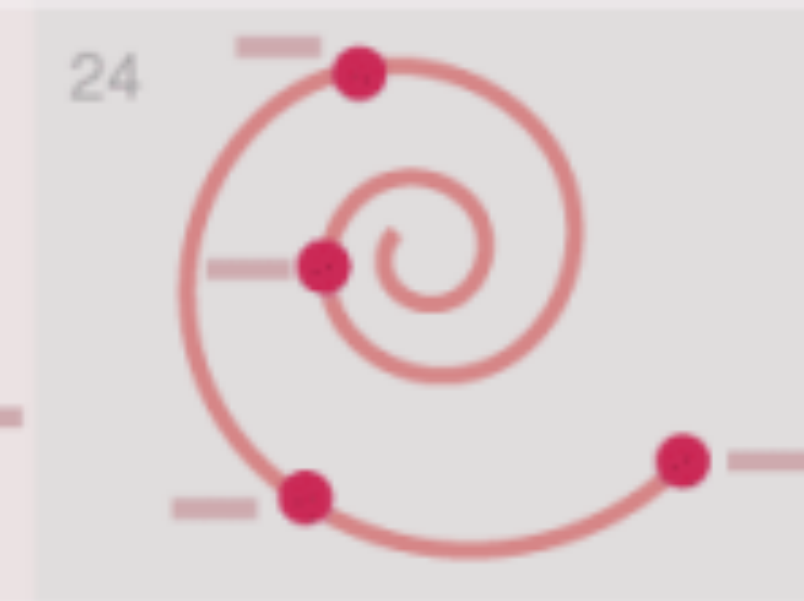
chord chart



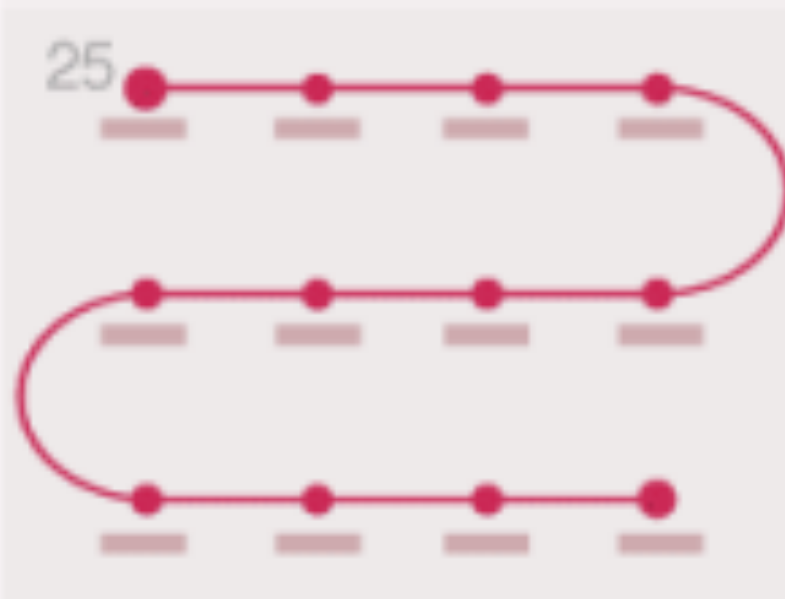
radar chart



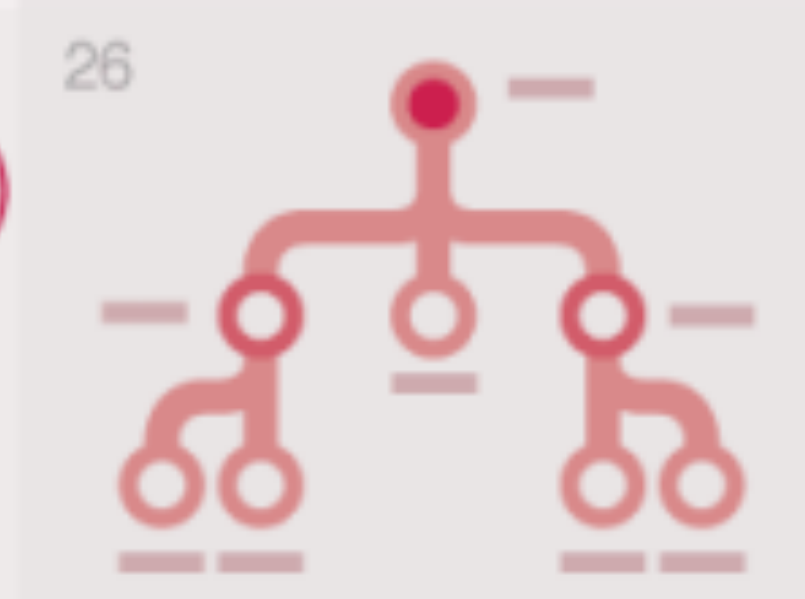
polar grid



spiral graph



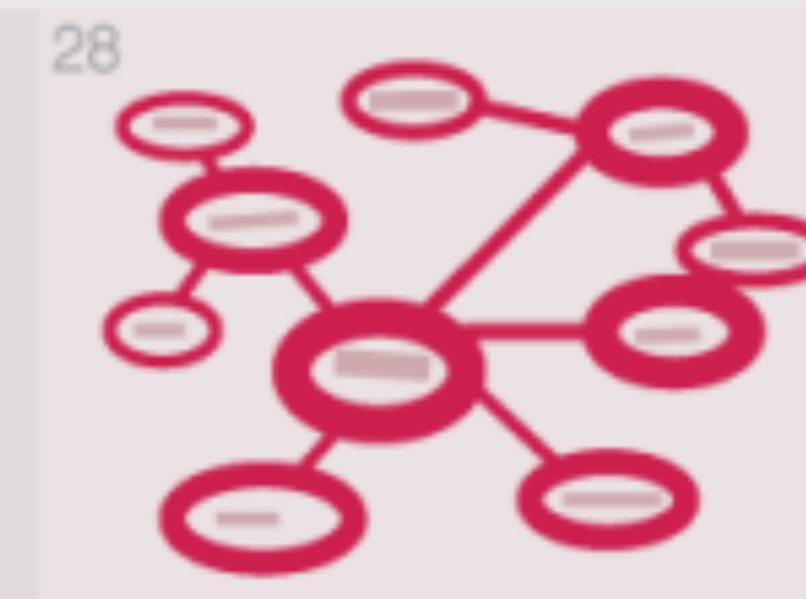
timeline



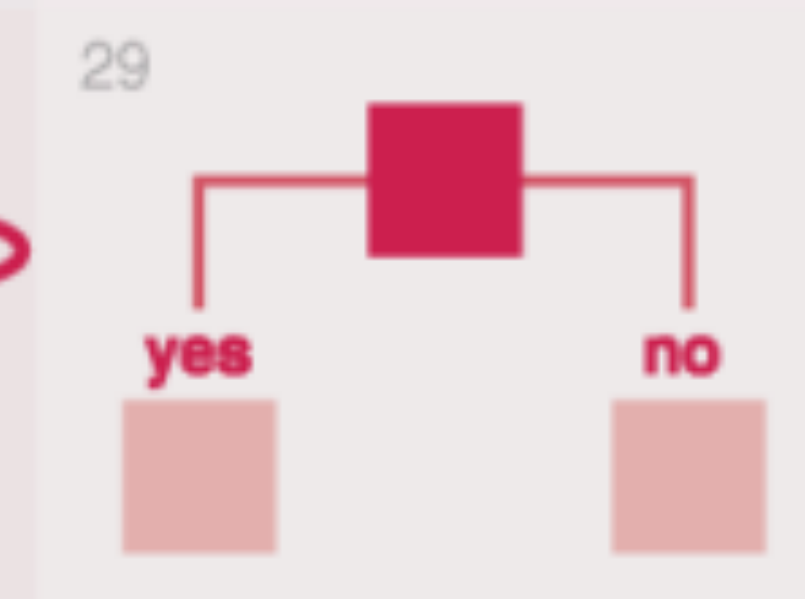
flow chart



binary tree



mind map



decision tree



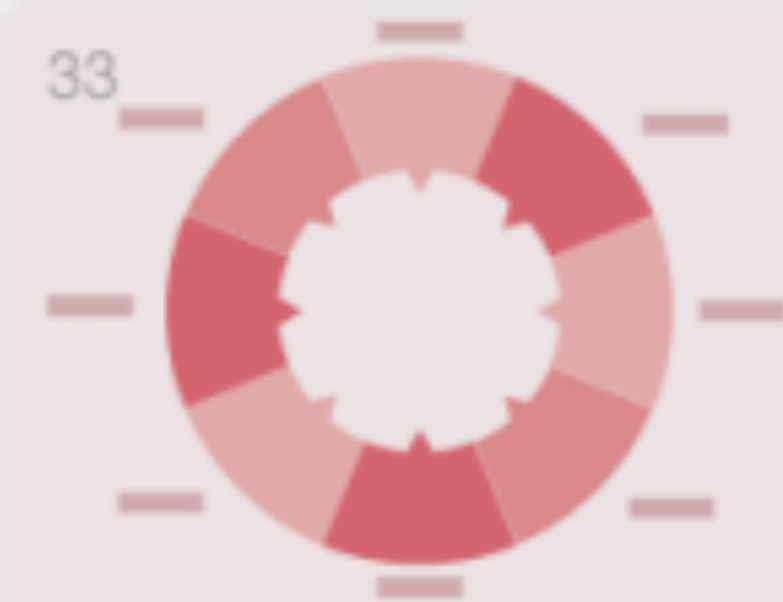
block scheme



pyramid



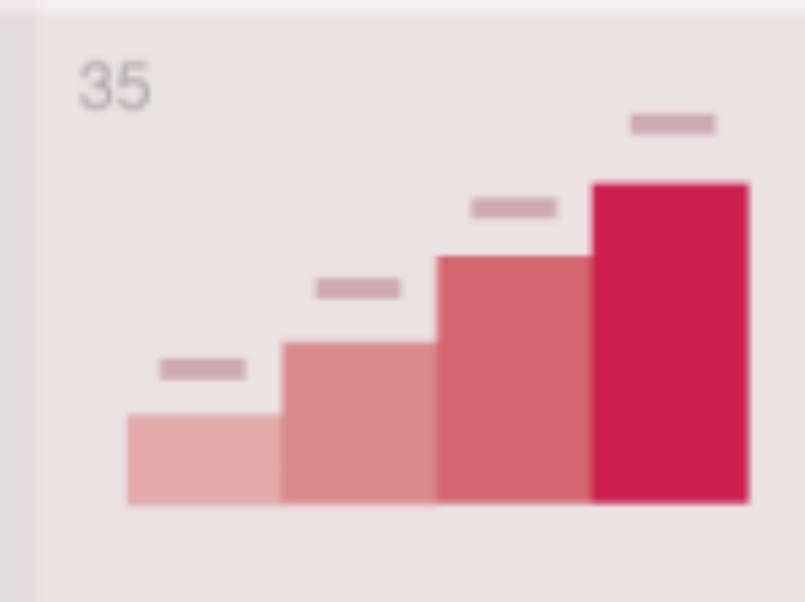
funnel



spoke wheel



cycle wheel



staircase



game strategy sketch



37



38



39



40



41



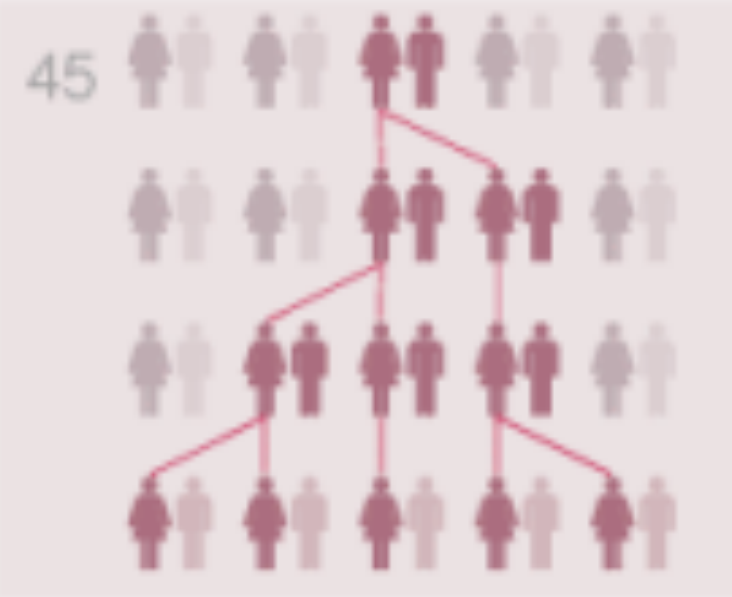
42



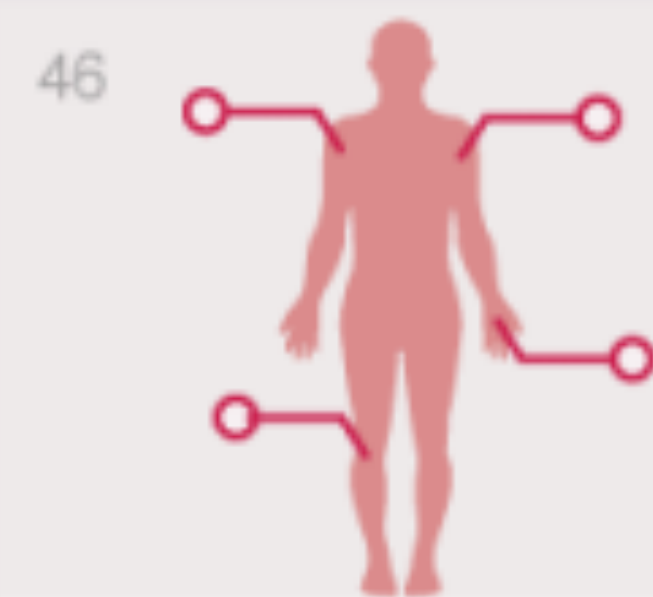
map



Ishikawa diagram



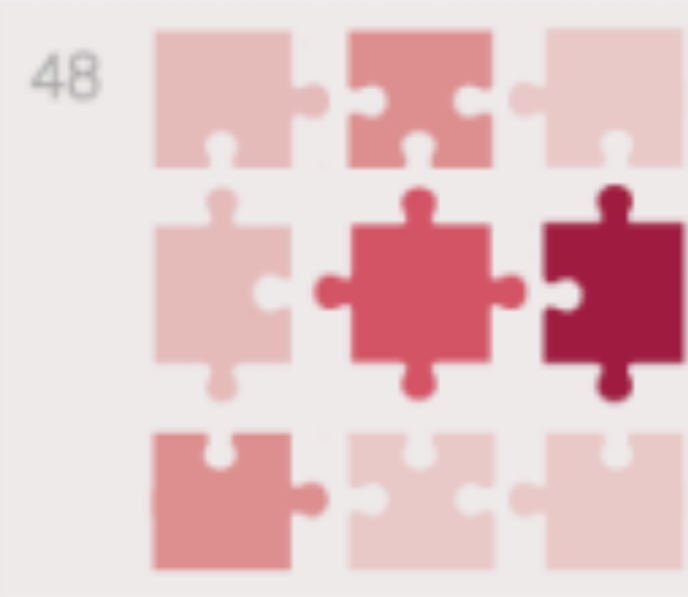
genealogy tree



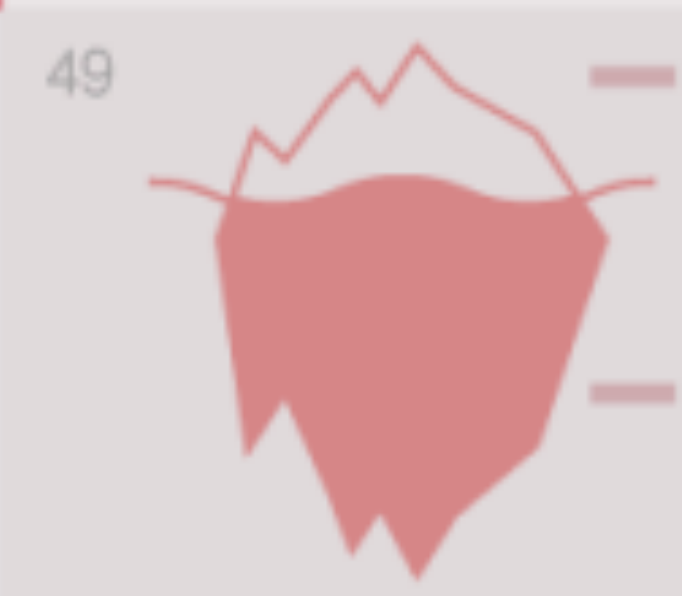
anatomy



maze



puzzle



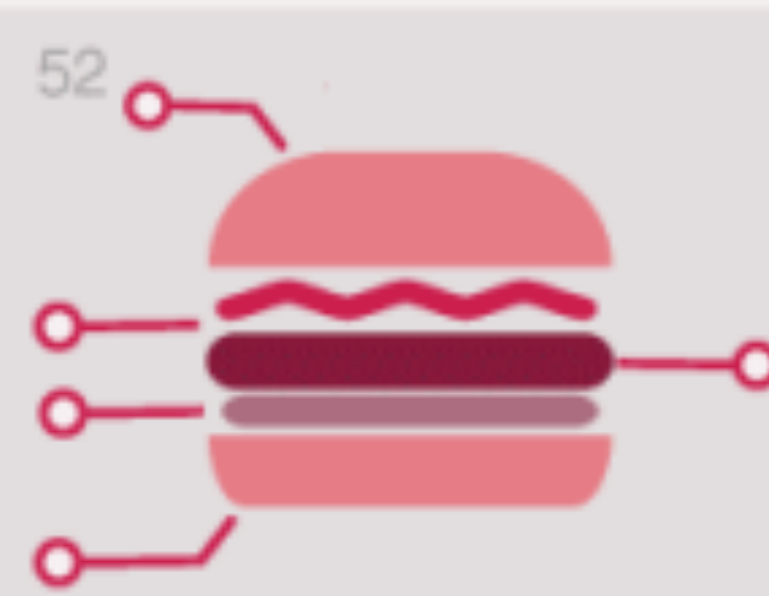
iceberg



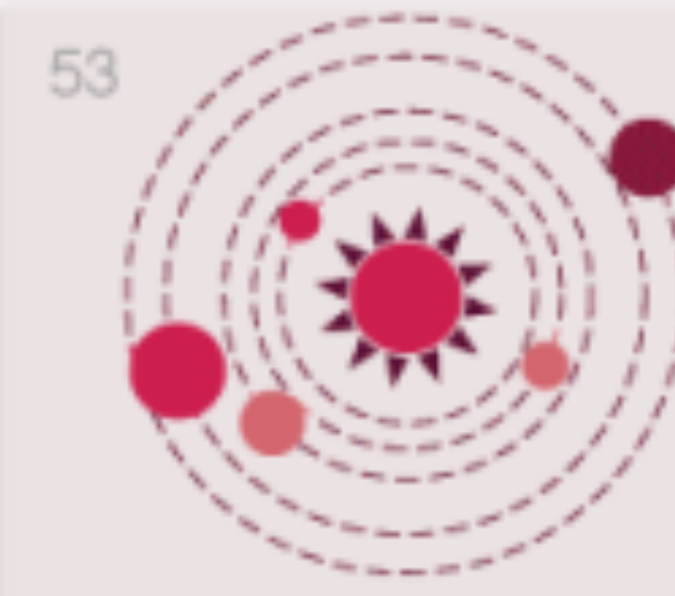
mountain



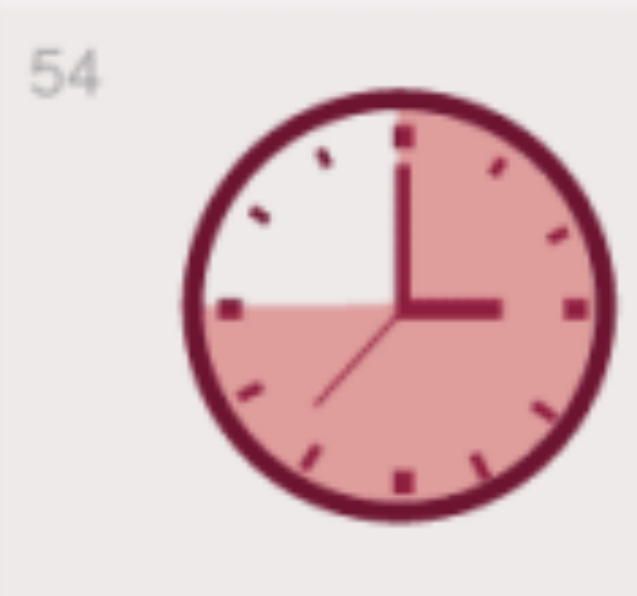
layers of the onion



sandwich



solar system



clock face



domino effect



roller coaster



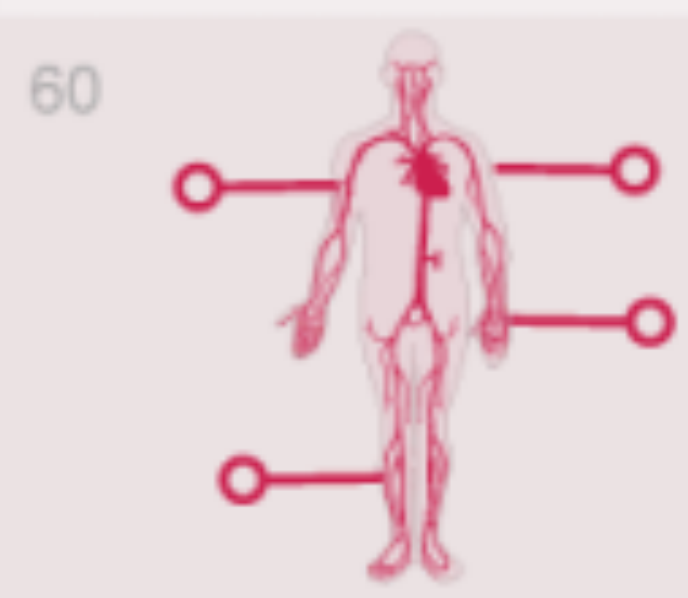
experiment



root



tree



circulatory system



61



62



63



64



65



66

iceberg

mountain

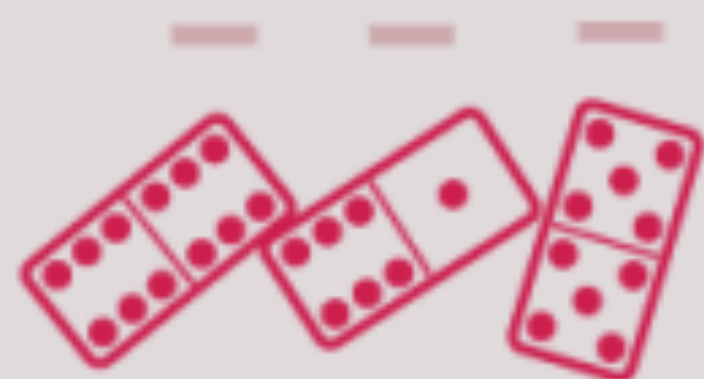
layers of the onion

sandwich

solar system

clock face

55



domino effect

56



roller coaster

57



experiment

58



root

59



tree

60



circulatory system

61



life of a household

62



life of a city

63



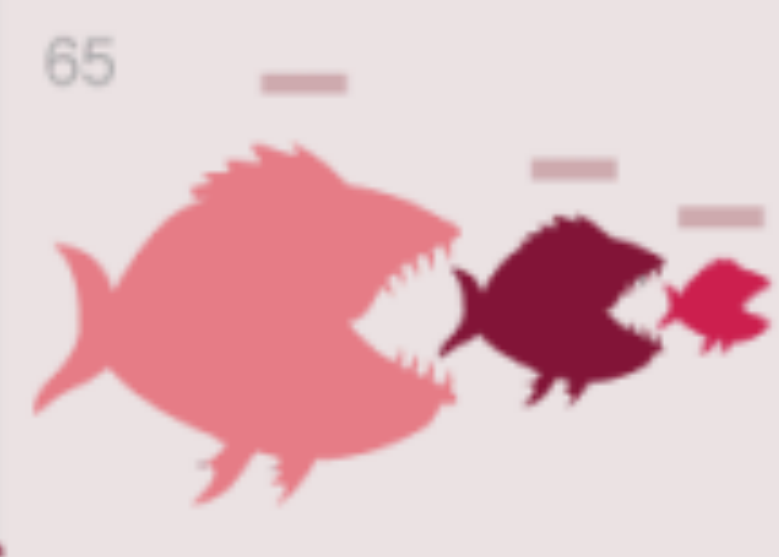
marathon

64



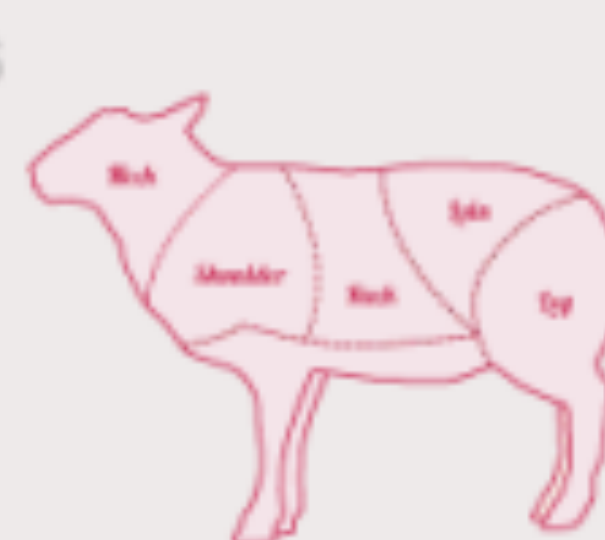
evolution

65



food chain

66



meat cuts

67



the playing field

68



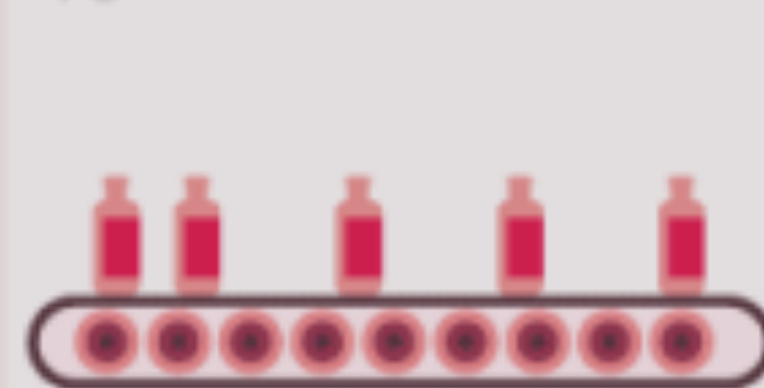
factory

69



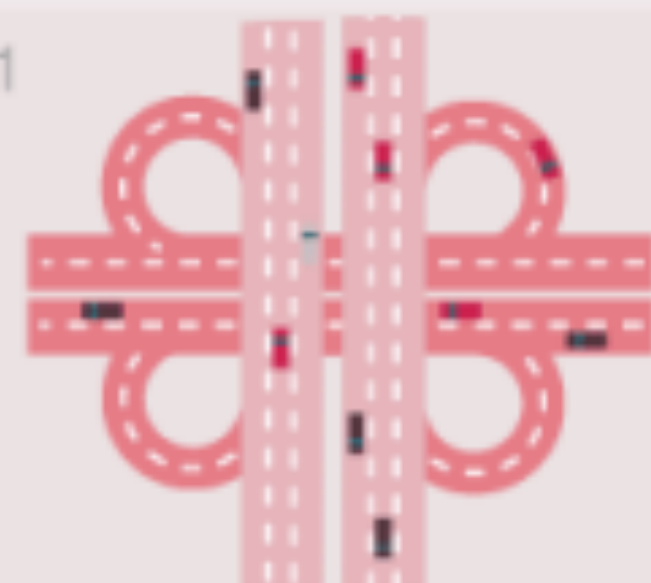
tool set

70



conveyor belt

71



road

72



the machine

Assets	Meaning	Example
Map	Location, Schematic, Spatial	Geographical representation
Graph	Quantitative data, Comparison, Relation between quantities	For statistical information
Diagram	Icon, sequence, Process, Timeline	To demonstrate a process or event, or as a timeline
Chart	Flow, Organisational, Schematic	To show some statistical information

JOEY DONUT'S YEAR IN REVIEW

2011

ANNUAL SALES

\$292,200.00

ANNUAL REVENUE BY DONUT TYPE



MAPLE BAR
\$93,504



SPRINKLES
\$70,128



JAM-FILLED
\$58,440

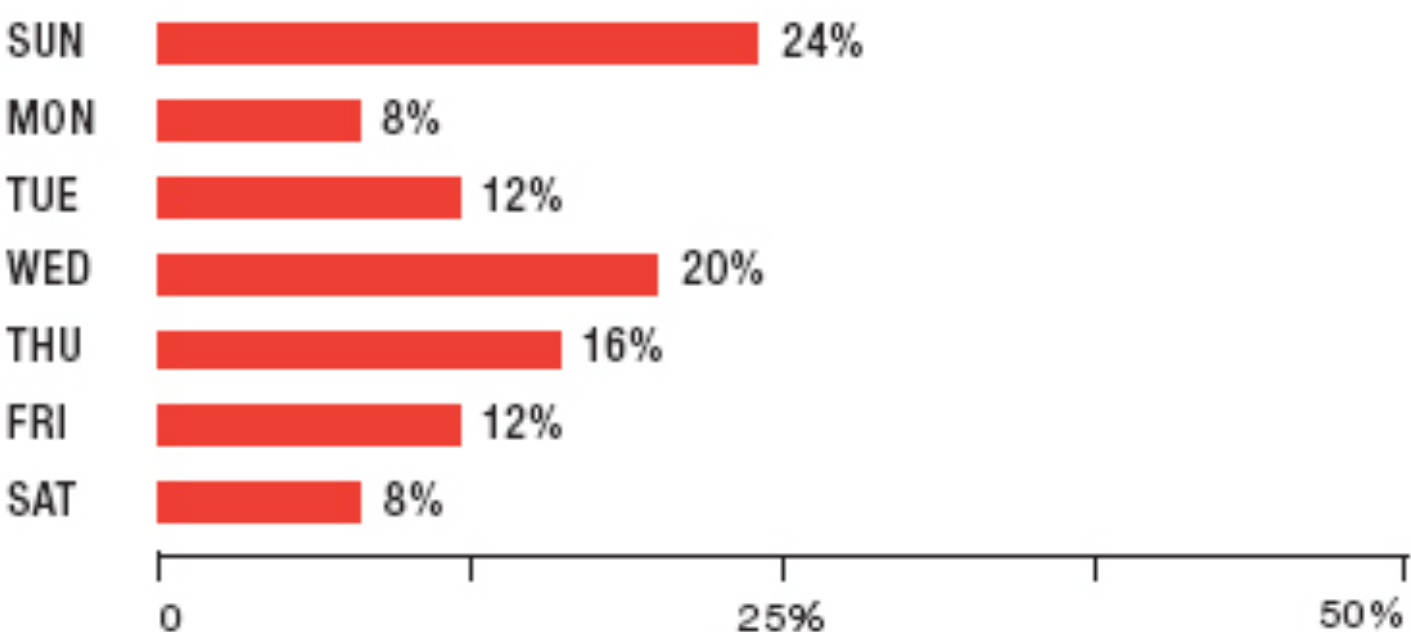


BEAR CLAW
\$46,752

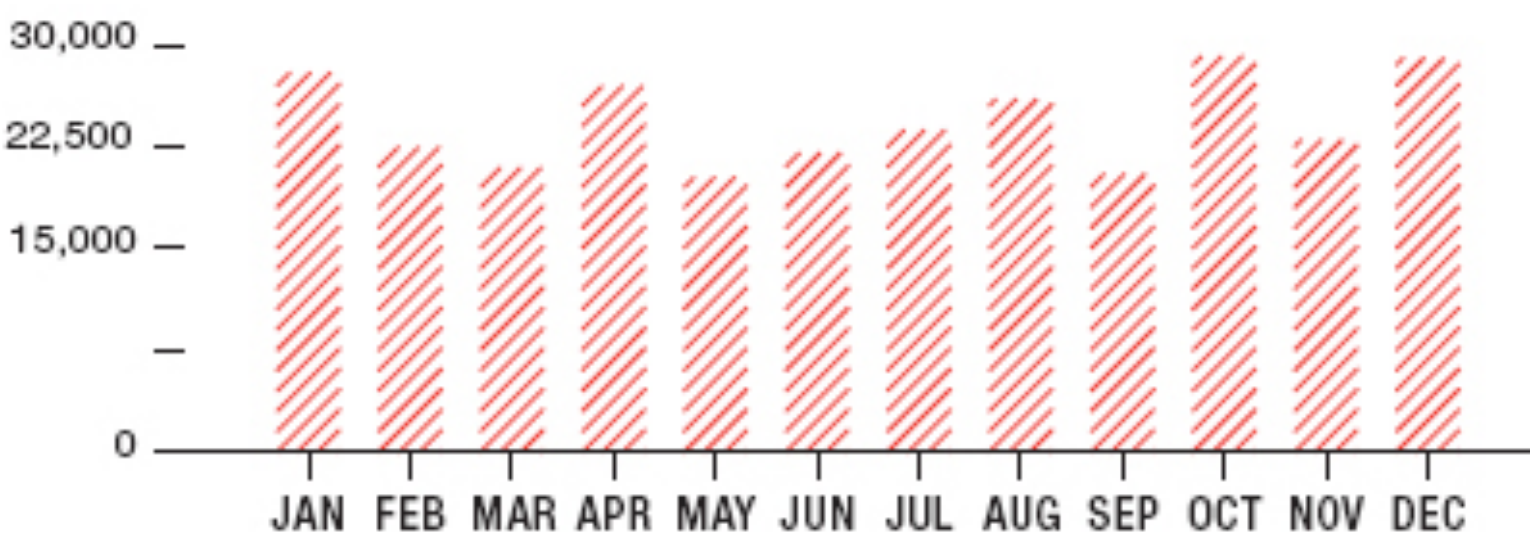


OLD-FASHIONED
\$23,376

BEST DAYS FOR DONUT SALES



MONTHLY DONUT SALES



DONUT SALES BY TYPE



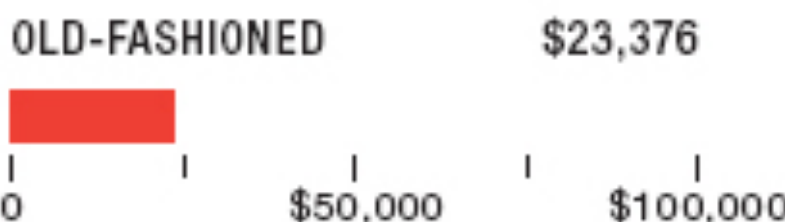
LEGEND



HIGHEST PERFORMER

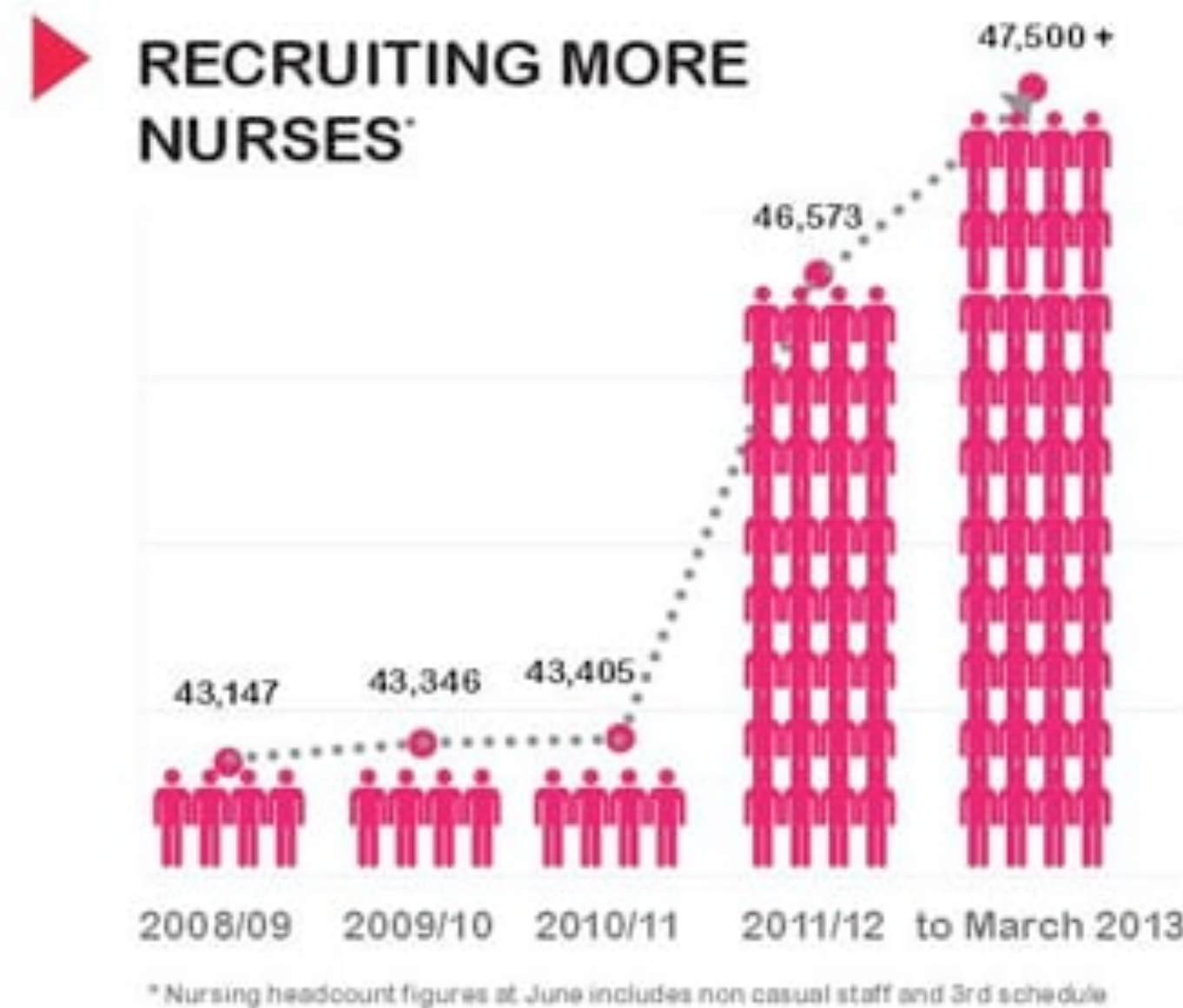


LOWEST PERFORMER



Misleading Visuals

The NSW Health system is...



NSW Ministry of Health March 2013



Color Coding

Avoid using a legend or key.

Use colors to **create meaning**.

For example, one color might designate labels, another to fill chart data, another to draw attention to icons.

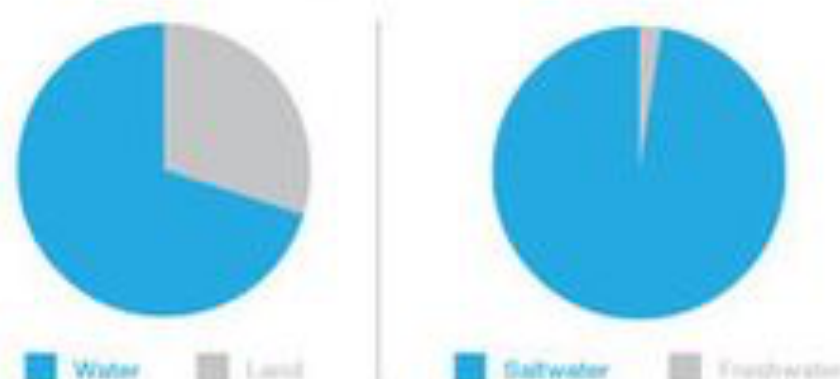
WATER WAY TO GO

FACTS ABOUT THE GLOBAL WATER CRISIS,
ACCESS, SANITATION, AND SOLUTIONS.

created by Jacob Johnson

RESOURCES

Water is a natural, renewable resource... so why is there a problem?



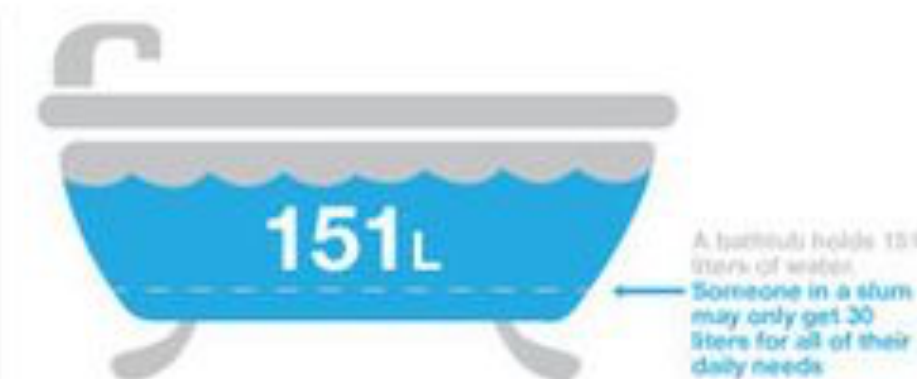
ACCESS

894 Million people don't have access to safe water supplies



HUMANS

A mere 5-13 gallons of freshwater per person per day is needed to ensure basic needs



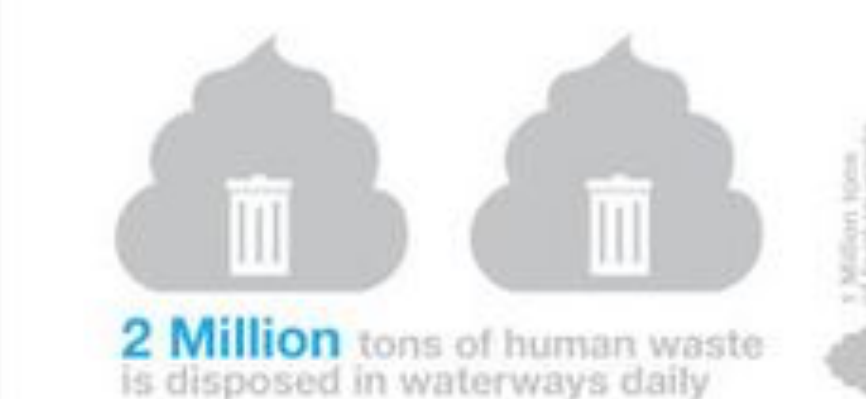
DEATHS

Lack of water claims more lives with disease than war claims through guns



DISEASE

34 Million people could perish in the next 20 years from water-related disease



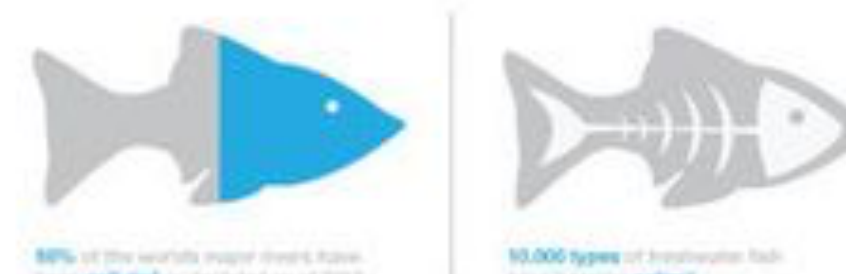
SANITATION

Nearly half of the world lacks any means to sanitize their drinking water



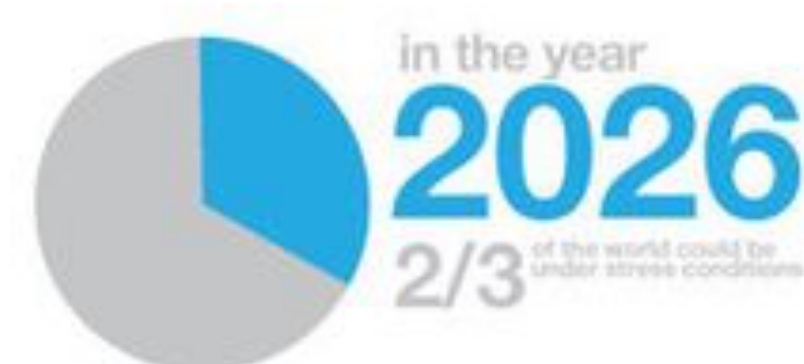
POLLUTION

Much of the world's water supply is taking victim to pollution and depletion



FUTURE

By 2025 1.8 billion people will have water scarcity



SOLUTIONS

Solving this crisis is possible; we have the knowledge



COMPANION PLANTING HERBS

 BASIL	 ROSEMARY	 CHIVES					
 Marigold	 Tomato	 Pepper	 Broccoli	 Beans	 Pepper	 Carrot	 Tomato
 MARIGOLD	 MINT	 LAVENDER					
 Carrot	 Tomato	 Tomato	 Cabbage	 Sage	 Beans	 Rosemary	 Carrot
 CAMOMILE	 FLAX	 GARLIC					
 Onion	 Cabbage	 Potato	 Beetroot	 Raspberry	 Rose		
 CHERVIL	 OREGANO	 DILL					
 Raddish	 Carrot	 Tomato	 Onion	 Cabbage			

WHITE

BRIGHTNESS

WHITE CAN BE A VERY POWERFUL COLOUR TO USE WHEN SHOWING INNOCENCE OR PEACEFULNESS. IT CAN ALSO BE USED TO EVOKE FEELINGS OF CLEANLINESS, STERILITY OR EMPOWERMENT.



RED

VERY EMOTIONAL

RED CAN EVOKE A VERY POWERFUL RESPONSE BOTH EMOTIONALLY AND SOMETIMES EVEN PHYSICALLY. OFTEN USED IN RELATION TO LOVE, PASSION, FESTIVITY & IMPORTANCE. IT CAN ALSO BE RELATED TO DANGER.



PINK

FEMININE

PINK IS STEREOTYPICALLY A FEMININE COLOUR, OFTEN USED IN RELATION TO THE TOPICS OF BABIES & HEALTH. THIS COLOUR IS ALSO USED WHEN TALKING ABOUT PRETTY OR SWEET THINGS.



COOL

COLOUR

A COOL COLOUR REFERS TO COLOURS SUCH AS GREEN, BLUE & PURPLE. THESE COLOURS ARE OFTEN RELAXING & CALMING, MAKING THEM MUCH MORE RESERVED THAN OTHER COLOURS.



HAVING TROUBLE?

SOMETHING DOESN'T LOOK RIGHT

AROUND 2.7 MILLION OF THE BRITISH POPULATION ARE COLOUR BLIND. THESE PEOPLE HAVE TROUBLE SEEING COLOUR FROM A SPECIFIC PART OF THE SPECTRUM.



NEUTRAL

COLOUR

NEUTRAL REFERS TO COLOURS SUCH AS WHITE, GREY & BLACK. THE MEANING & IMPRESSIONS GIVEN BY THESE COLOURS ARE EASILY AFFECTED BY THEIR SURROUNDING COLOURS.



PURPLE

EXPENSIVE

PURPLE IS A COLOUR OFTEN USED WHEN TALKING ABOUT LUXURY & ROYALTY. IT'S ALSO USED TO CONVEY BRAVERY, ARISTOCRACY AND IN SOME CASES SPIRITUALITY, AS IT'S PART OF THE BLUE SPECTRUM.



GREEN

WEALTH

GREEN IS THE COLOUR OF MONEY SO WE OFTEN ASSOCIATE THIS COLOUR WITH WEALTH. IT'S ALSO ANOTHER COLOUR WE ASSOCIATE WITH NATURE, OFTEN LEADING TO ITS USE WHEN TALKING ABOUT GROWTH, THE ENVIRONMENT & RENEWAL.



BLUE

SPIRITUAL

BLUE IS USED WHEN TALKING ABOUT LOYALTY, DEPENDABILITY & TRUST WHICH IS WHY WE USE IT HERE AT COMMUNICATOR. BLUE IS ALSO USED TO SHOW 'THE BEST' OR HIGH TECHNOLOGY.



BROWN

NATURAL

BROWN IS USED TO PROMOTE FEELINGS OF COMFORT & SECURITY. DUE TO ITS EARTHY TONES IT'S OFTEN ASSOCIATED WITH ORGANIC PRODUCTS.



BLACK

NEUTRAL & AROMATIC

WHEN USED ON ITS OWN CAN CREATE A VERY SOPHISTICATED LOOK AND FEEL. SOMETHING OFTEN USED IN FASHION, WE CAN ALSO CONVEY FEELINGS OF POWER AND IN MONETARY TERMS IT CAN CREATE A FEELING OF BEING IN-CREDIT.



LEGIBILITY

IS IT READABLE?

IT'S IMPORTANT TO KEEP LEGIBILITY IN MIND WHEN CHOOSING YOUR COLOURS. AFTER ALL HAVING AN AMAZING COLOUR SCHEME CAN BE POINTLESS IF NO ONE CAN READ THE INFORMATION YOU'VE INCLUDED.



YELLOW

VERY LUMINOUS

YELLOW IS OFTEN RELATED TO HAPPINESS & VITALITY, IT CAN ALSO BE USED TO CONVEY OPTIMISM. WE ALSO USE YELLOW FOR WARNINGS OR TO SHOW HAZARDS.



ORANGE

WARMTH

ORANGE IS MOST OFTEN ASSOCIATED WITH AUTUMN & WARMTH. IT CAN ALSO BE ASSOCIATED WITH SPICES, FRUITFULNESS AND AS IT'S A CLOSE MATCH WITH YELLOW IT CAN ALSO SHOW CHEERFULNESS.



WARM

COLOUR

WARM REFERS TO COLOURS SUCH AS RED, ORANGE AND YELLOW. THESE COLOURS ARE GENERALLY PASSIONATE, ENERGETIC OR POSITIVE.



COLOUR THEORY

SOURCE: COLOUR STUDIES 3RD EDITION BY FEISHER REED
WWW.SMASHINGMAGAZINE.COM/2010/01/28/COLOR-THEORY-FOR-DESIGNERS-PART-1-THE-MEANING-OF-COLOR
WWW.COLORMATTERS.COM/COLOR-AND-DESIGN/BASIC-COLOR-THEORY
WWW.TIGERCOLOR.COM/COLOR-LAB/COLOR-THEORY/COLOR-HARMONIES.HTM

communicator

www.communicatorcorp.com

Voice-over vs. Music

Using some voice-over + text-based content improves comprehension

150 words (approximately)

Audio should support tone of message

Slow down and use a professional voice

KISS Method

Keep It Simple Silly

The problem/challenge: Address the obstacle your audience is having (0:00–0:20)

The solution: Introduce your perspective as an answer (0:20–0:25)

How it works: Briefly describe how it works or how to get started (0:25–0:50)

A call to action: Tell people what to do next (0:50–0:60)