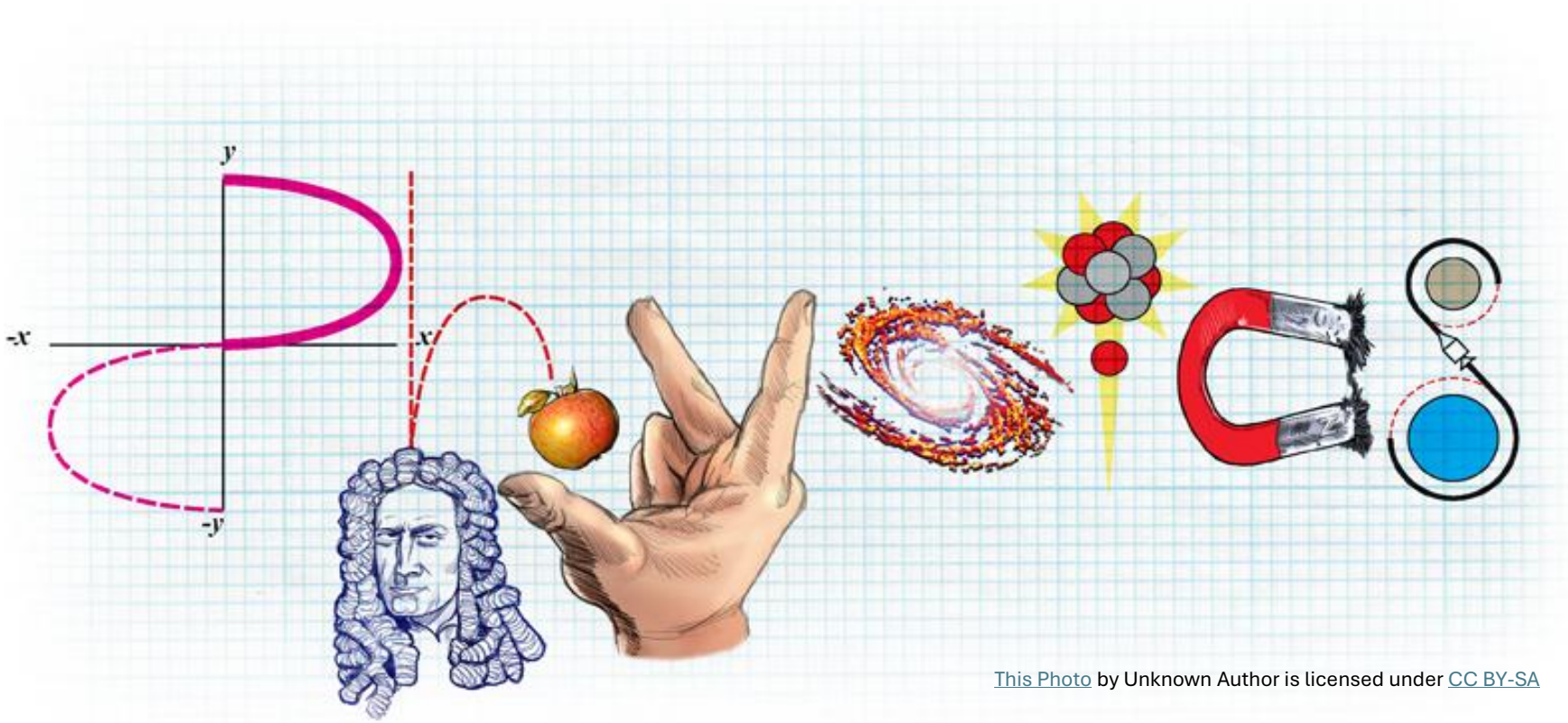


SCENIC SCIENCE LESSONS 2B

WHAT IF …

What if the secret to life or death was listening to instructions?

1. Would you listen?
2. Would you be able to follow the instructions?
3. What knowledge would you need?

MEASUREMENTS

God gave Noah measurements for the ARK.

DIMENSIONS – a measurable extent of some kind, such as length, breadth/width, height/depth.

These were essential to save lives.

LENGTH 300 cubits = ~450 feet or ~135 meters long

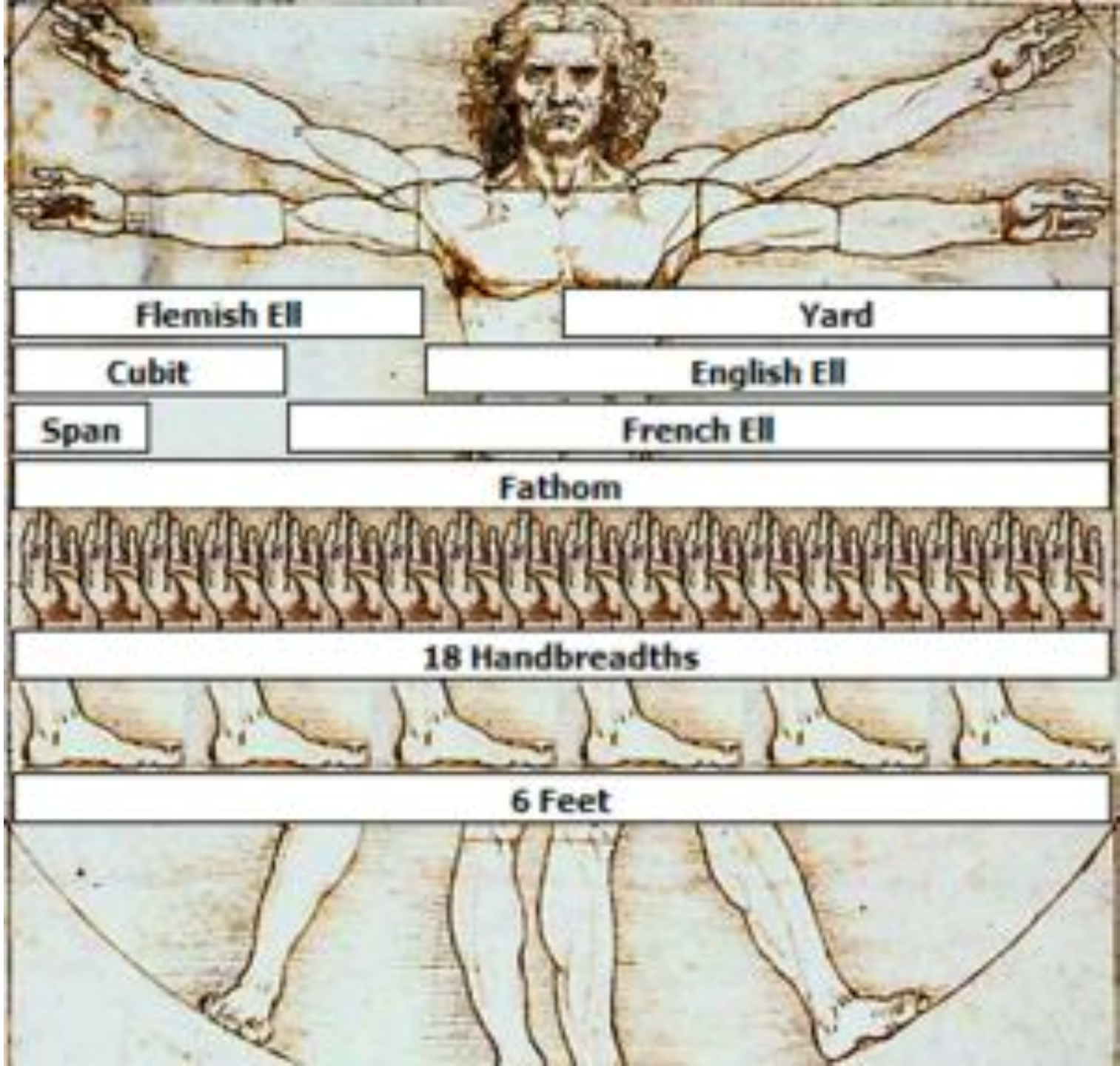
WIDTH 50 cubits = ~75 feet or ~23 meters wide

HEIGHT 30 cubits = ~45 feet or ~14 meters tall

CUBITS vs METERS

- One Cubit = 1.5 Feet
- One Meter = ~2 Cubits

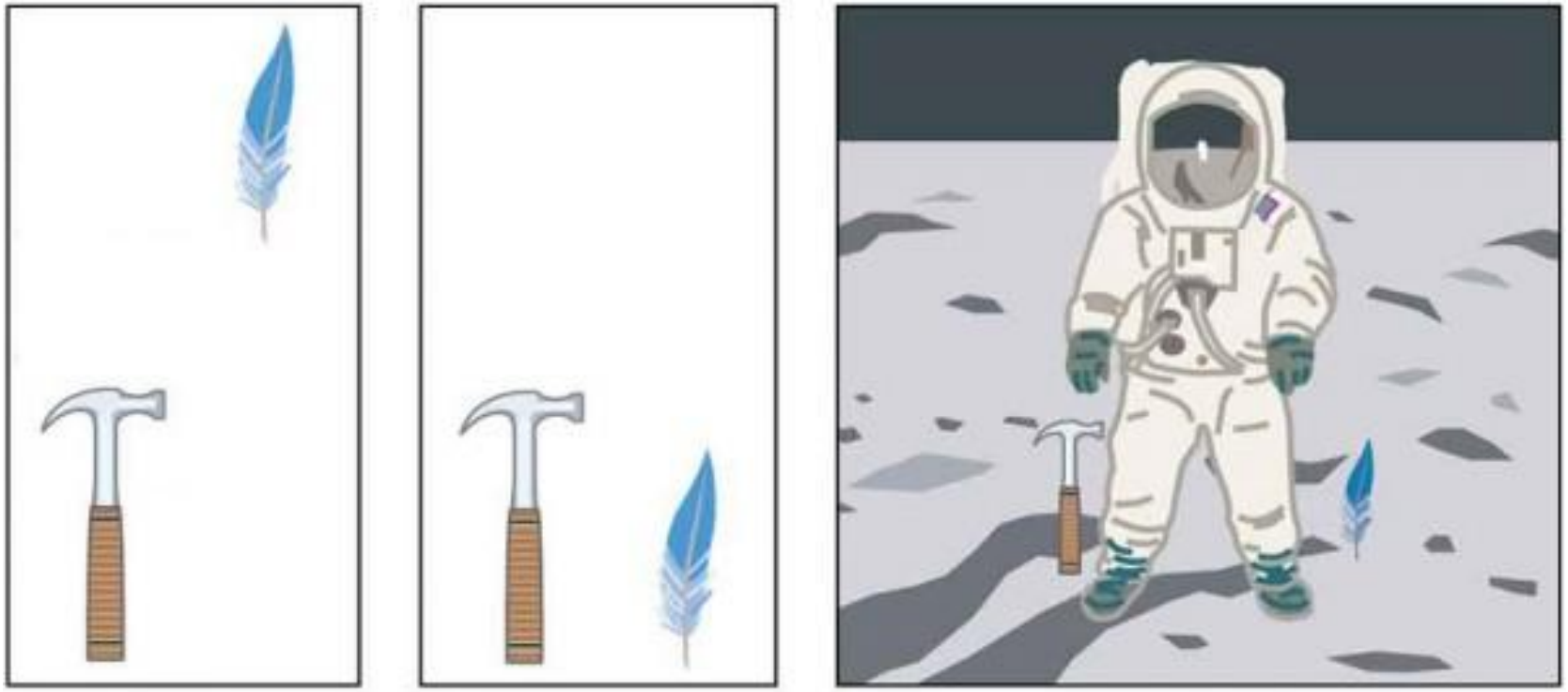
English/US Measures are more cumbersome. We'll use metric, the **STANDARD for Physics.**



God gave us the ability to measure things, so we can…

- Build and create
- Know how
  - Far away something is
  - Fast it's going
  - Big it is (or small it is)
- Consider the needs
  - Like could the ark carry all the animals and food needed
  - Could Noah find all the wood he would need

Experiments with Measurements/Meters



https://youtu.be/Oo8TaPVsn9Y?si=ftgrdTQUiwUm1FT1

THE CAPACITY OF THE ARK

- 450 semi-trailers or
- 570 railroad cars.
- This is more than adequate space to house all the diverse kinds of animals aboard the ark.

BASE 10 BASICS

GOD GAVE US: **10 fingers**

10 toes

We count by 1’s, 10’s, 100’s

These are Base 10 numbers

Our decimal system is Base 10

Our changing numbers are Base 10

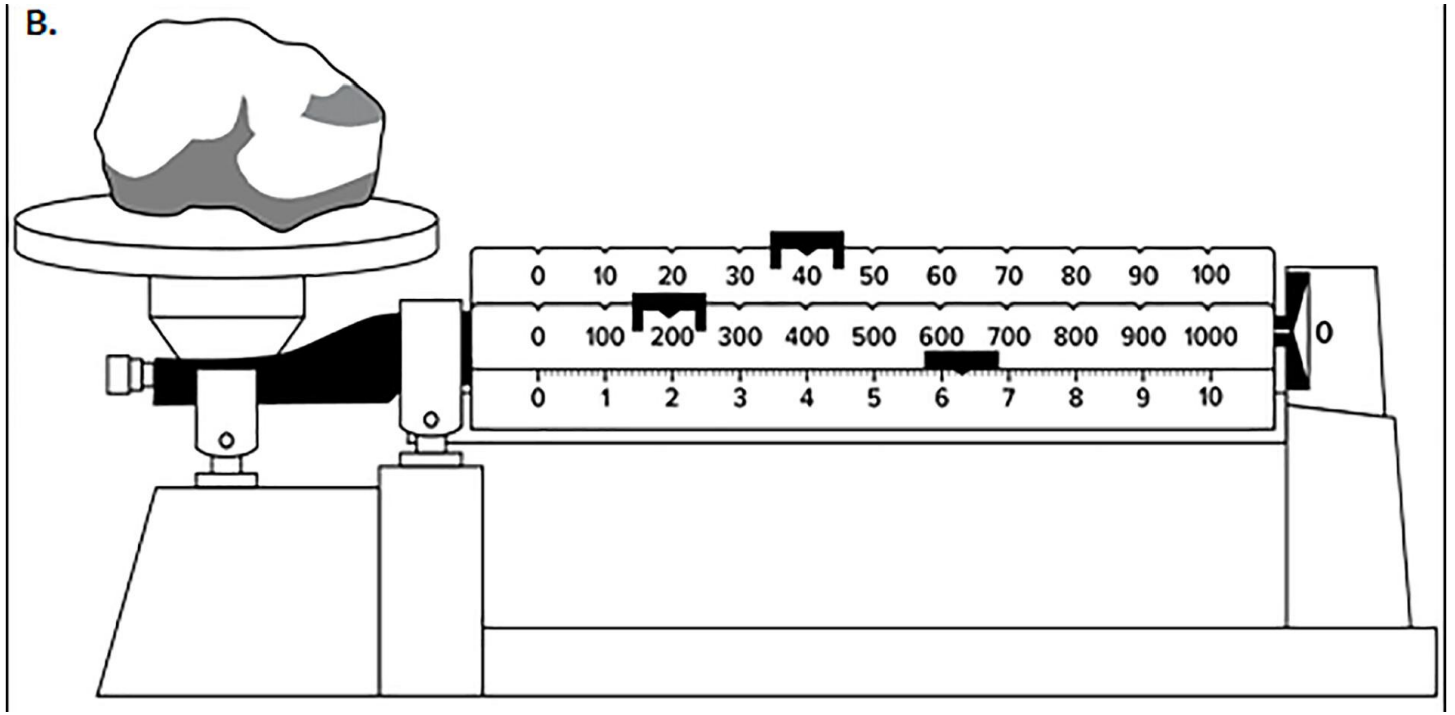
tens, hundreds, thousands

Base 10 Measurements

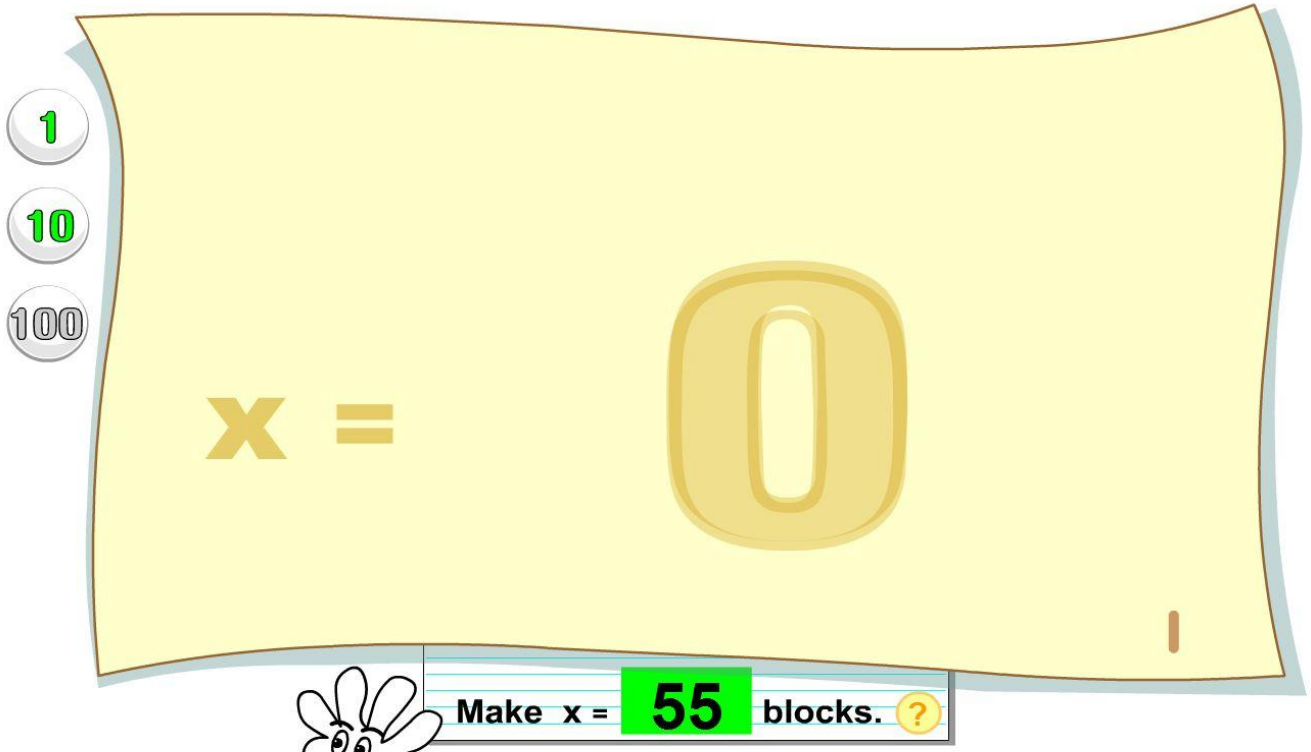
Scaler values are normally Base 10.

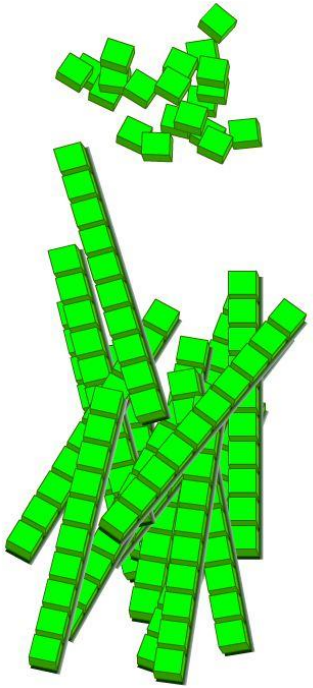
A scale (right) shows: 1's, 10's, 100's grams on separate beams.

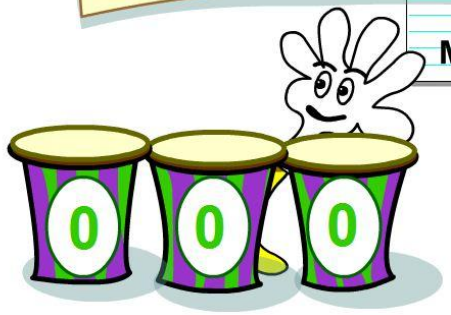
Weight Measures

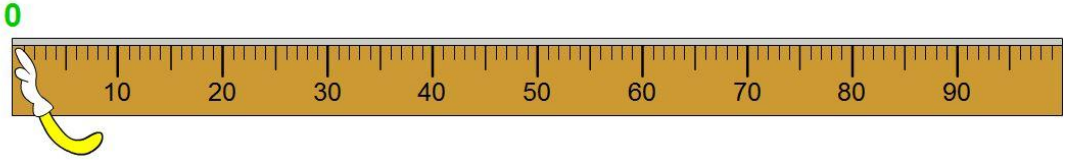


Quantities combine 1’s, 10’s, 100’s…

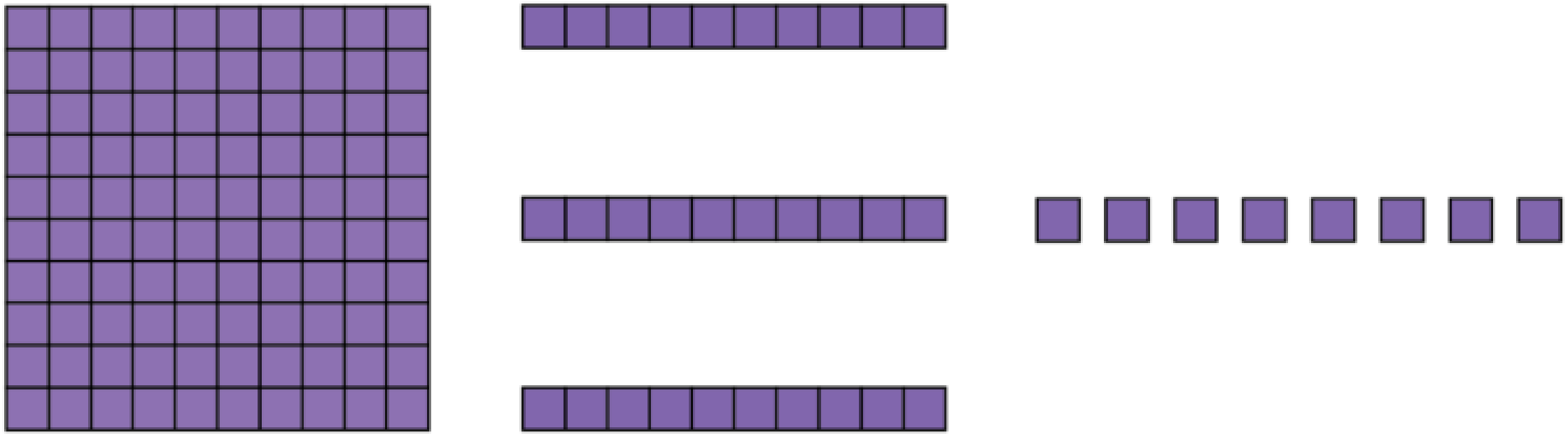








Linear to Squares – 10 x 10 = 100 squares



1 hundred

3 tens

8 ones

We live in a 3-D World – Three Dimensions

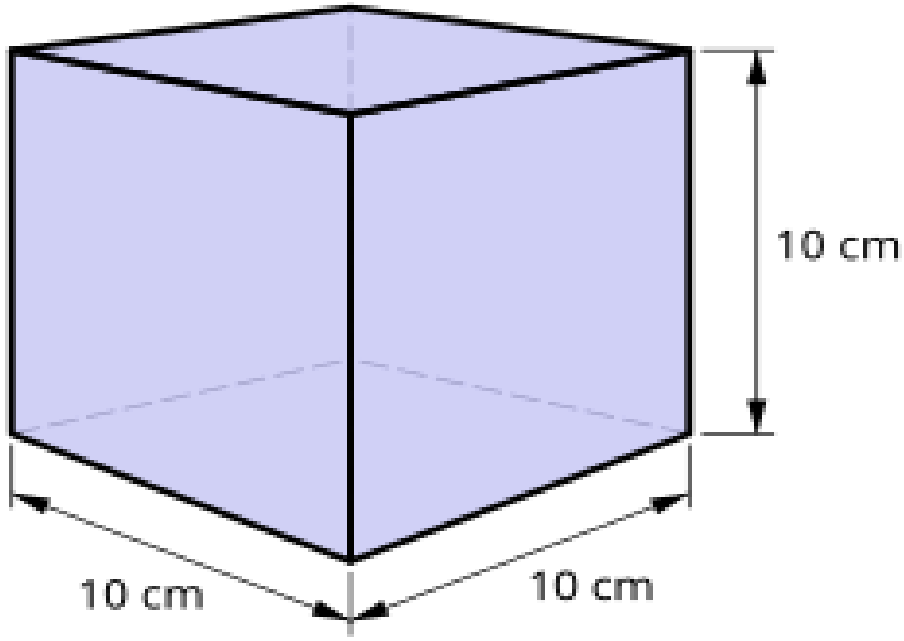
A point, a line, or a plane are often called imaginary because nearly everything we can see has 3 dimensions

- One dimension (like a line)
- Two dimensions (like a piece of paper)
- Three dimensions (everything else)

Even a line you can draw on your “white board” has a thickness, though it is very small. Draw a line like this:

Cubic Measures

Capacity, Volume, Liquids
Displacement, and Others



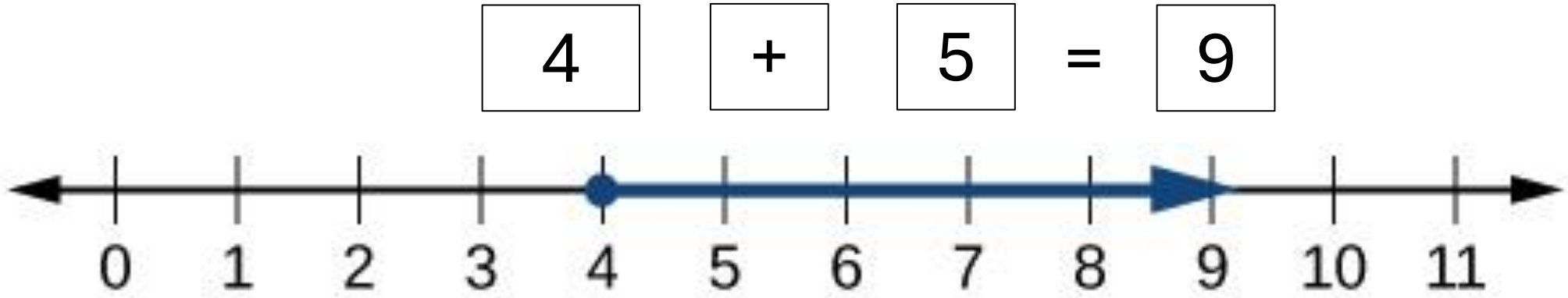
WHAT A CUBE CAN HOLD

LENGTH	10 cm
WIDTH	10 cm
HEIGHT	10 cm

10 cm x 10 cm x 10 cm = 1000 cubic cm

Number Lines with Vectors

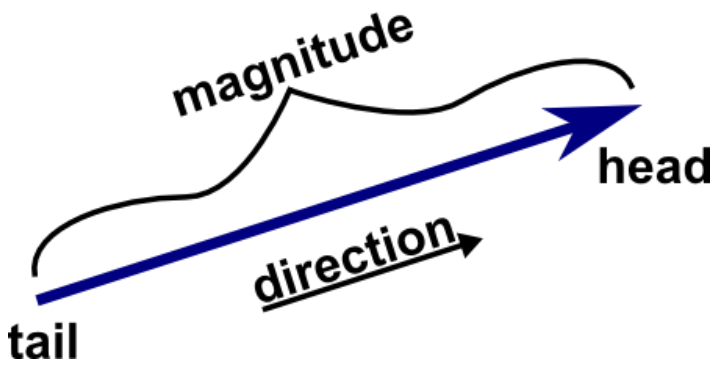
Learn to View Number Lines AND Vectors

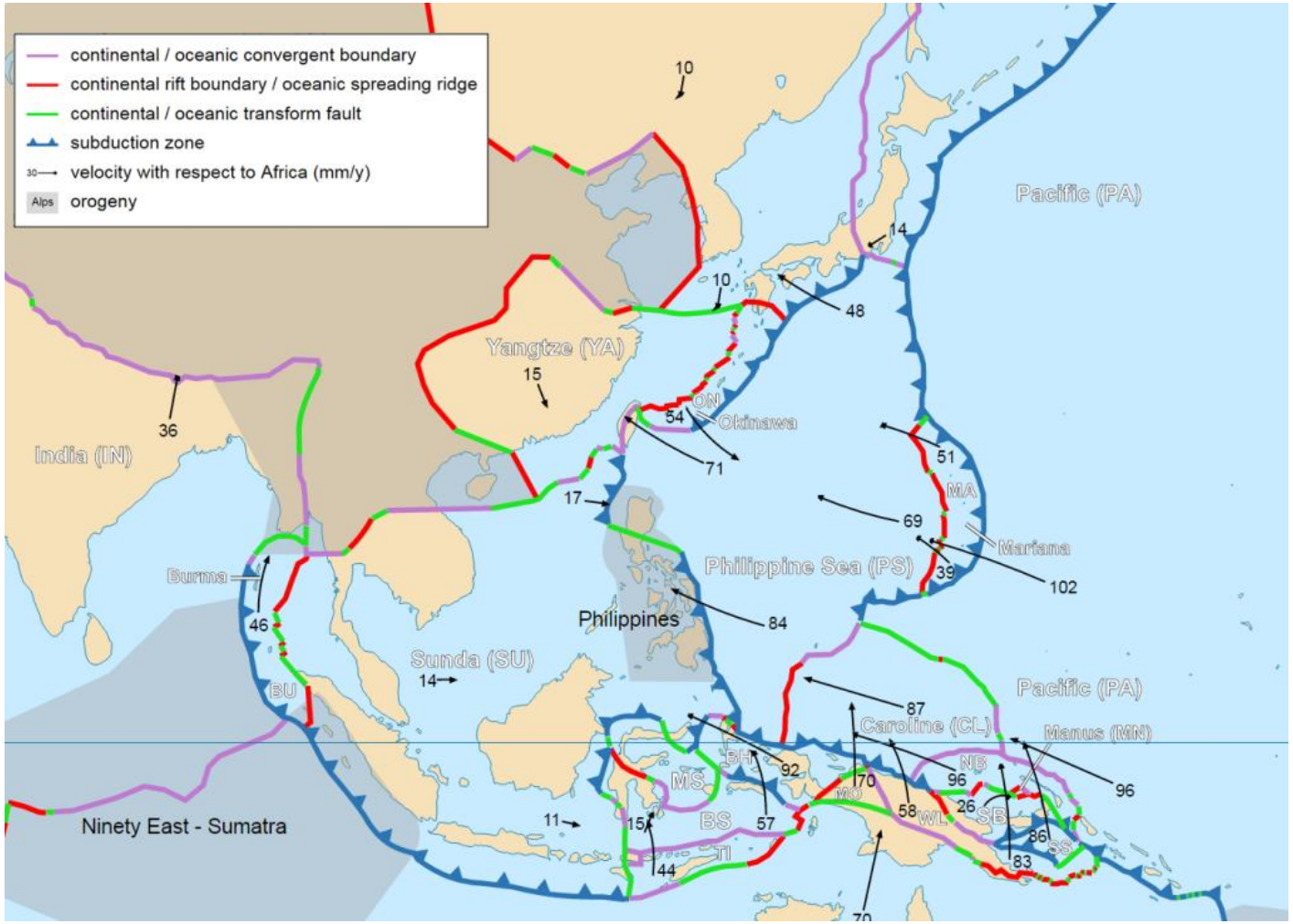


Although a standard number line has only 2 directions, shown as positive and negative, can be used for anything with only two opposite directions, such as north/south, or east/west.

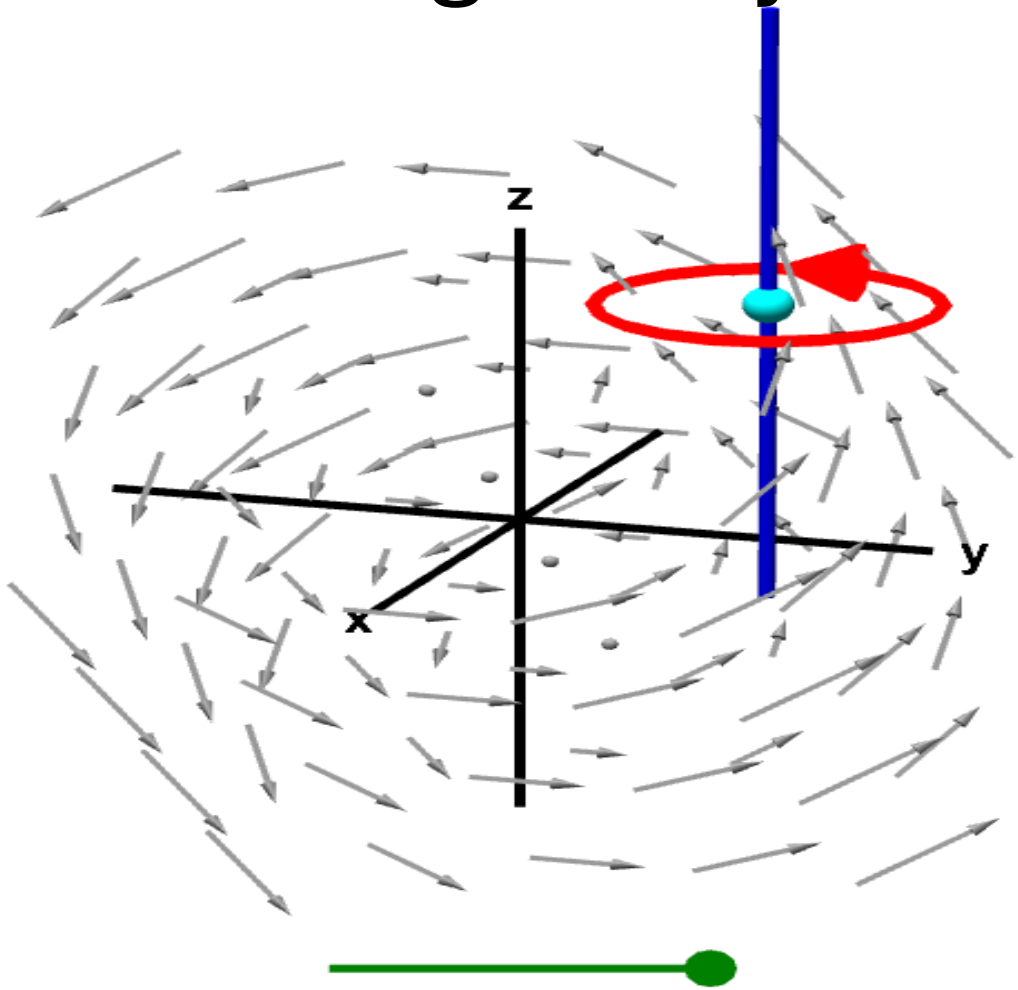
Vectors 2-D

- Vectors indicate magnitude and direction
- Acceleration and Velocity are vector quantities
- Example plate motion





3-D Vectors can give any Direction



The Volume/Capacity of the Ark Calculations

CUBITS

- 300 LONG
- 50 WIDE
- 30 TALL

300 X 50 X 30 = 450,000 cubic cubits or cubits^3

METERS

- ~137 LONG
- ~23 WIDE
- ~14 TALL

APPROXIMATE METRIC CONVERSION

137 x 23 x 14 = 44,114 cubic meters or meters^3

REMEMBER THESE THINGS

MEASURES: (a Ruler)
Luke 6:8 A good measure, pressed down, shaken together, running over, will be put into your lap; for the measure you give will be the measure you get back.

We should measure our lives, not as man would, but as God does. Too often we'll find ourselves following the crowd, or valuing what others believe is important, such as "keeping up with the Jones's." Learn to rightly measure, as Noah did, so you don't miss the boat when God is seeking you to fulfill a mission or calling.