GARDEN TOWER
Measurement & Data Collection

PROJECT-BASED LEARNING

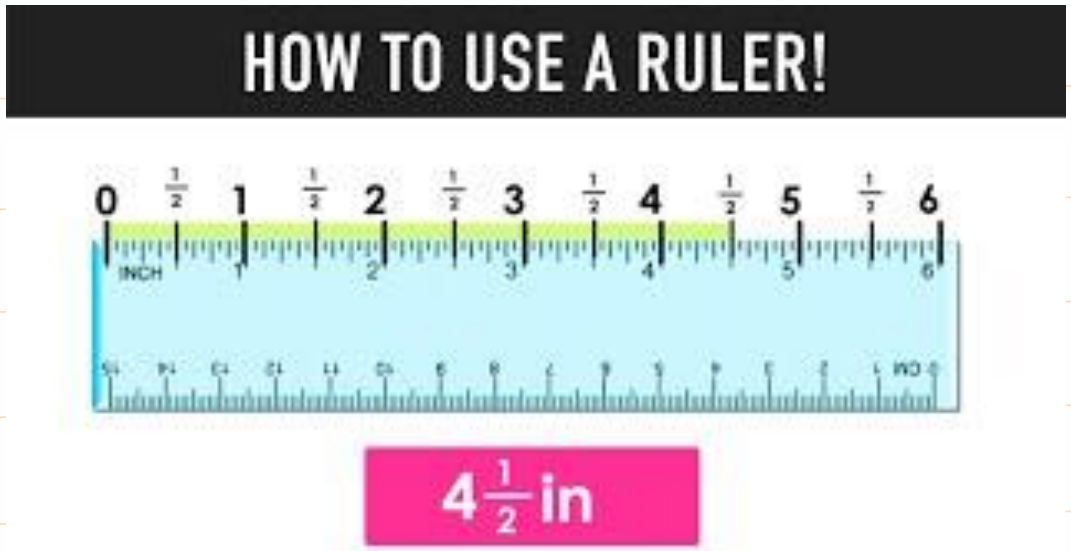
Let's explore:

What do we use measurement for?

Why do we collect data?

01

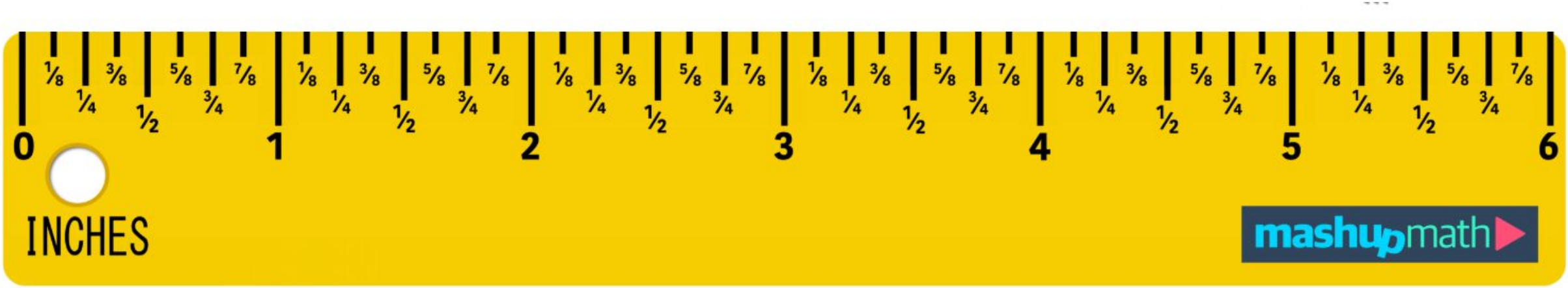
Using a ruler:



How do we read a ruler?

- We will be using the customary system, our units will be in inches
- There are typically 8 lines between each inch (sometimes 16)
- Common fractions on a ruler:
  - **½**
  - **¼**
  - **⅛**
  - **1/16 (sometimes)**

How do we read a ruler?



Common fractions on a ruler:

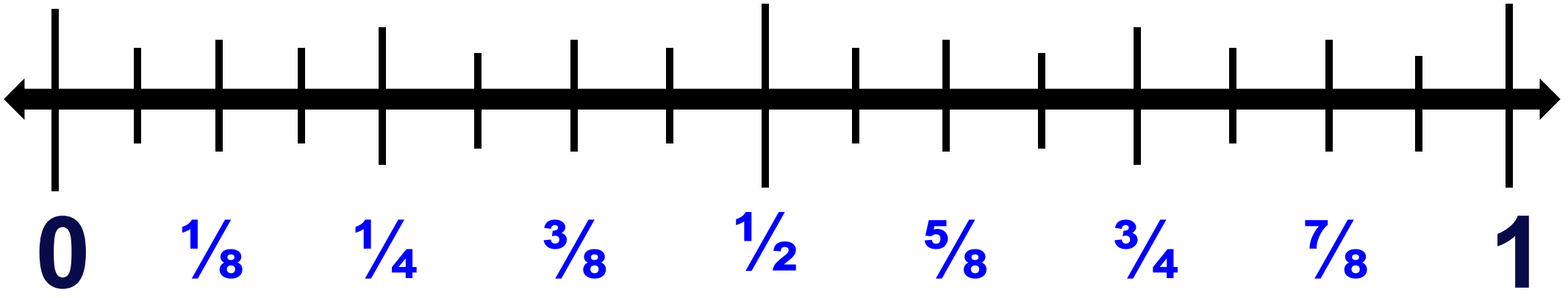
½

¼

⅛

1/16 (sometimes)

Let’s practice labeling a number line with fractions:



Class activity

Practice: Use a ruler to measure your thumb in inches.

Record your data.

Compare your results with a partner.

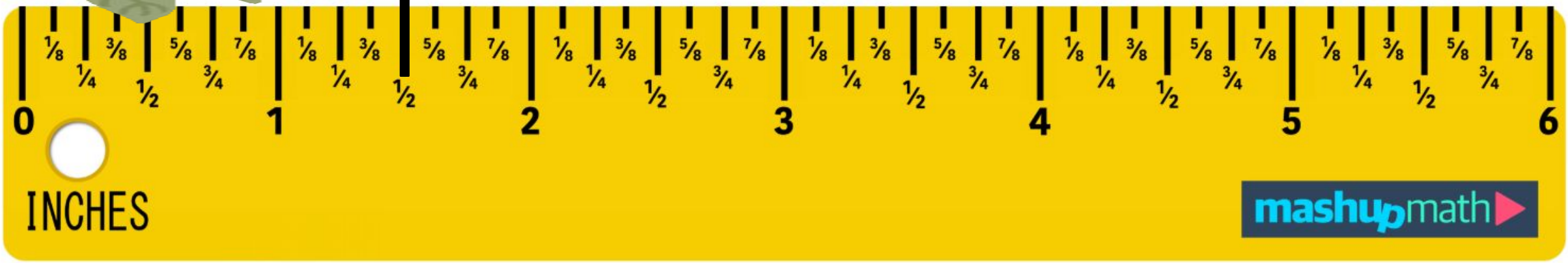
What is your and your partner’s combined total?

Independent Practice:

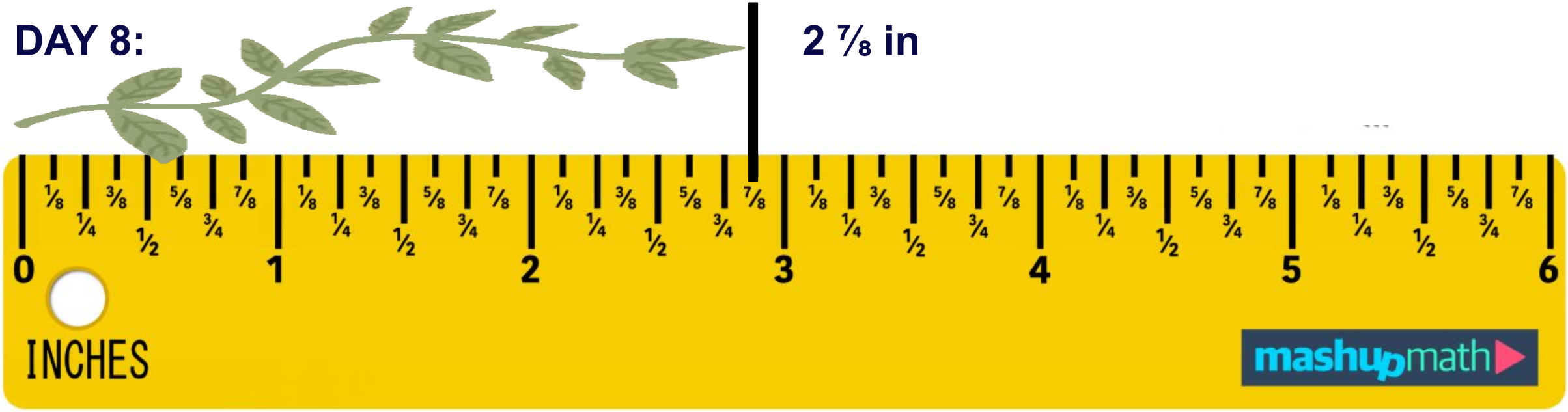
A plant's length is 1 ½ in on DAY 3. On DAY 8 the plant's length is 2 ⅞ in.

How many inches did the plant grow from DAY 3 to DAY 8?

DAY 3: 1 ½ in



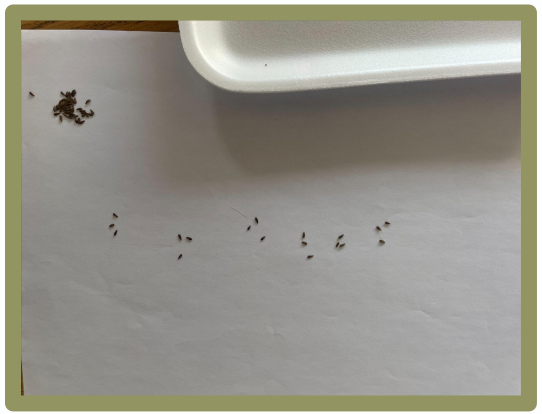
DAY 8: 2 ⅞ in



ZIPGROW GARDEN VIDEO

ZIPGROW GARDEN TOWER

BUTTERCRUNCH LETTUCE



- 4 rows of 6

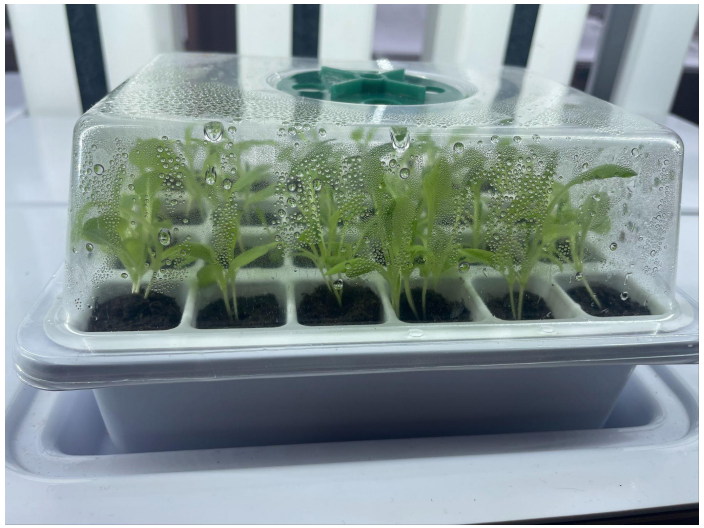
  = 24 soil pods

- 3 seeds per pod

  = 72 seeds

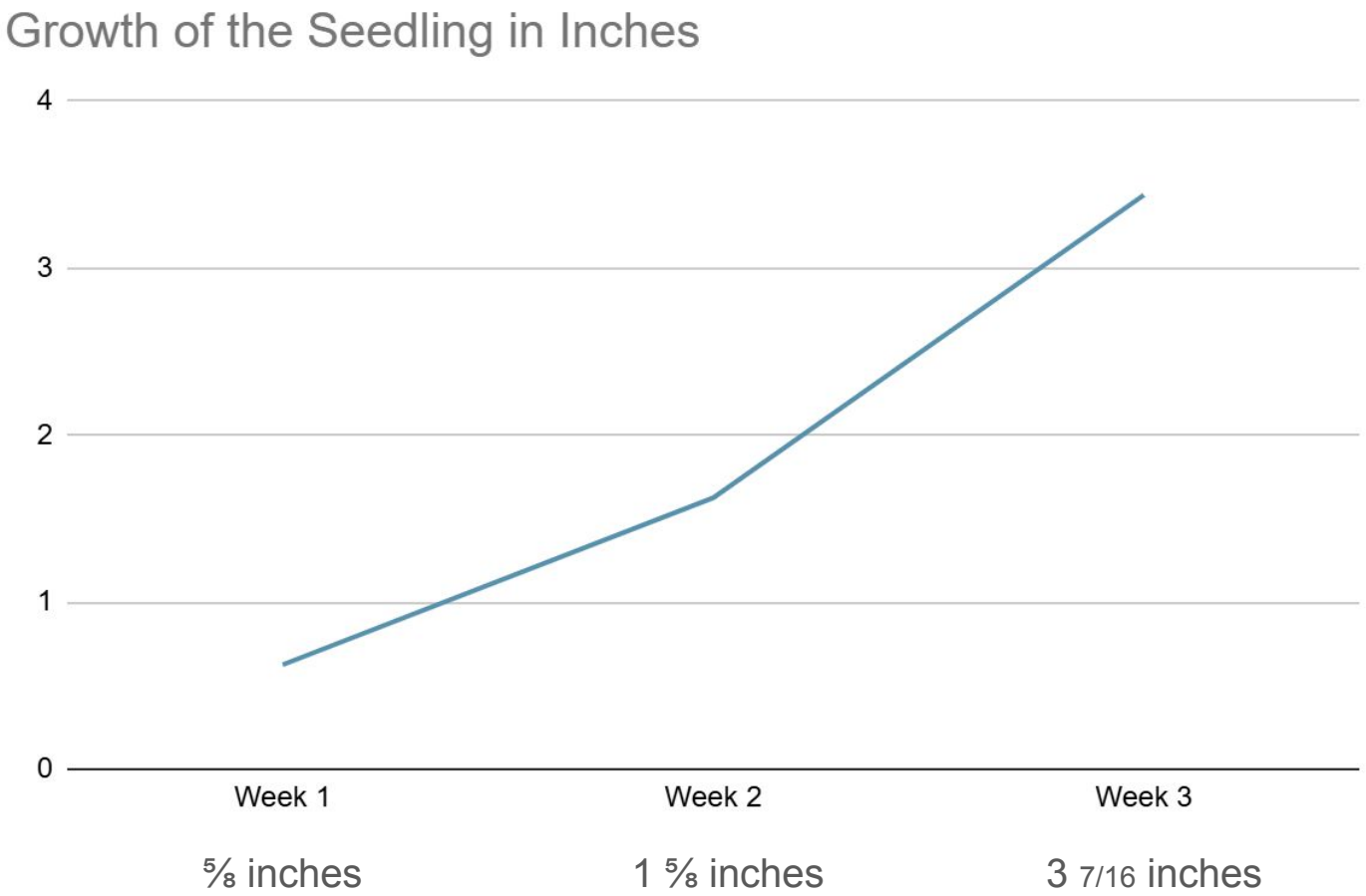
Tracking the growth of one seeding for three weeks:

Week 1
⅝ inches

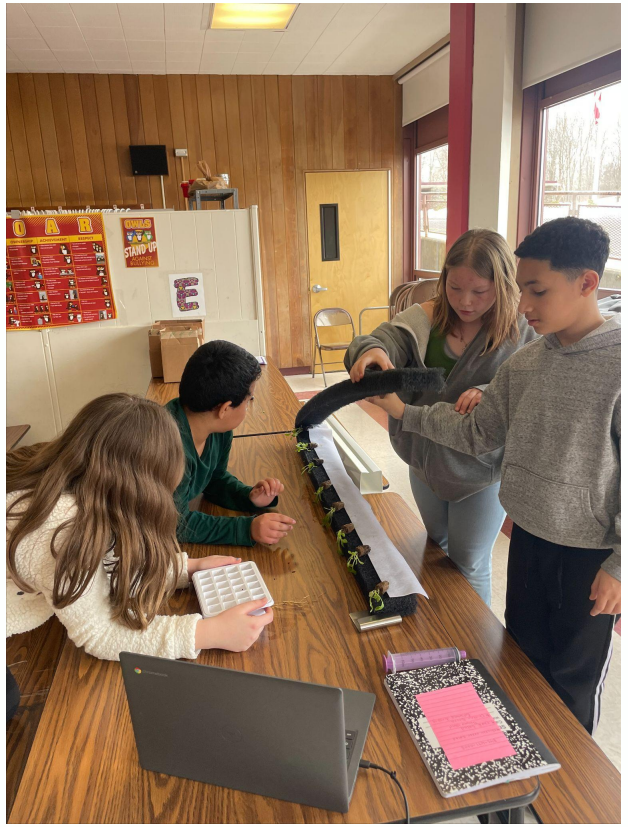


Week 2
1 ⅝ inches

Week 3
3 7/16 inches


Growth of the Seedling in Inches
4
3
2
1
0
Week 1
Week 2
Week 3
⅝ inches
1 ⅝ inches
3 7/16 inches

TRANSFERRING THE SEEDLINGS



Tracking plant growth within the garden tower:

Week 4

Week 5

Week 6

Week 7

Interactive Concept Mapping

sdgs.un.org/goals

Central Idea

Target

Teacher Planning

Garden Tower

Target **2.1**
By 2030, end hunger and ensure access by all people, in particular the poor and people in vulnerable situations, including infants, to safe, nutritious and sufficient food all year round

Target **2.3**
By 2030, double the agricultural productivity and incomes of small-scale food producers, in particular women, indigenous peoples, family farmers, pastoralists and fishers, including through secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets and opportunities for value addition and non-farm employment

Target **3.4**
By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being

Target **12.2**
By 2030, achieve the sustainable management and efficient use of natural resources

Target **15.5**
Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species

Food

Health

Learning

Water

Energy

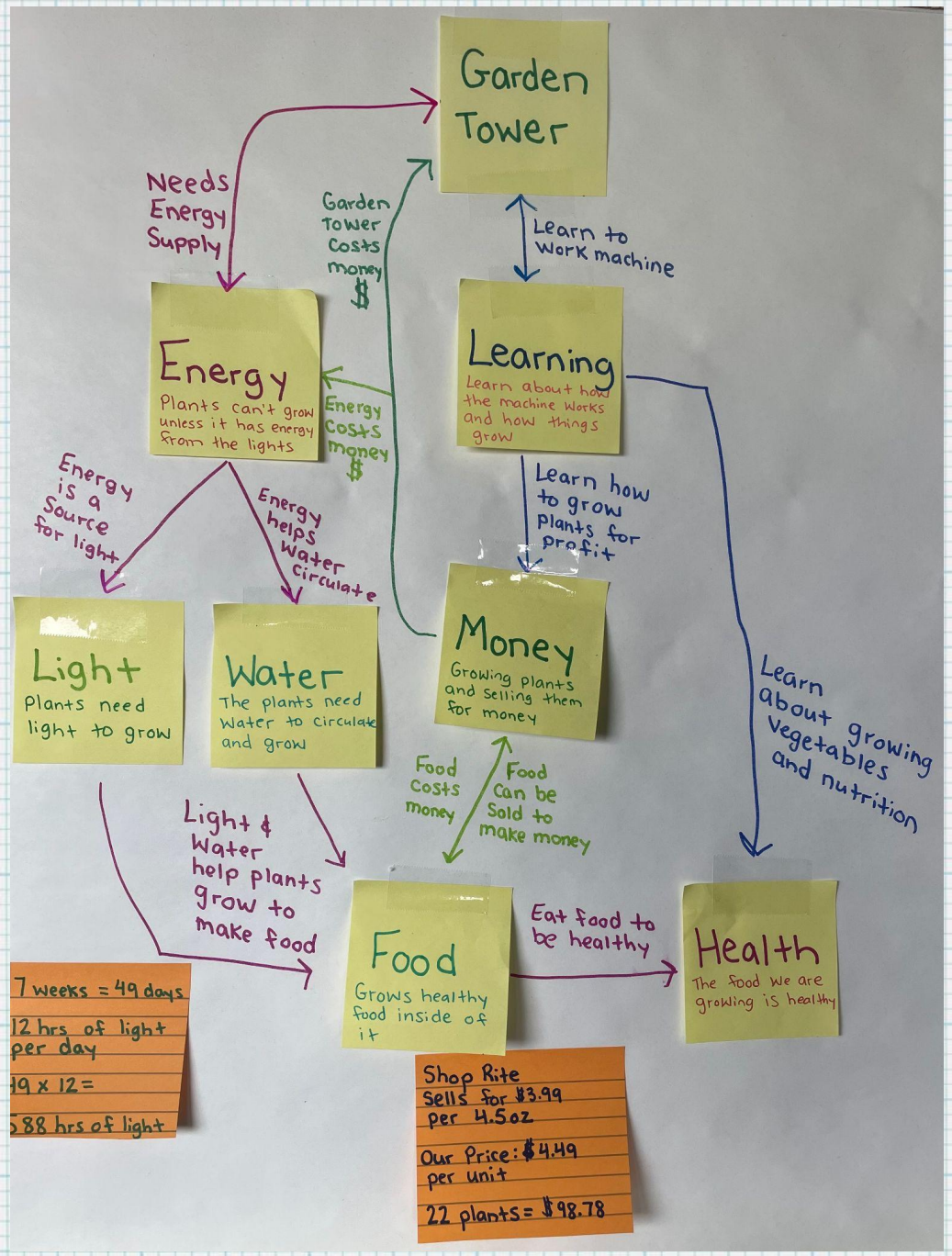
Money

Central Idea

Student Friendly

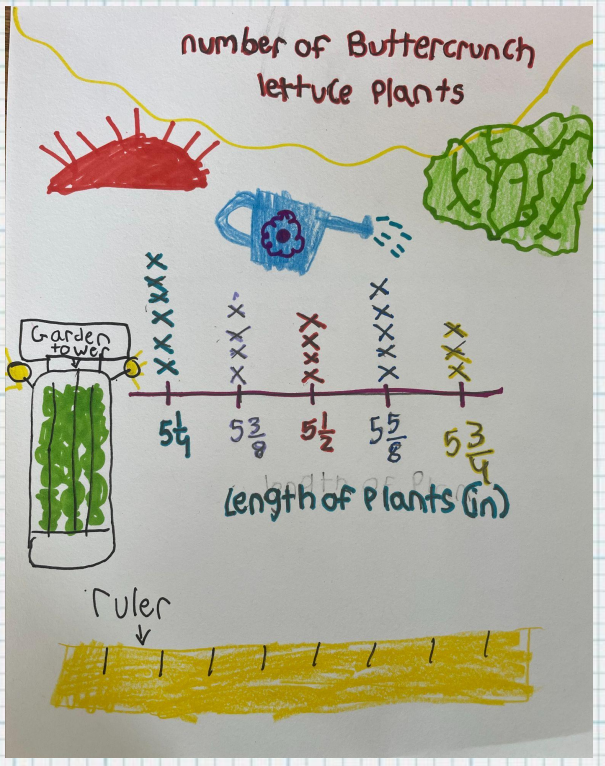
Non-Tech Based

Concept Mapping



Non-Tech Based

Data Displays



Week 1

Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Interactive Concept Mapping Platforms & Data Display Resources

Non-tech based: (List key terms)

- Whiteboards
- Notebook
- Post its
- Graph Paper

Tech-based:

- Miro
- Figjam
- Prezi
- Padlet
- Canva
- Lucidchart
- Google Slides

Non virtual data set creation:

Observe Collect Draw

- Weekly “Dear Data” project

Virtual data sets to explore:

Gap minder - Connected to UN SDGs

- Dollar Street

Our World in Data

Data Viz Project

Seeing Data

Platforms to create virtual data displays:

Tableau

CODAP

Tuva