

WELCOME TO THINKING MAPS TRAINING

Questions from Texts, Teachers and Tests

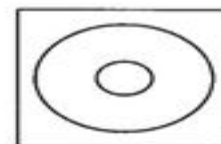
Thinking Processes

Thinking Maps as Tools

How are you defining this thing or idea? What is the context? What is your frame of reference?

DEFINING IN CONTEXT

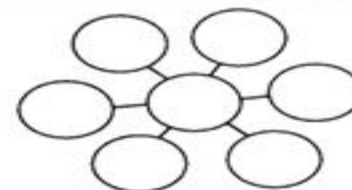
Circle Map



How are you describing this thing?
Which adjectives would best describe this thing?

DESCRIBING QUALITIES

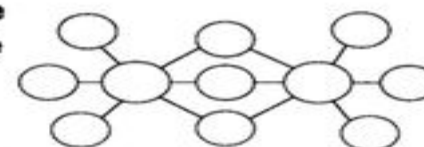
Bubble Map



What are the similar and different qualities of these things?
Which qualities do you value most? Why?

COMPARING and CONTRASTING

Double Bubble Map



What are the main ideas, supporting ideas, and details in this information?

CLASSIFYING

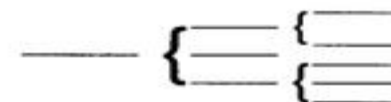
Tree Map



What are the component parts and subparts of this whole physical object?

PART-WHOLE

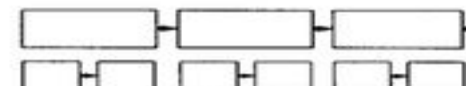
Brace Map



What happened?
What is the sequence of events? What are the substages?

SEQUENCING

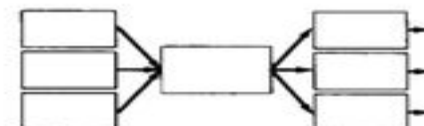
Flow Map



What are the causes and effects of this event?
What might happen next?

CAUSE and EFFECT

Multi-Flow Map



What is the analogy being used?
What is the guiding metaphor?

SEEING ANALOGIES

Bridge Map



Thinking Map	Thought Process	Key Words
Circle	Defining in Context Brainstorming	Context, Context clues, List, Define, Tell everything that you know, Brainstorm, Identify, Relate prior knowledge, Tell About, Explore the meaning, Discuss
Bubble	Describing	Describe, Use vivid language, Observe using the 5 senses, Describe feelings, Attributes, Characteristics, Properties, Adjectives, Qualities
Double Bubble	Comparing and Contrasting	Compare / Contrast, Discuss similarities / differences, Distinguish between, Differentiate
Tree	Classifying	Classify, Sort, Group, Categorize, Give sufficient and related details, Types of, Kinds of, List and Elaborate, Taxonomy
Brace	Part to Whole Relationship	Parts of, Take apart, Show structure, Physical components, Anatomy
Flow	Sequence	Sequence, Put in order, Order, Recount/Retell, What happens next, Cycles, Patterns, Processes, Change, Solve multi-step problems
Multi-Flow	Cause and Effect	Causes and effects, Discuss consequences, What would happen if, Predict, Change, Identify motives, Why, Results, Outcomes, Benefits
Bridge	Seeing Analogies	Identify the common relationship, Guess the rule, Interpret symbols, Simile, Metaphor, Allegory, Ratio

Instructional Shifts for College and Career Readiness

LITERACY

**Building knowledge
through content-rich
nonfiction and
informational texts**

**Reading and
writing grounded
in evidence from
text**

**Regular practice
with complex text
and its academic
vocabulary**

MATH

**Focus
strongly
where the
Standards
focus**

**Coherence:
Think across
grades and link
to major topics
within grades**

**Rigor: Require
conceptual
understanding,
procedural skill and
fluency, and
application with
intensity**



What are the defining characteristics of Thinking Maps?

Visual Patterns



Used in
combination for
depth and
complexity

Thinking Maps®

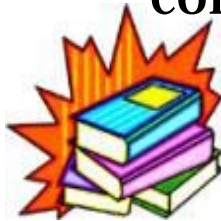


Based on
8 Cognitive
Skills

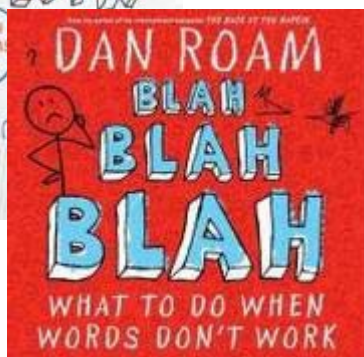
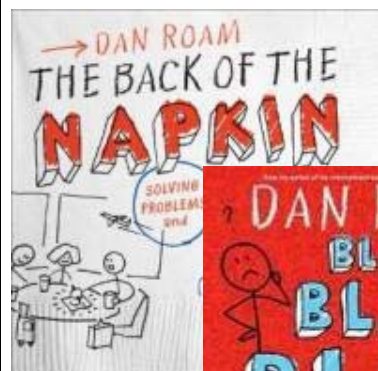


Used by all
teachers

Applied in all
content areas



What are Thinking Maps?



What is the source?



**ALL OF THE SPACE IN
YOUR BRAIN THAT IS
DEVOTED TO THE 5
SENSES**

75%

**25%
ALL
OTHER
SENSES**



THINKING MAPS

**How does this
information impact
teacher instruction
and student learning?**

Visual Patterns



Used in
combination for
depth and
complexity

Thinking Maps®

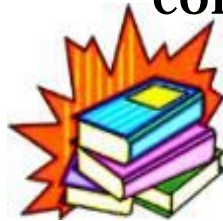


Based on
8 Cognitive
Skills



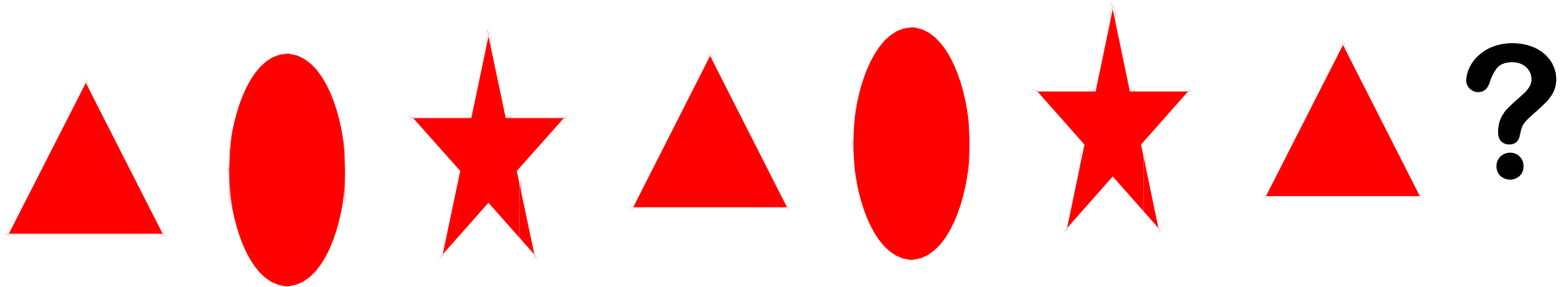
Used by all
teachers

Applied in all
content areas



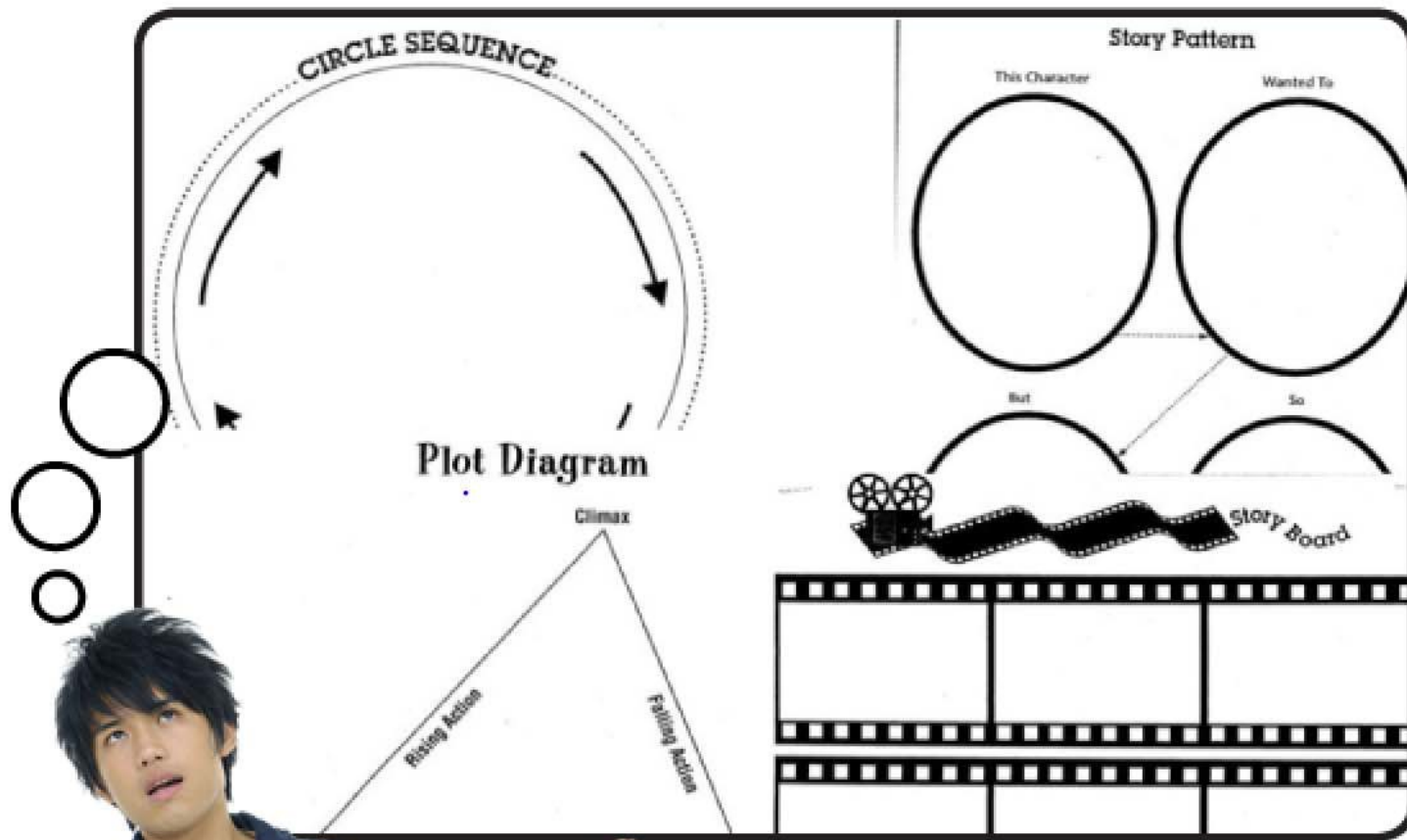
What are Thinking Maps?

DRAW AN ILLUSTRATION OF A PATTERN



PATTERNS HELP WITH PREDICTION.





Graphic organizers **do not** provide students with predictable patterns for thinking.



This confusing variety of graphic organizers makes it impossible for students to own these tools.

SCAFFOLDING

SECURITY AND ACCESS

“What is important is to allow all students to interact with challenging text on their own as frequently and independently as possible.”



Visual
Patterns



Used in
combination for
depth and
complexity

**Thinking
Maps®**

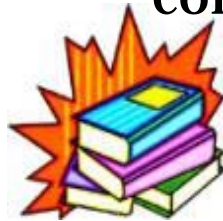


**Based on
8 Cognitive
Skills**



Used by all
teachers

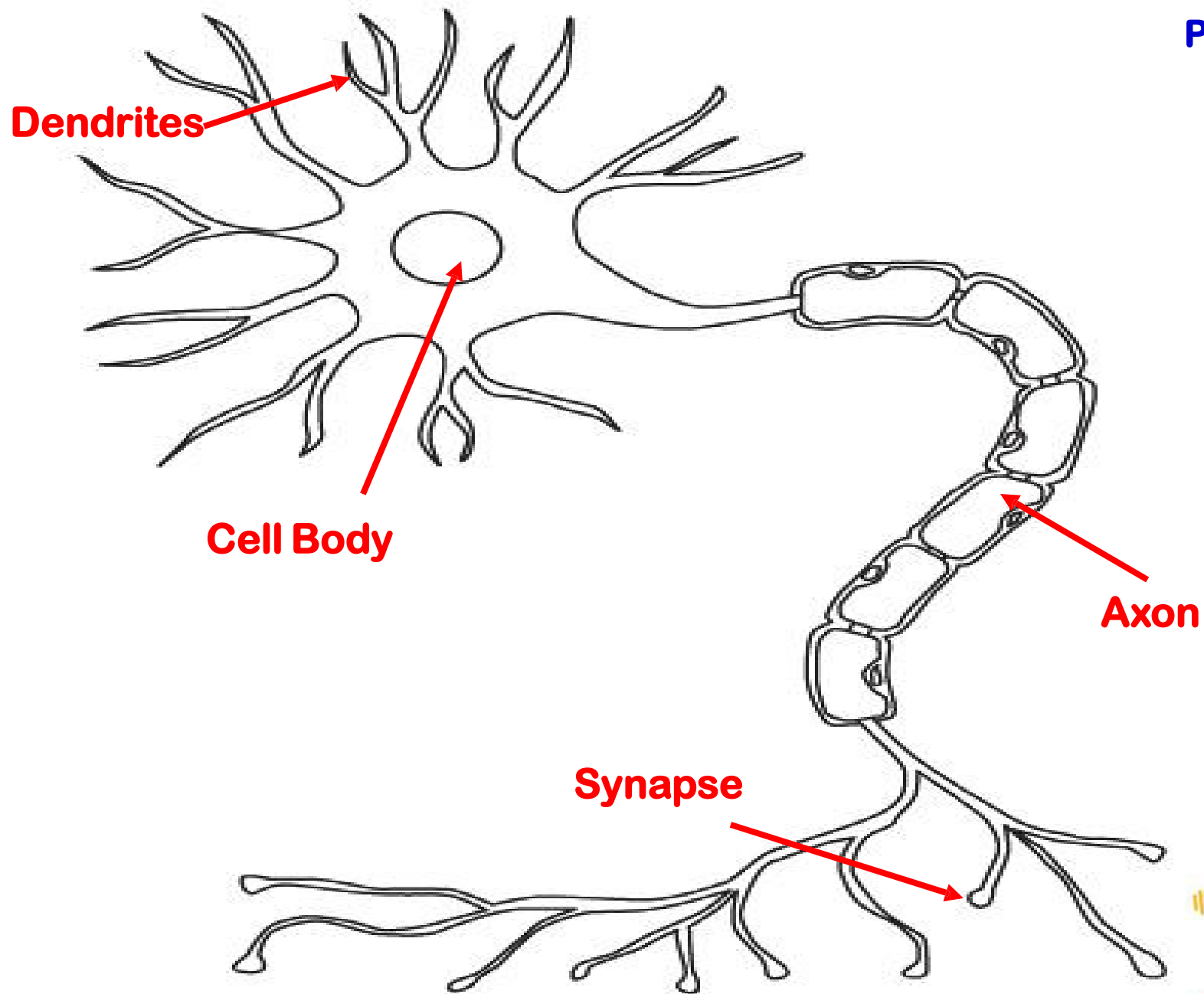
Applied in all
content areas

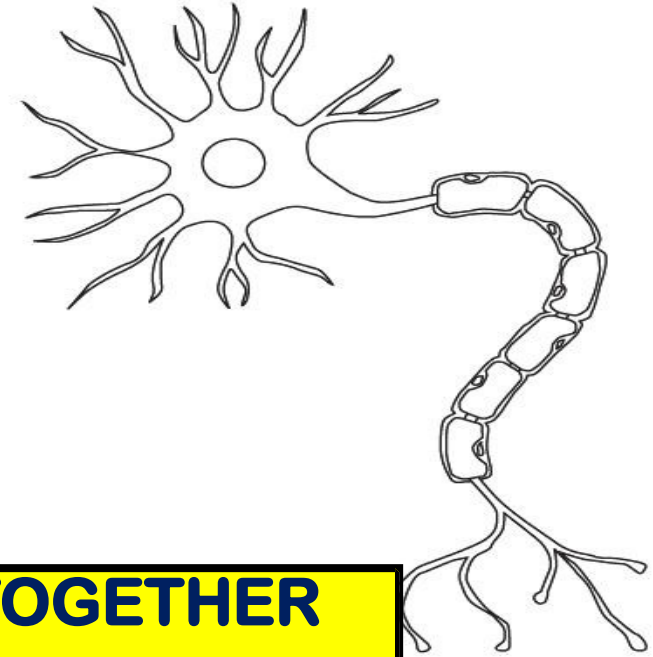
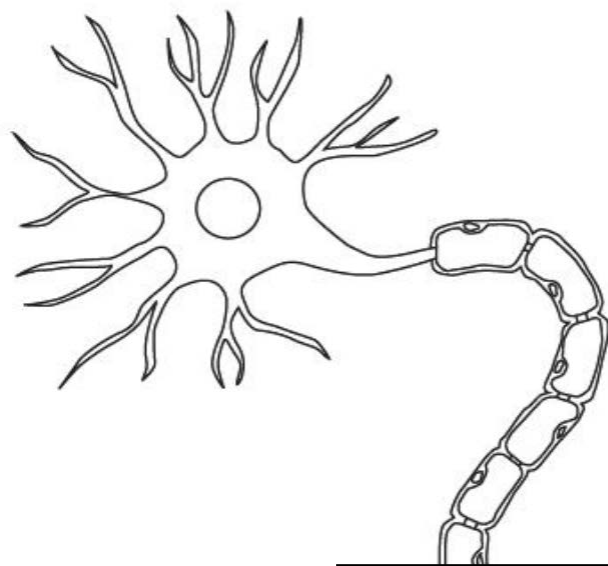


What are Thinking Maps?

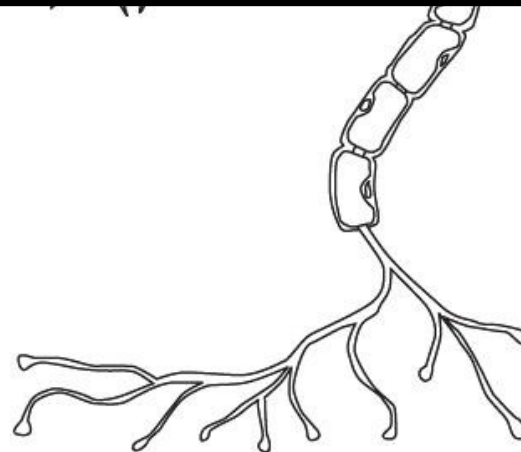


THINKING MAPS





**NEURONS THAT FIRE TOGETHER
GET WIRED TOGETHER.
THAT IS WHAT A PATTERN IS!**



THINKING MAPS

BRAIN COMPATIBLE TEACHING

Page 8

“The overwhelming need for learners is for meaningfulness... we do not come to understand a subject or master a skill by sticking bits of information to each other.

Understanding a subject results from perceiving relationships. The brain is designed as a *pattern detector*.

Our function as educators is to provide our students with the sorts of experiences that enable them to perceive *patterns that connect*.”

Making Connections: Teaching and the Human Brain (1994), Caine & Caine

Visual
Patterns



Used in
combination for
depth and
complexity

**Thinking
Maps®**



Based on
8 Cognitive
Skills



Used by all
teachers

**Applied in
all content
areas**



What are Thinking Maps?

Visual
Patterns



Used in
combination for
depth and
complexity



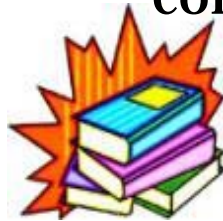
**Thinking
Maps®**

Based on
8 Cognitive
Skills



**Used by all
educators**

Applied in all
content areas



What are Thinking Maps?



THINKING MAPS®

Visual
Patterns



**Used in
combination
for depth and
complexity**

**Thinking
Maps®**



Based on
8 Cognitive
Skills



Used by all
teachers

Applied in all
content areas



What are Thinking Maps?

Integration of Knowledge and Ideas

“Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.”

Visual
Patterns



Used in
combination for
depth and
complexity

**Thinking
Maps®**

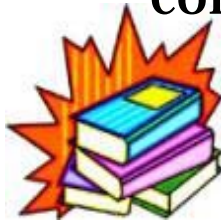


Based on
8 Cognitive
Skills



Used by all
teachers

Applied in all
content areas



What are Thinking Maps?

Better learning will come from
Learner-Centered Teaching

INSTRUCTION but, from giving
the learner better ways to
CONSTRUCT MEANING.



The maps should become

STUDENT TOOLS FOR:

**INDEPENDENT THINKING AND
COLLABORATION.**



**What is the purpose of
each map and how do
these visual patterns
support critical and
creative thinking?**

Learning the Maps



The Frame of Reference

Guiding Questions

- How do you know what you know about this topic?
- Did your information come from a specific source?
- Is this information being influenced by a specific point of view or perspective?
- So what do you now understand about the information in your map ?
- Why is this information important?

META-COGNITIVE FRAMES OF REFERENCE

What is framing your thinking?

Where did you get the information in your map?

Is the information based on your prior knowledge?

What personal experiences have you had with this content or topic?

What background knowledge do you have that you could relate to this content or topic?

Did the information come from a specific source?

What are the specific titles, page numbers, web addresses of the sources you referenced?

What specific textual evidence can you cite to support your inferences?

What is influencing the information in your map?

Is a specific point of view influencing the information in your map?

Is there a specific point of view that is influencing the content / ideas in your map? Is that point of view biased?

Is the information in your map influenced by a primary or a secondary source?

Are there any historic or social issues influencing the information in your map?

Does a specific time period influence your thinking about the information in your map?

Are there any cultural beliefs that are influencing your thinking?

What conclusions can you draw from your map?

So what is the main idea for the information in your map?

So what do you now understand about this concept or topic because of the thinking you have done?

So how would you summarize the main idea of this information?

So why is the information in your map important?

So why is this information important to you?

So why should this information be important to others?

A Language for Learning

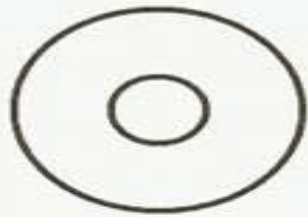
The Common Core Standards

Rigorous State Standards and Assessments

21st Century Skills

The Frame of Reference encourages reflective thinking.

CIRCLE MAP



For Defining in Context

TREE MAP



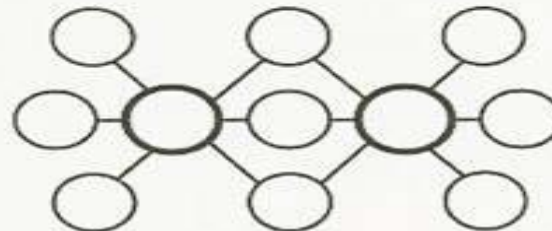
For Classifying and Grouping

BUBBLE MAP



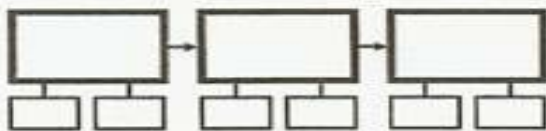
For Describing using Adjectives

DOUBLE BUBBLE MAP



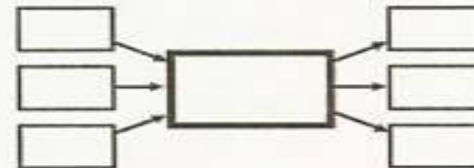
For Comparing and Contrasting

FLOW MAP



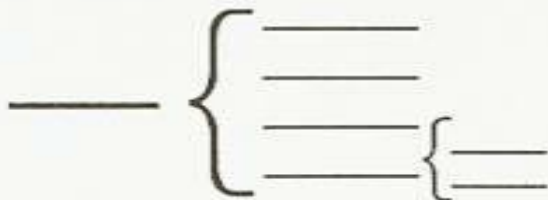
For Sequencing and Ordering

MULTI-FLOW MAP



For Causes and Effects

BRACE MAP



For Analyzing Whole Objects and Parts

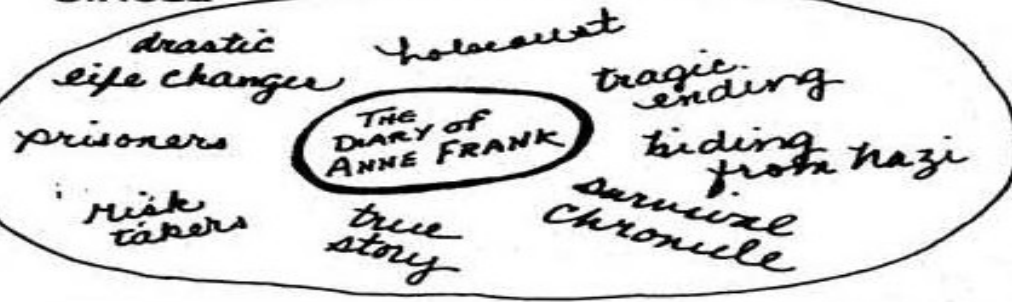
BRIDGE MAP



For Seeing Analogies

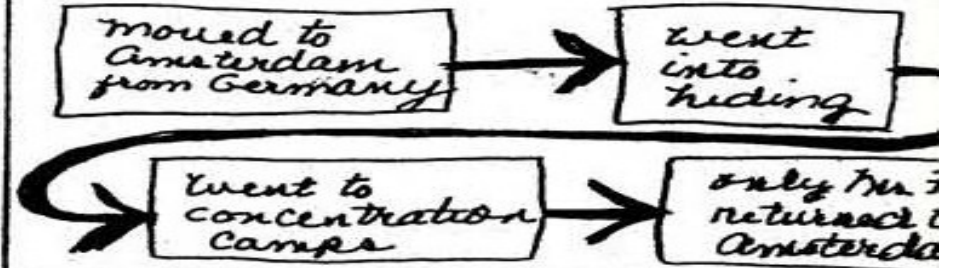
STORY TITLE THE DIARY OF ANNE FRANK (PLAY)

CIRCLE



FLOW

MOVEMENT of FRANK Family

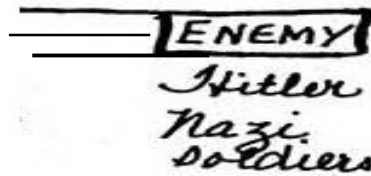


TREE

PEOPLE

Prisoners

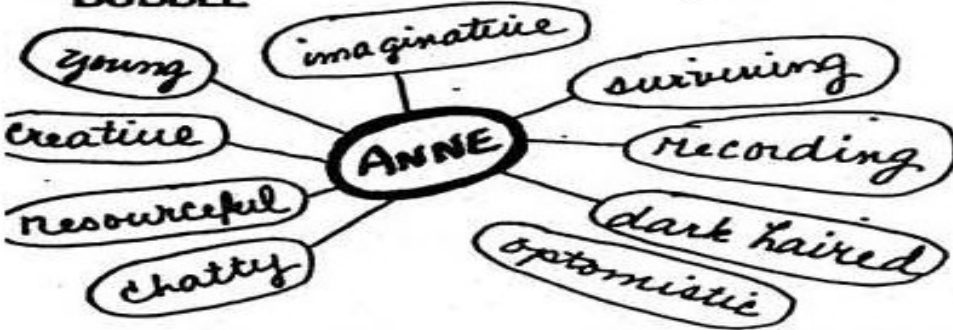
Helpers



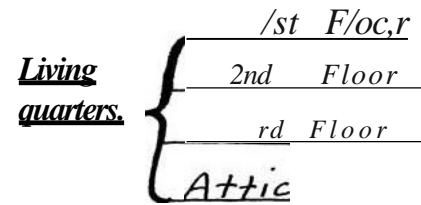
MULTI - FLOW



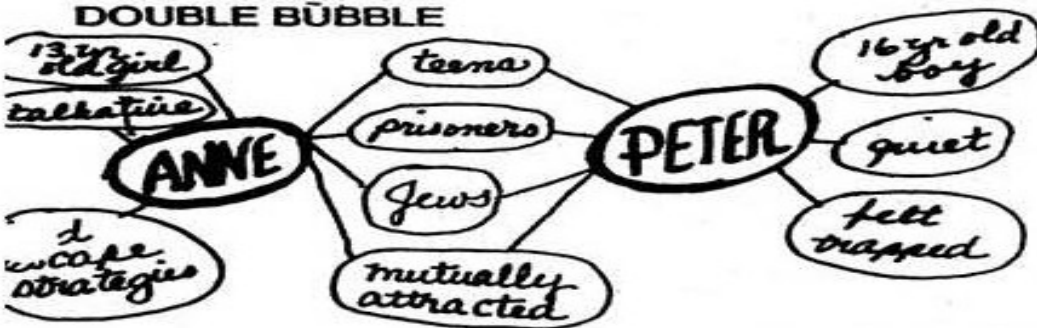
BUBBLE



BRACE

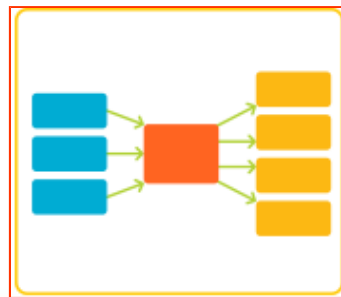
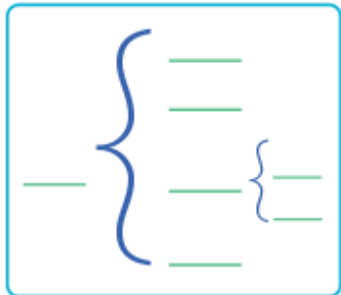
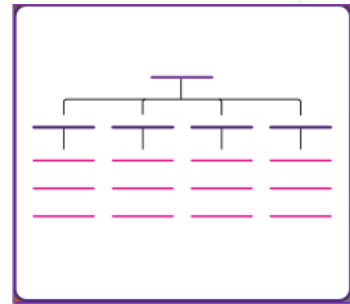
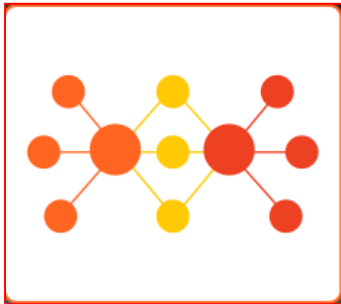
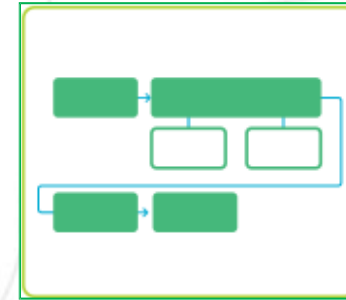
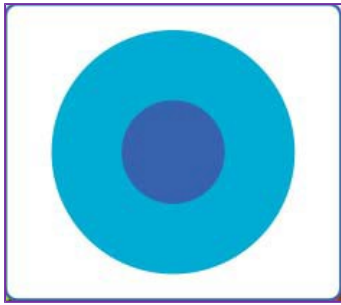


DOUBLE BUBBLE



BRIDGE

Anne AS Alex Haley
 The Holocaust Slavery
 — wrote about the time of —



Flow Map

Which of these steps comes first? What are the stages of...?

Sequencing



Thought process: Sequencing

When do you use sequencing in:

ENGLISH?

FOREIGN LANGUAGE?

SCIENCE?

MATH?

HUMANITIES?

THE ARTS?

TECH?

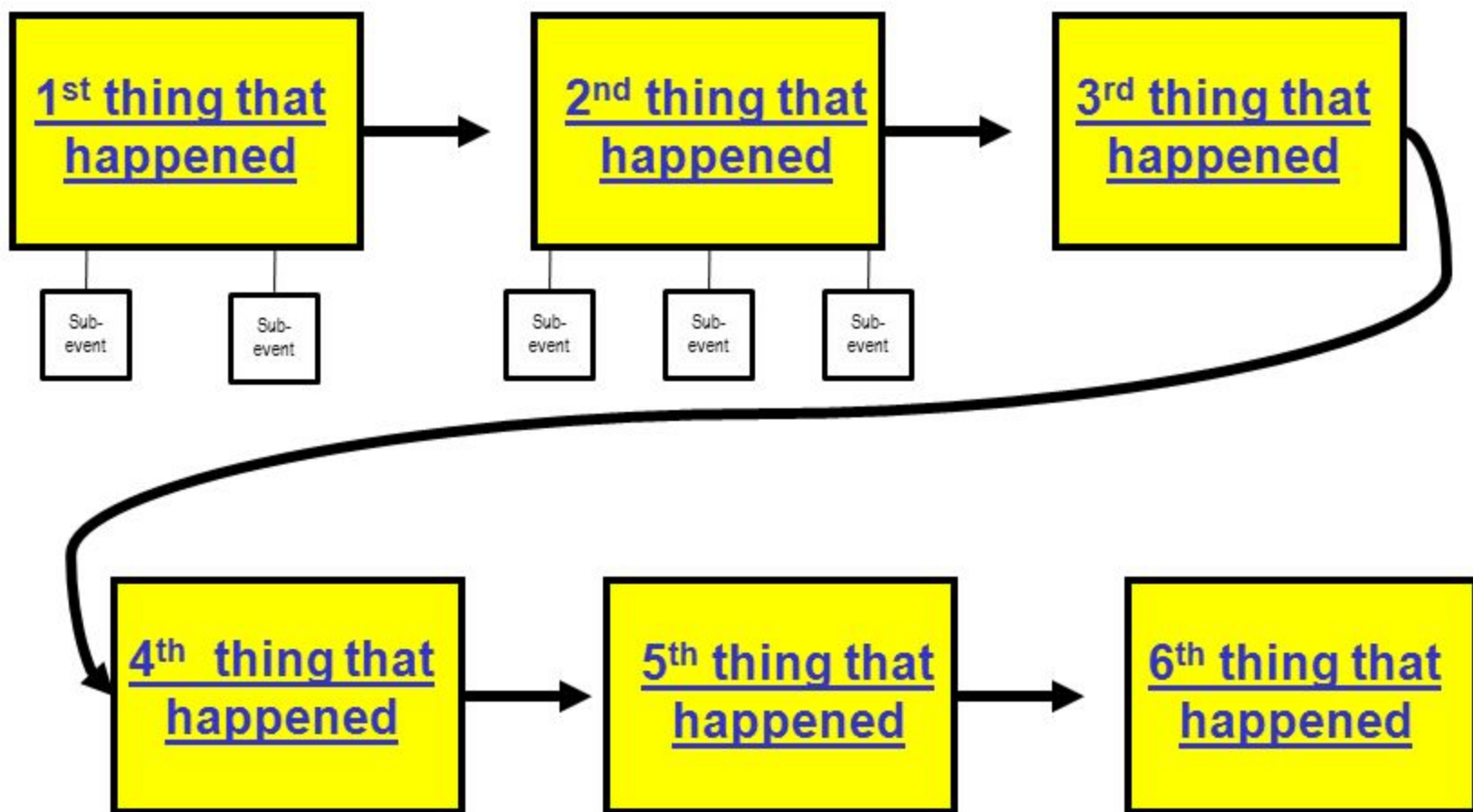
In every instance, you could use a FLOW MAP



FLOW MAP

Thinking Skill: Sequencing

Event Title



How to Write a Decimal as a Percent

Analyze
the
Problem



Find the
decimal



Move the
decimal two
places to
the right



Rewrite
the new
number



Add the
percent
sign

0.125



0.125



0.125



12.5



12.5 %

FLOW MAP

Duke Rodriguez

Michèle Jaramano

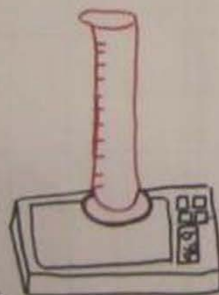
Addison samano



11

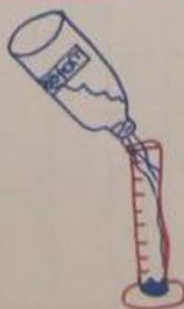
Measure the mass of an empty container such as a graduated cylinder.

46.9g



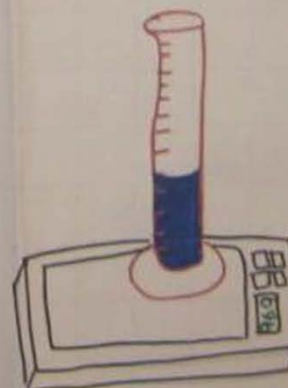
Room 29
2nd period

Pour the liquid you want to measure into the graduated cylinder.



Measure the mass of the liquid plus the graduated cylinder.

96.9g

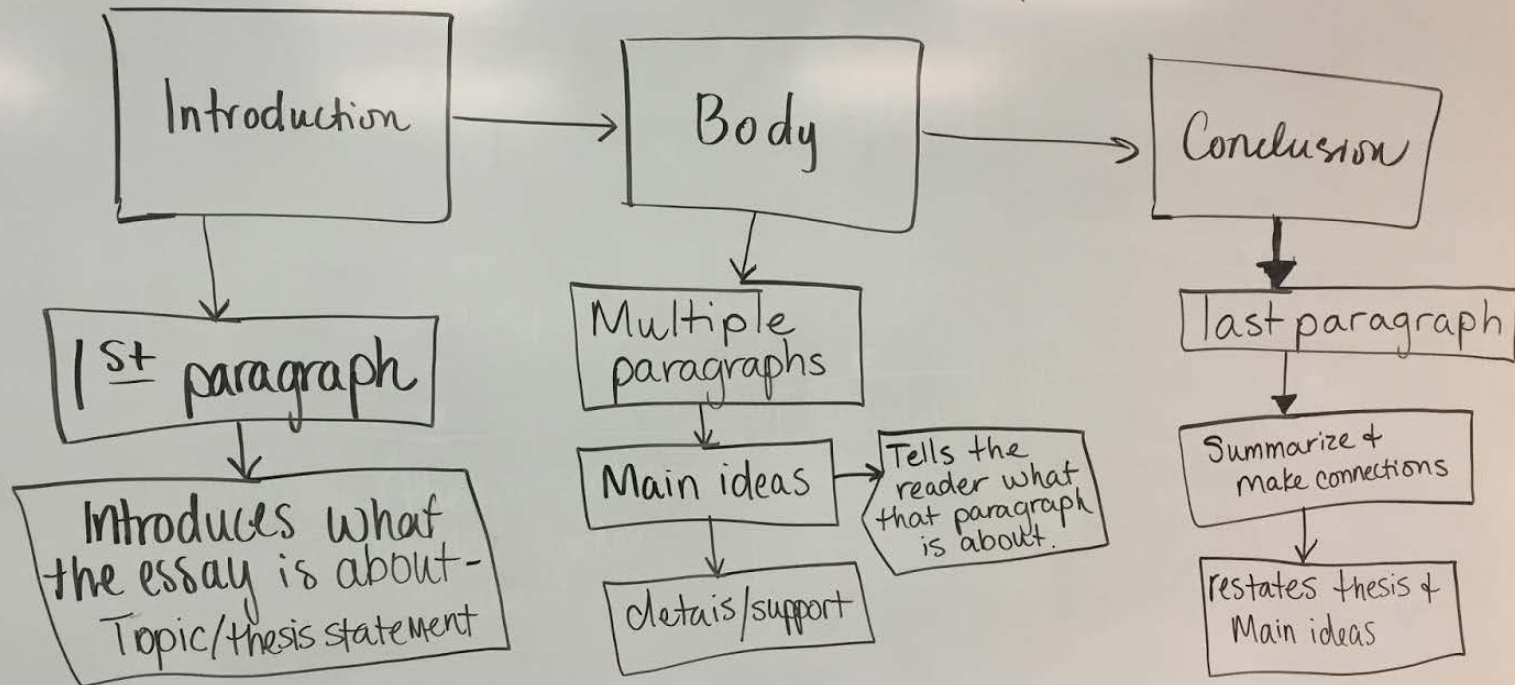


Subtract the mass of the empty graduated cylinder from the mass of the graduated cylinder plus liquid. The answer will be the mass of the liquid.

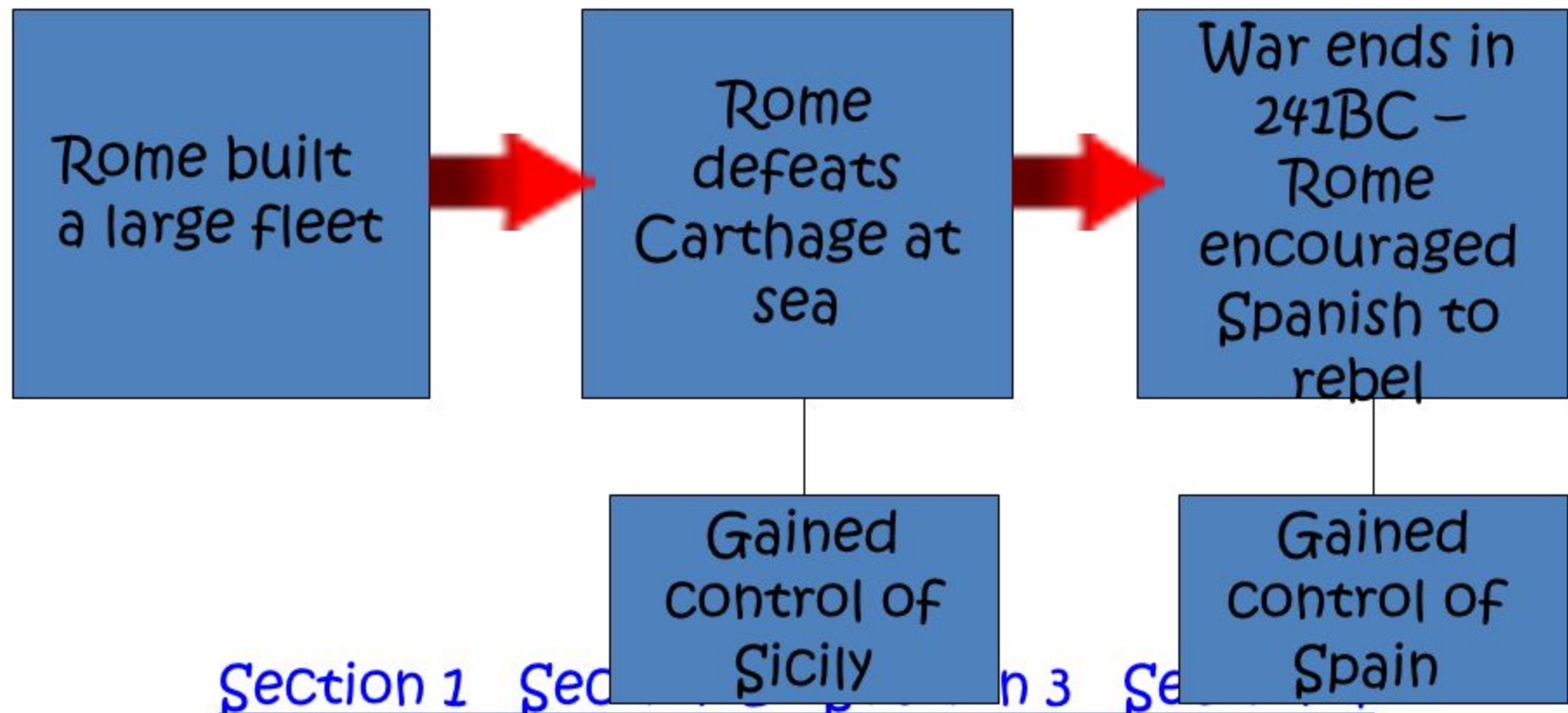
$$\begin{array}{r} 96.9\text{g} \\ - 46.9\text{g} \\ \hline 50.0\text{g} \end{array}$$

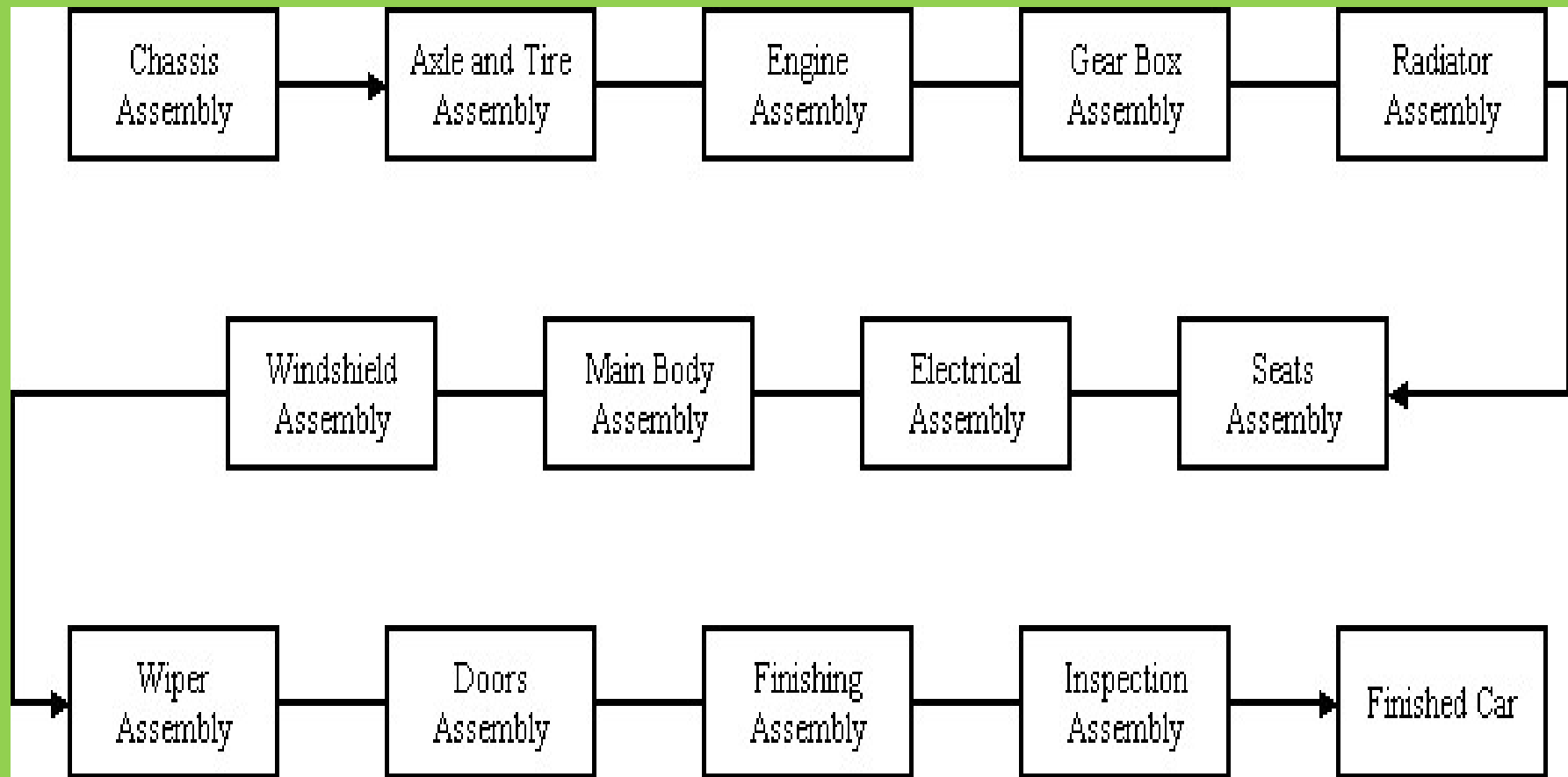
-Teacher
-classroom
-of self
-classmate

Multi-Flow Map

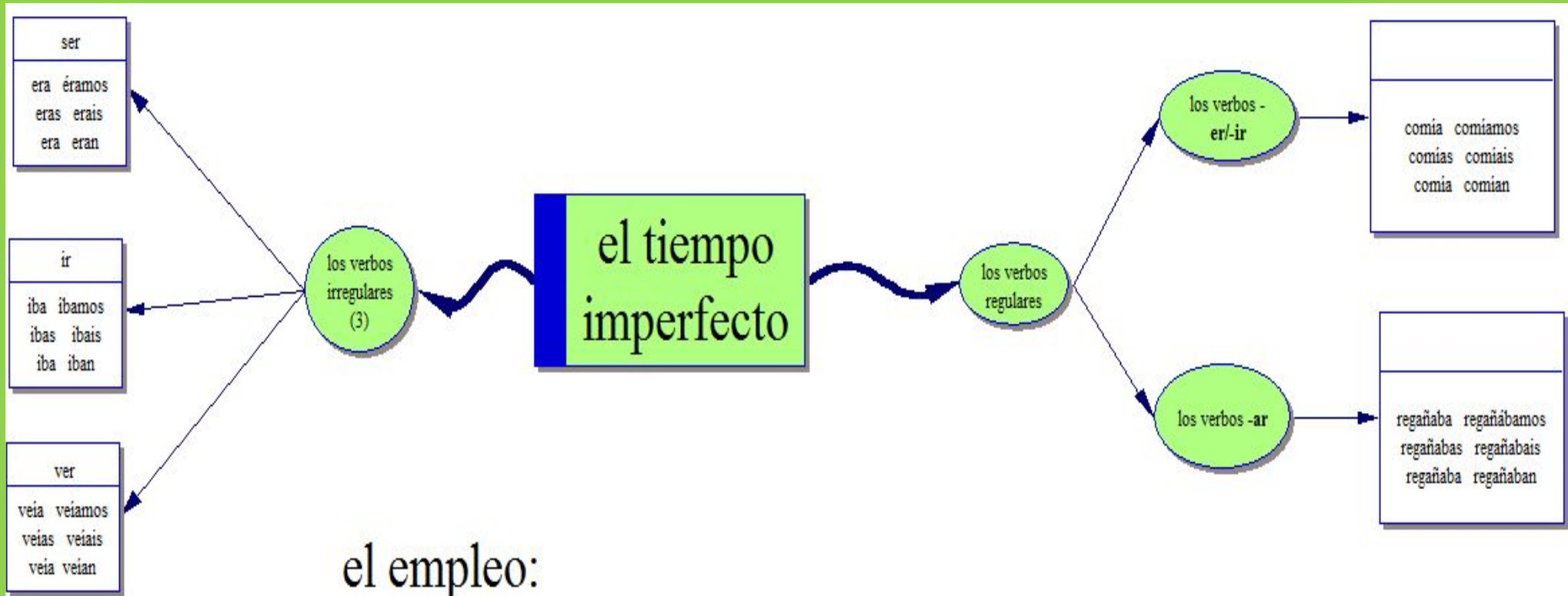


Flow Map that depicts the events from the start of the First Punic War to the start of the Second Punic War





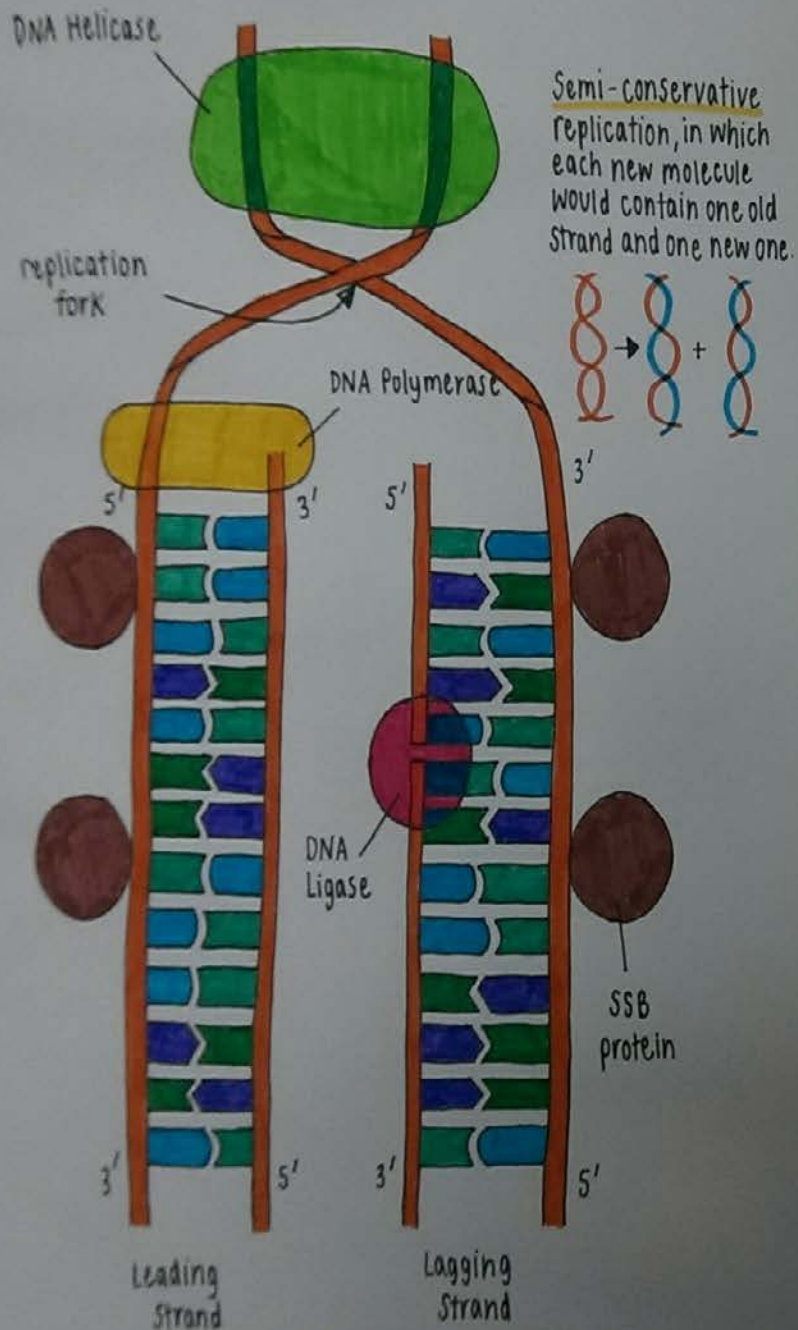
Additional option: Choose one assembly and have students create a flowchart to detail the action steps in order to show mastery.



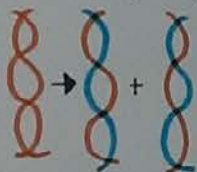
el empleo:

- ◆ acciones continuas en el pasado
- ◆ acciones repetidas en el pasado
- ◆ acciones habituales en el pasado

DNA Replication



Semi-conservative replication, in which each new molecule would contain one old strand and one new one.



The DNA double helix unzips as the hydrogen bonds between the bases break. This process is done by 'DNA Helicase'.

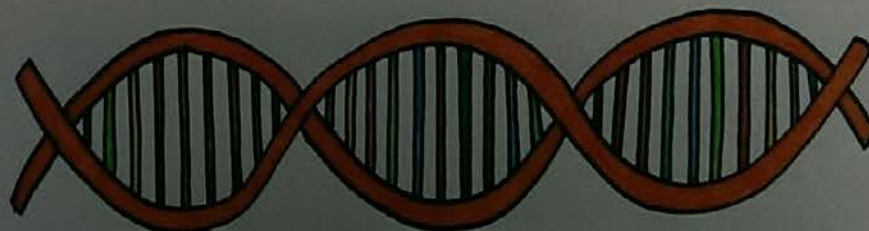
Single-stranded binding proteins (SSB) binds to single stranded regions of DNA to make sure that the DNA is uncoil.

DNA Polymerase links an incoming nucleotide to the growing new chain from 5' to 3' which forms a leading strand.

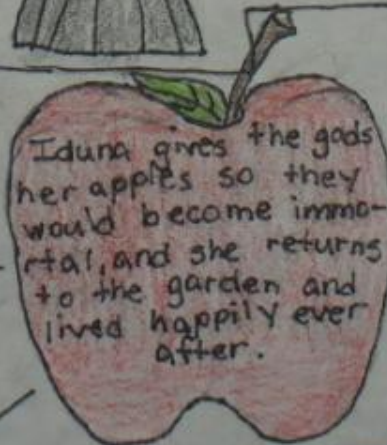
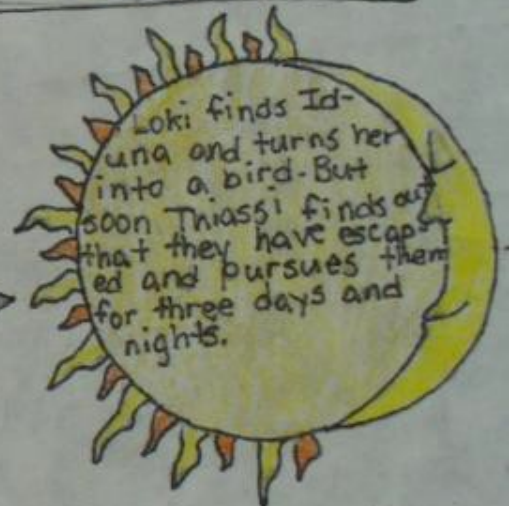
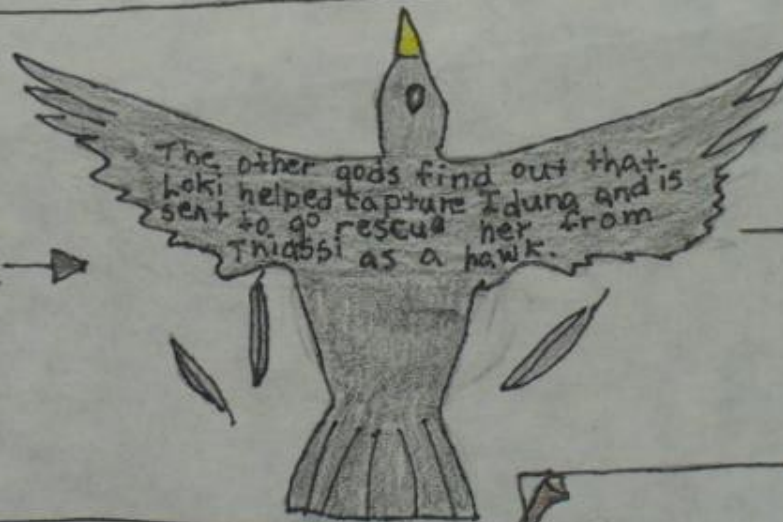
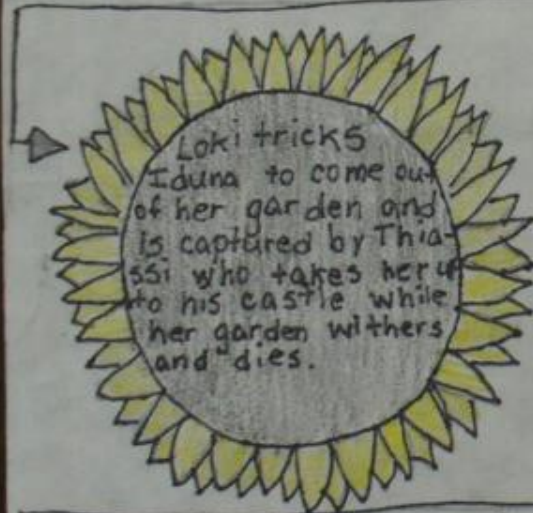
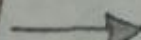
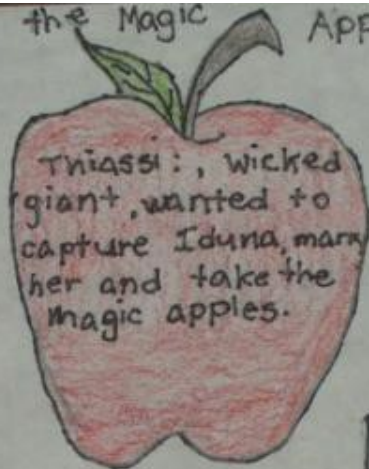
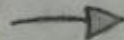
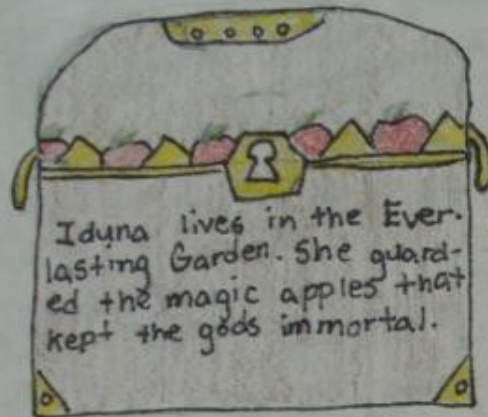
Lagging strand or Okazaki Fragment proceeds by discontinuous synthesis of short stretches of DNA.

The lagging strand joins together by an enzyme called DNA Ligase which seals the fragment.

Replication occurs in both directions forms a 'Replication Bubble'

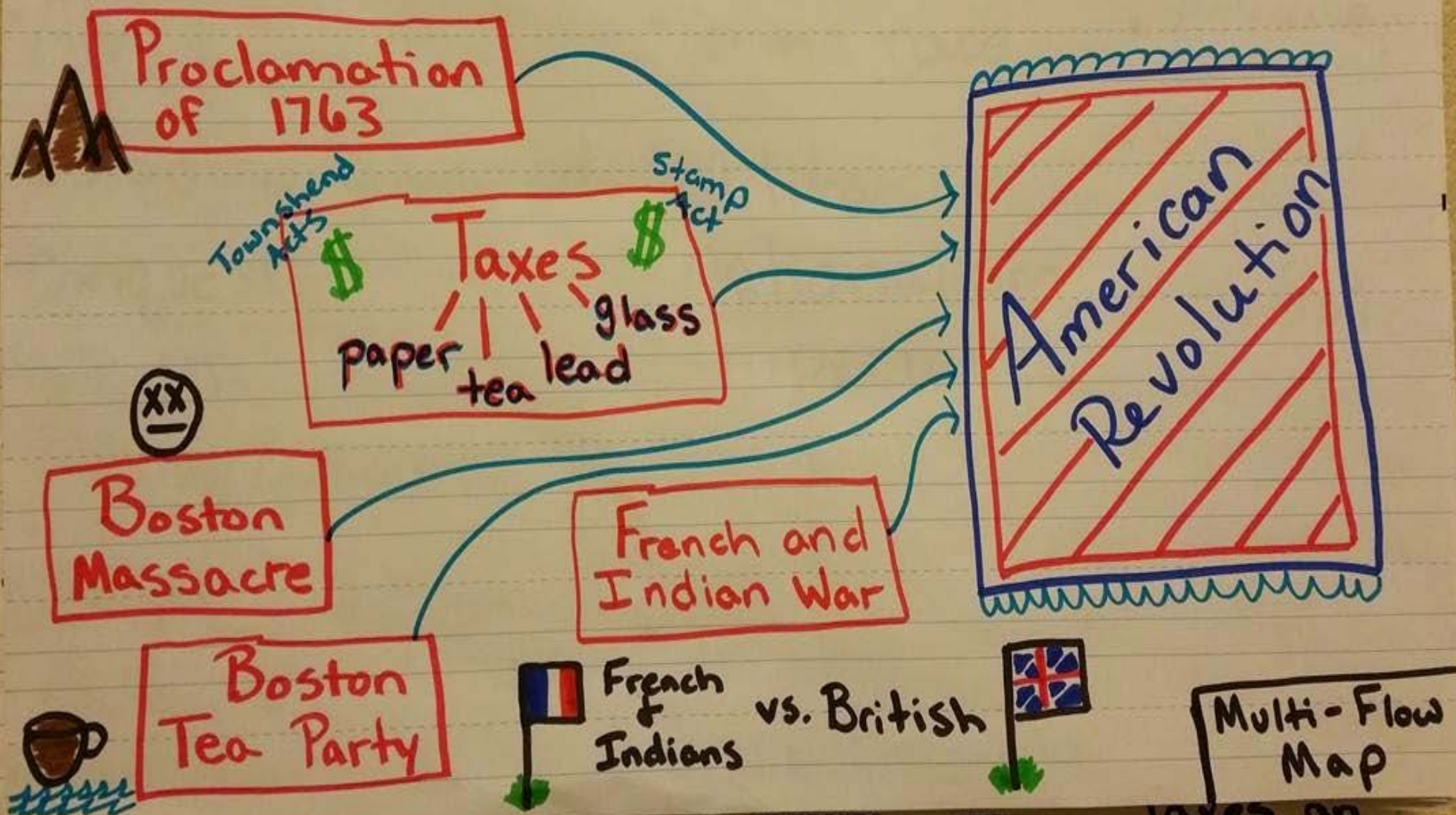


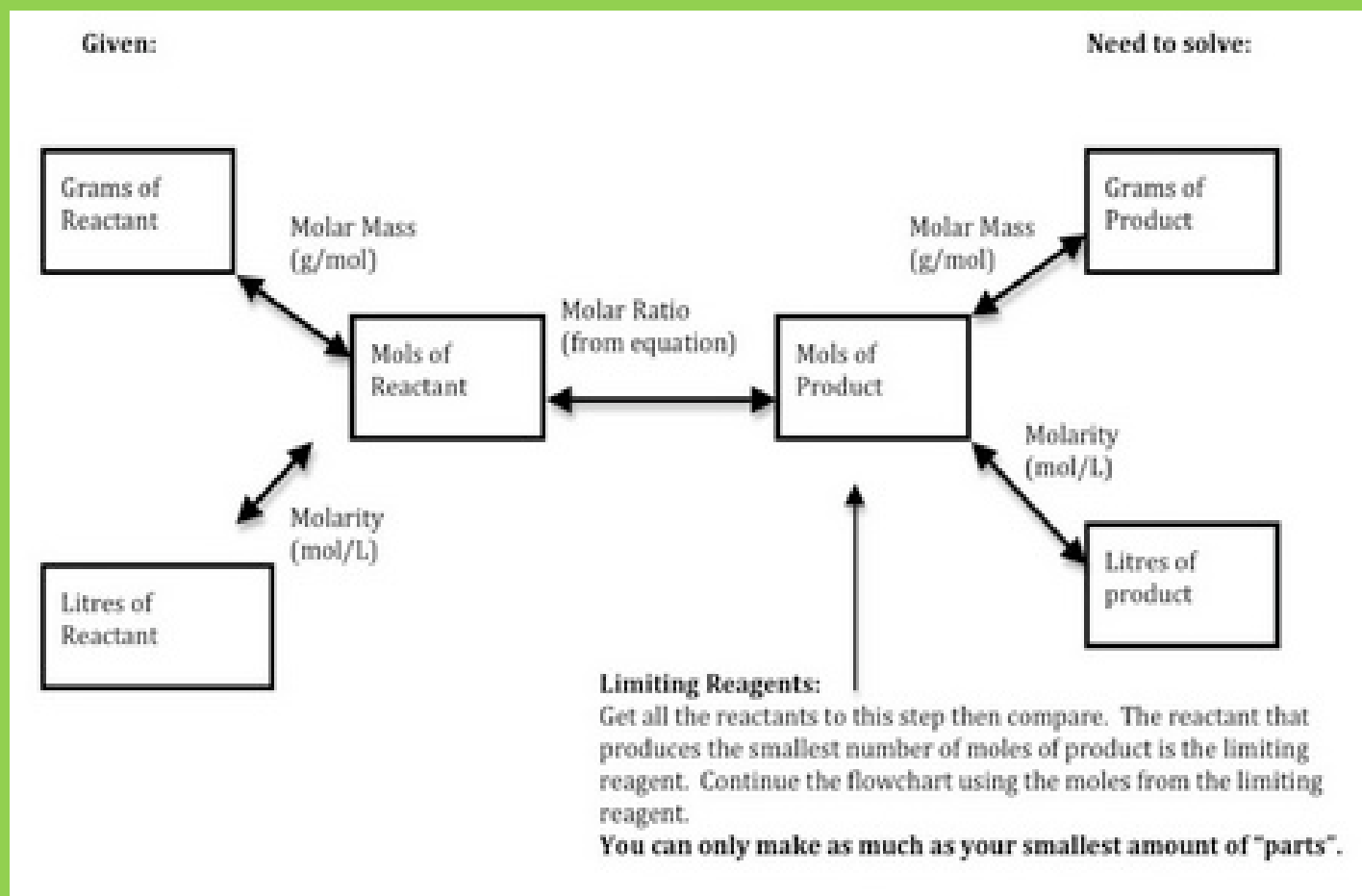
Iduna and the Magic Apples Flow Map





Causes of the American Revolution





Mitosis

Prophase



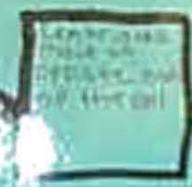
Metaphase



Anaphase



Telophase



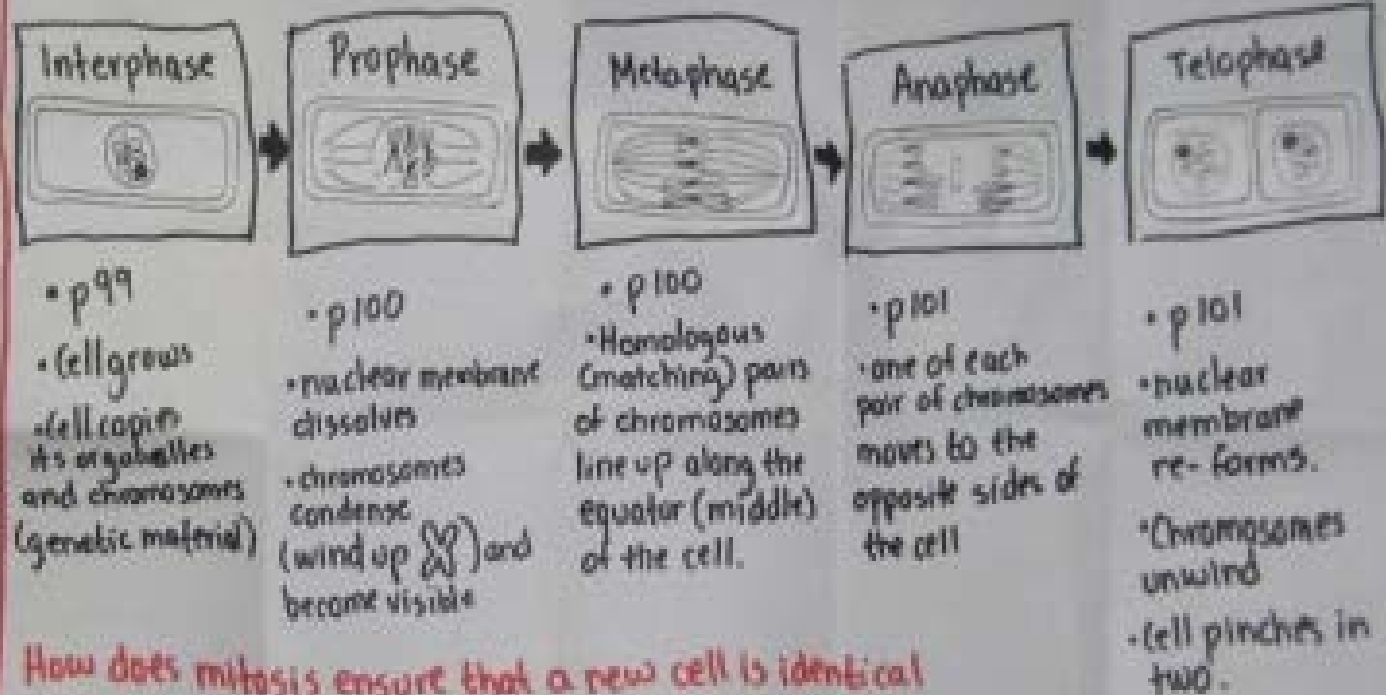
Interphase



2.22.1

“What are the stages of mitosis?”

Unit 2: Mitosis (cell division) • Flow Map 3/2/11 Pd 2



How does mitosis ensure that a new cell is identical to the parent/original cell?

- Exact copies are made, then they move to opposite ends.

1/31/11 pd 2

covers the cell, acts as a selective barrier that comes in and out of the cell to get the work done.

DNA is a

Ex: people, plants, animals, fungus

The Black Death

The Black Death began in China

Ships returning from Asia brought it to Italy

Spread to the rest of Europe along trade routes

1/3 of Europe's population died

Not enough people to do the work

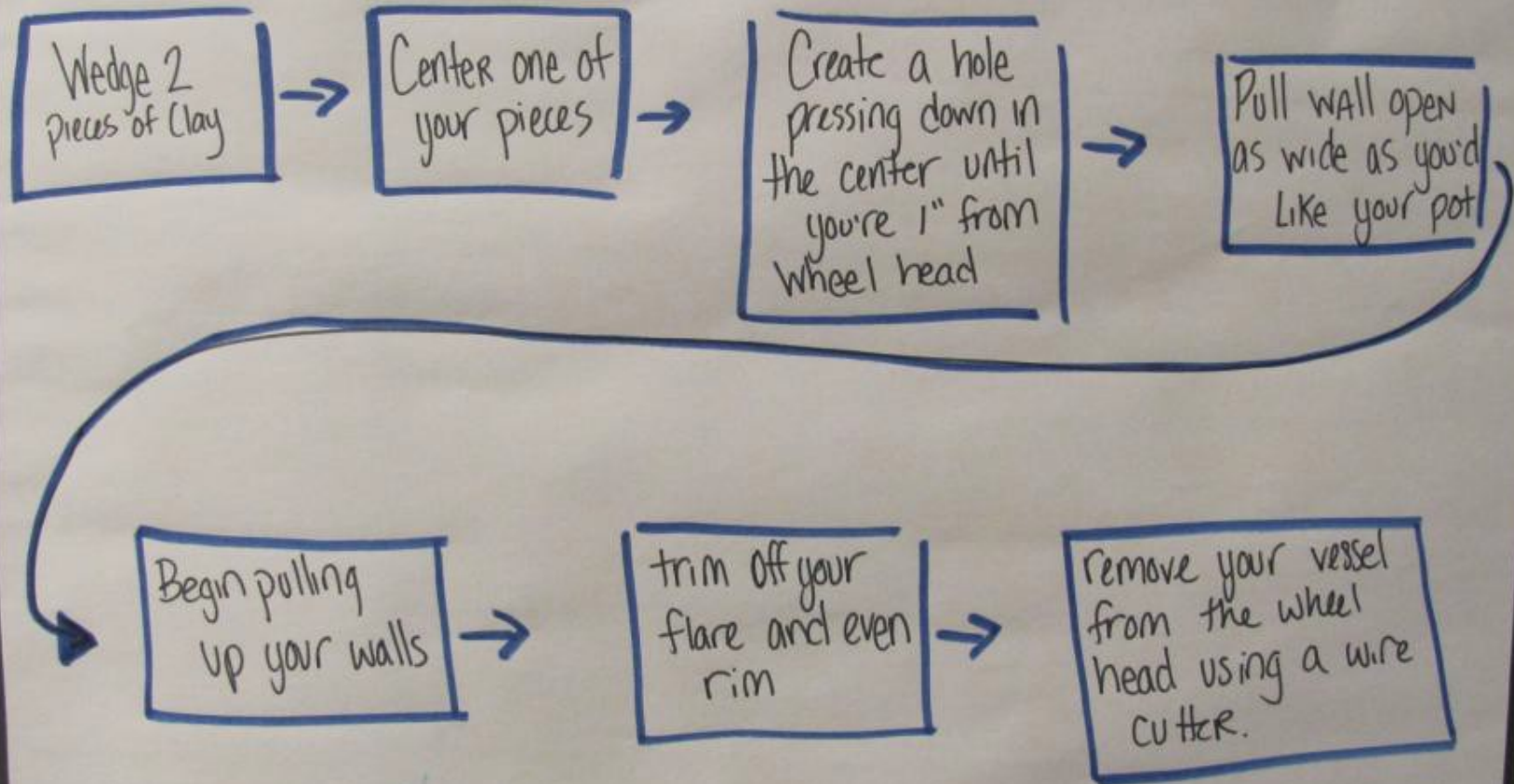
Surviving peasants demanded better conditions and wages

Feudal system began to break down



What are the stages of throwing on the Potter's Wheel?

STEPS TO THROWING



Textbook

teacher

experience

Where did you get your information?

Identify terms in the Problem

$$5x - 2y + 10 - x + 3$$

✓ ✓ ✓
8 terms

Notice the operation that is in front of each term

5x, 10 and 3 are added. 2y and 1x are subtracted

Find the terms that are alike.

$$5x - 2y + 10 - 1x + 3$$

Perform operation to bring like terms together.

$$5x - 1x, 10 + 3, -2y$$

✓ ✓
4x 13

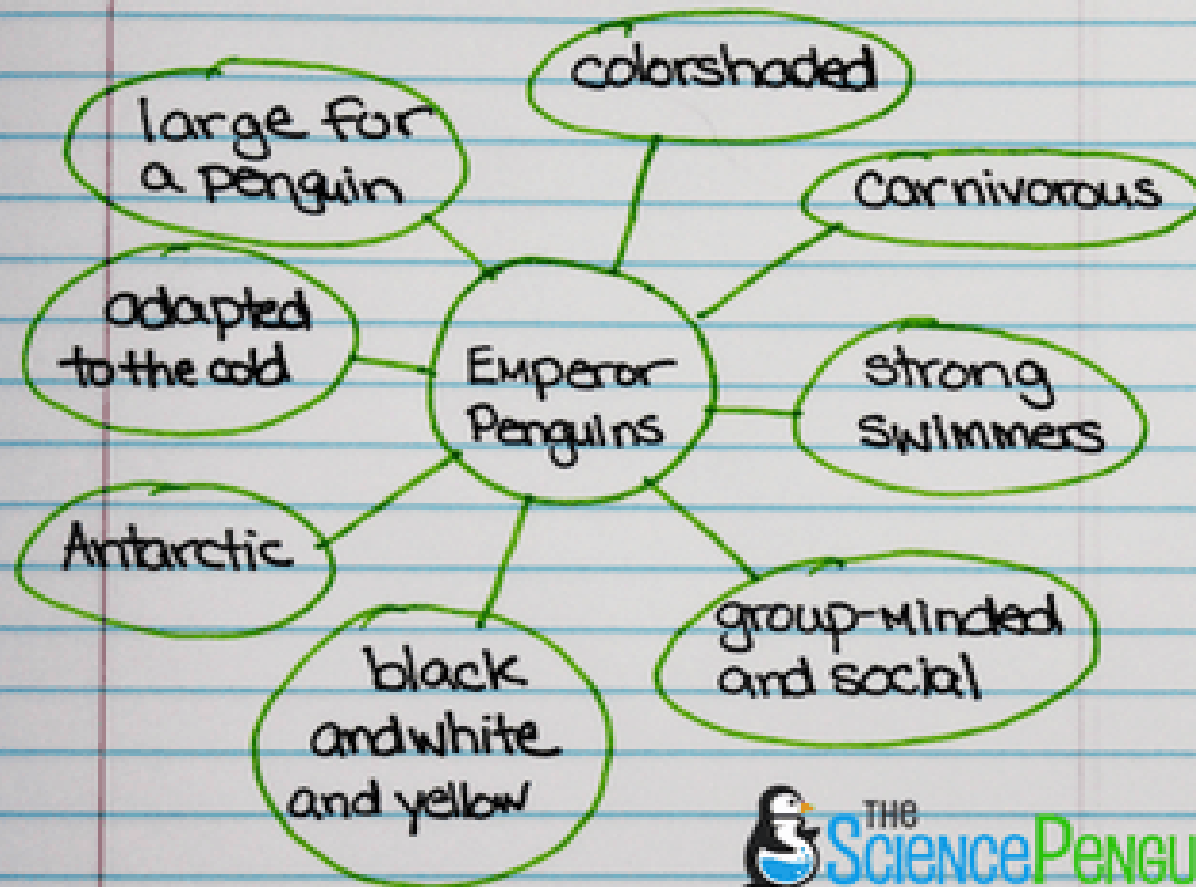
Include any terms that were not combined into answer.

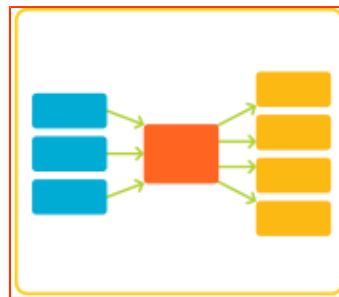
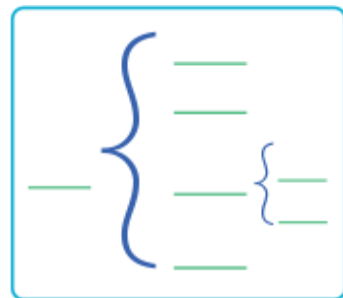
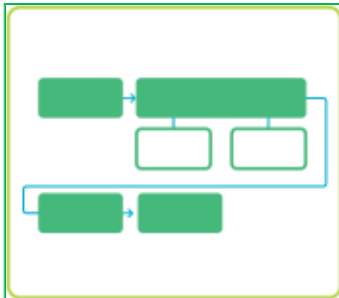
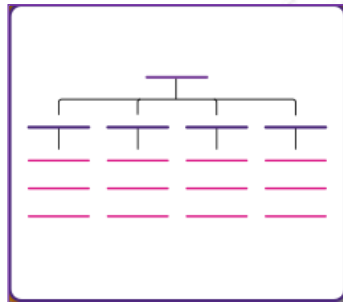
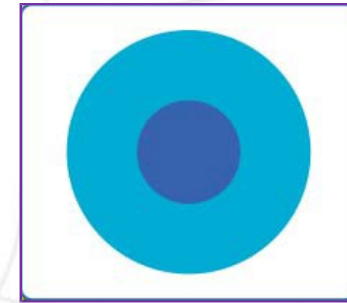
$$4x + 13 - 2y$$

Place terms in appropriate order. (variables 1st, alphabetically)

$$4x - 2y + 13$$

Emperor Penguin Bubble Map





Circle Map

What is the definition
of _____?

Defining and
Brainstorming



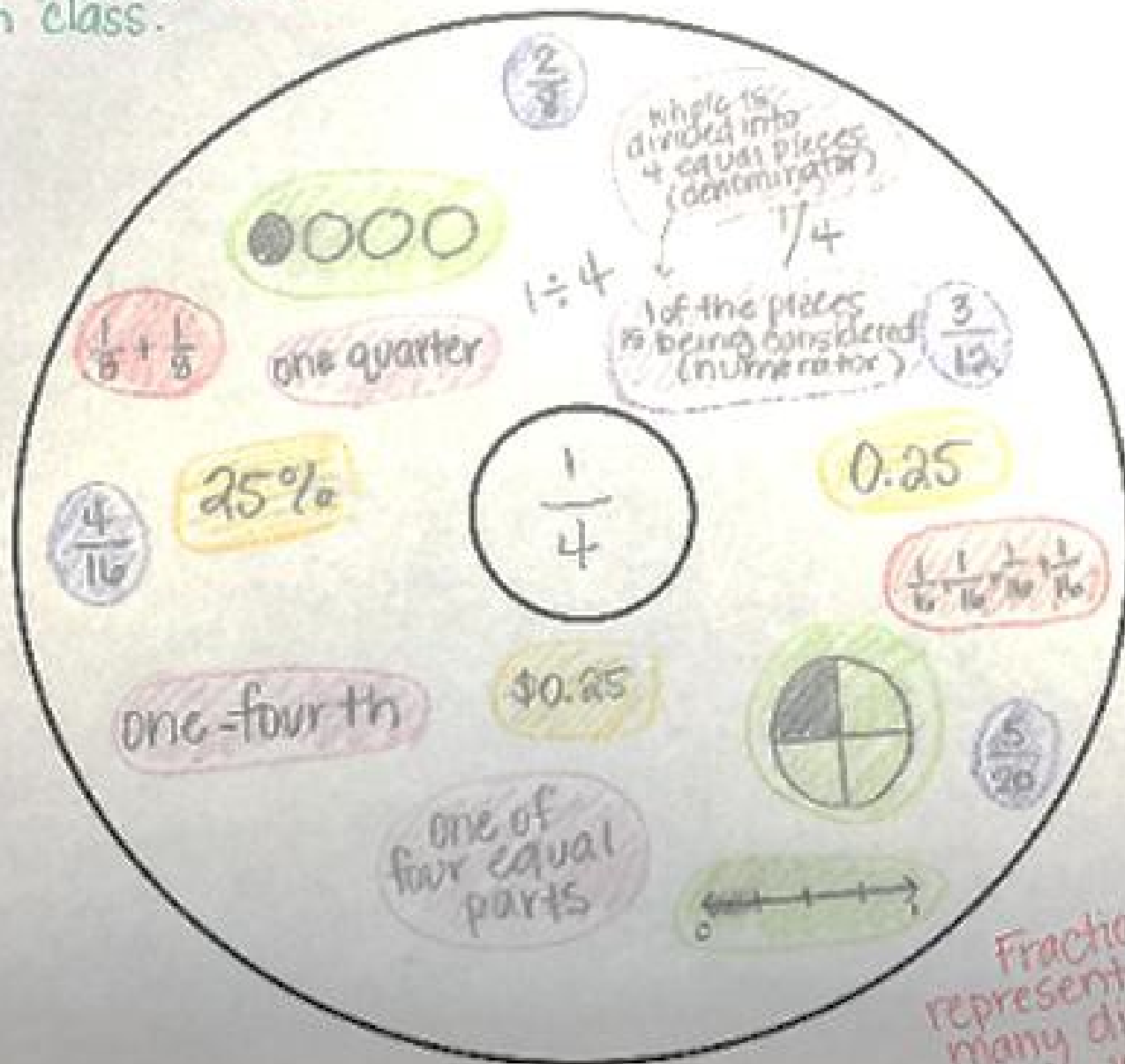
KEY INFORMATION

The Circle Map is used to define a concept, word or idea. It is a great map to use to diagnose prior knowledge, brainstorm before writing, or use as a lesson closure.



THINKING MAPS®

3rd, 4th, and 5th grade
math class.

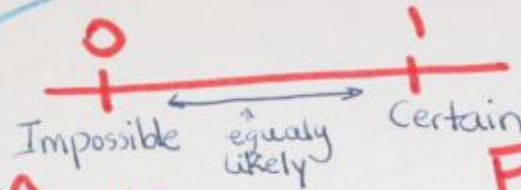


Fractions can be
represented in
many different
ways.

E.Q. How do you define probability?

Internet

Previous teachers



Event

Counting Principle



I have

How many outfits can I come up with?

Independent event

Probability

Sample space



rolling a spinner
dice



outcomes

$$\frac{3}{9} = \frac{1}{3} \quad \frac{2}{9} \quad \frac{4}{9}$$

Mrs. Rogers

Text books

Math, 8th Grade

Cadillac

scarves



May
still
be
alive

sideburns



THINKING MAPS®

Who Am I? Trivia

Clue # 1

Clue # 2

Clue # 3

Clue # 4

?

Is this symbol I can see today?

Clue 1

Clue 2

Clue 3

Clue 4

?

Why is this Symbol important?

?

?

?

?

?

Clue # 1

Clue # 2

Clue # 3

Clue # 4

?

Clue # 1

Clue # 2

Clue # 3

Clue # 4

?

Clue 1

Clue 2

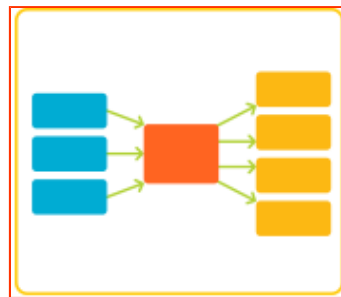
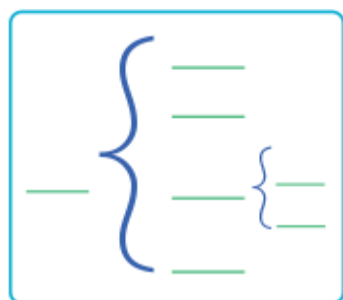
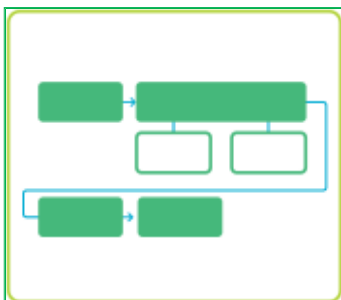
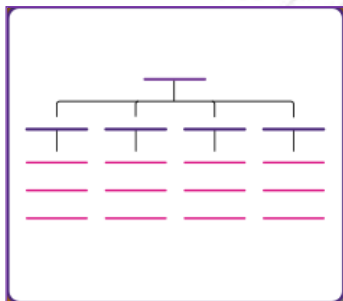
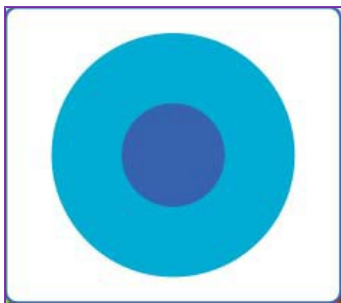
Clue 3

Clue 4

?

Picture Bank for Map Activity & Who am I.



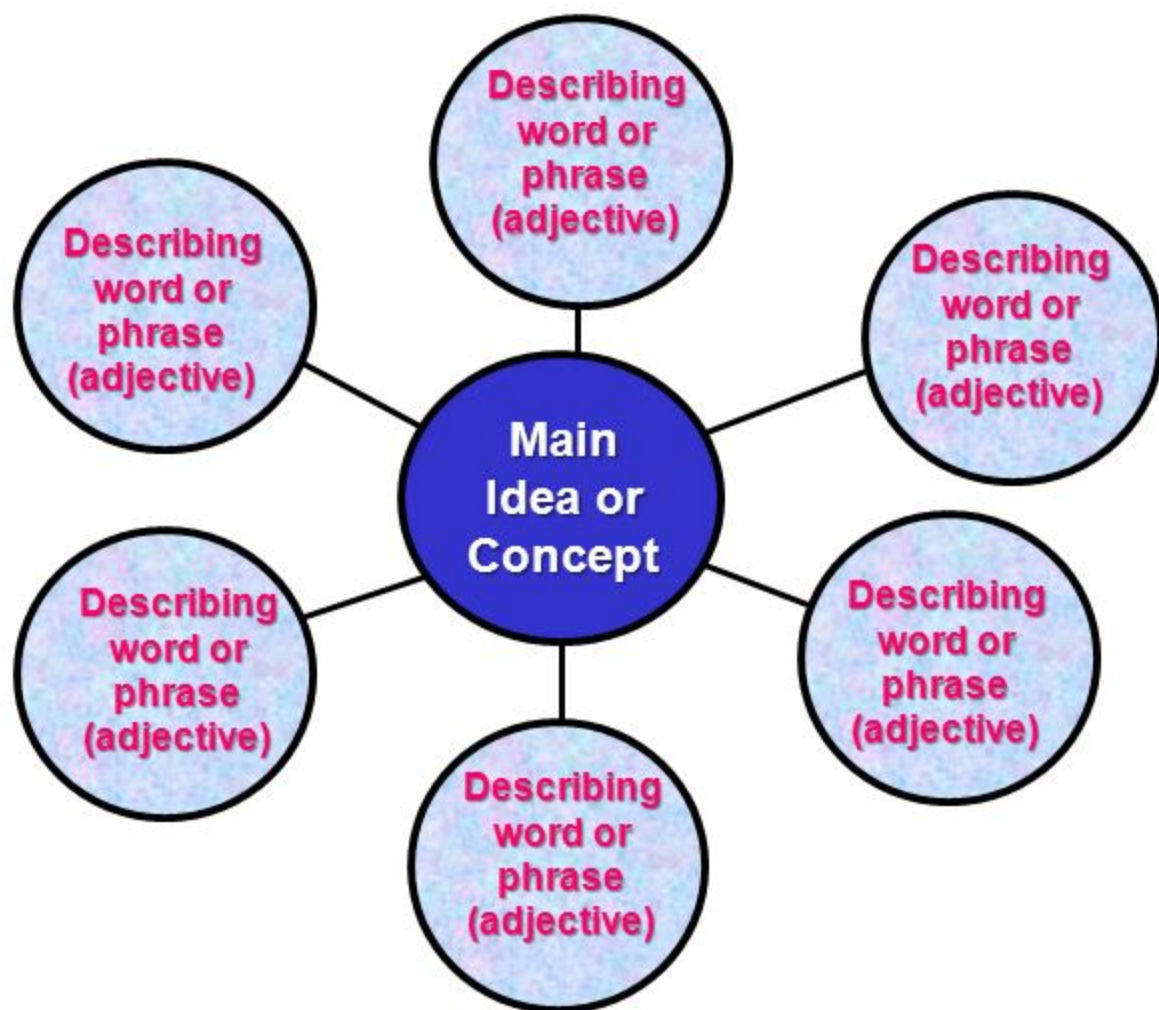
Bubble Map

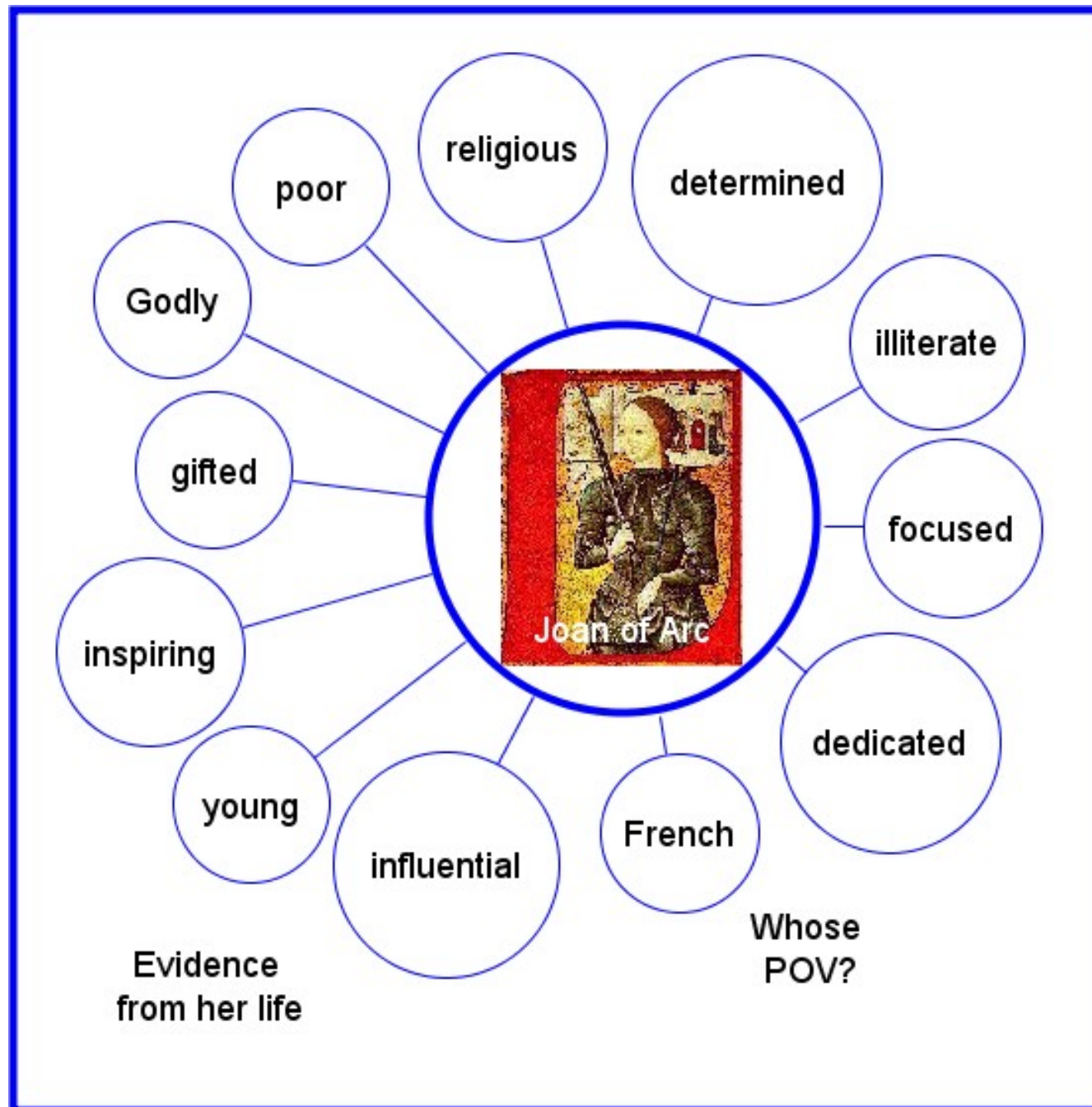
Which word best describes
_____? What are the
qualities of _____?

Describing

BUBBLE MAP

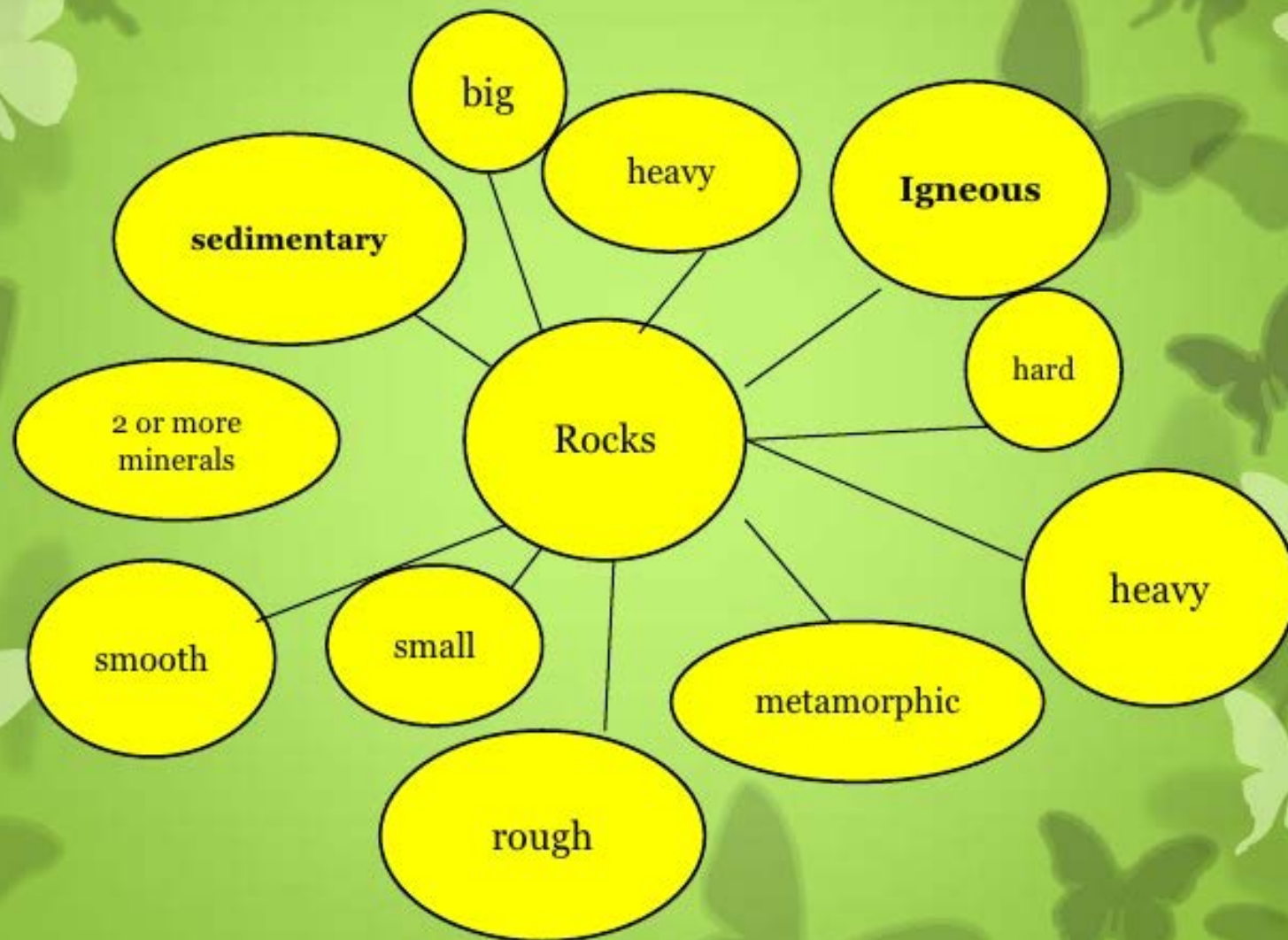
Thinking Skill: Describing in Detail



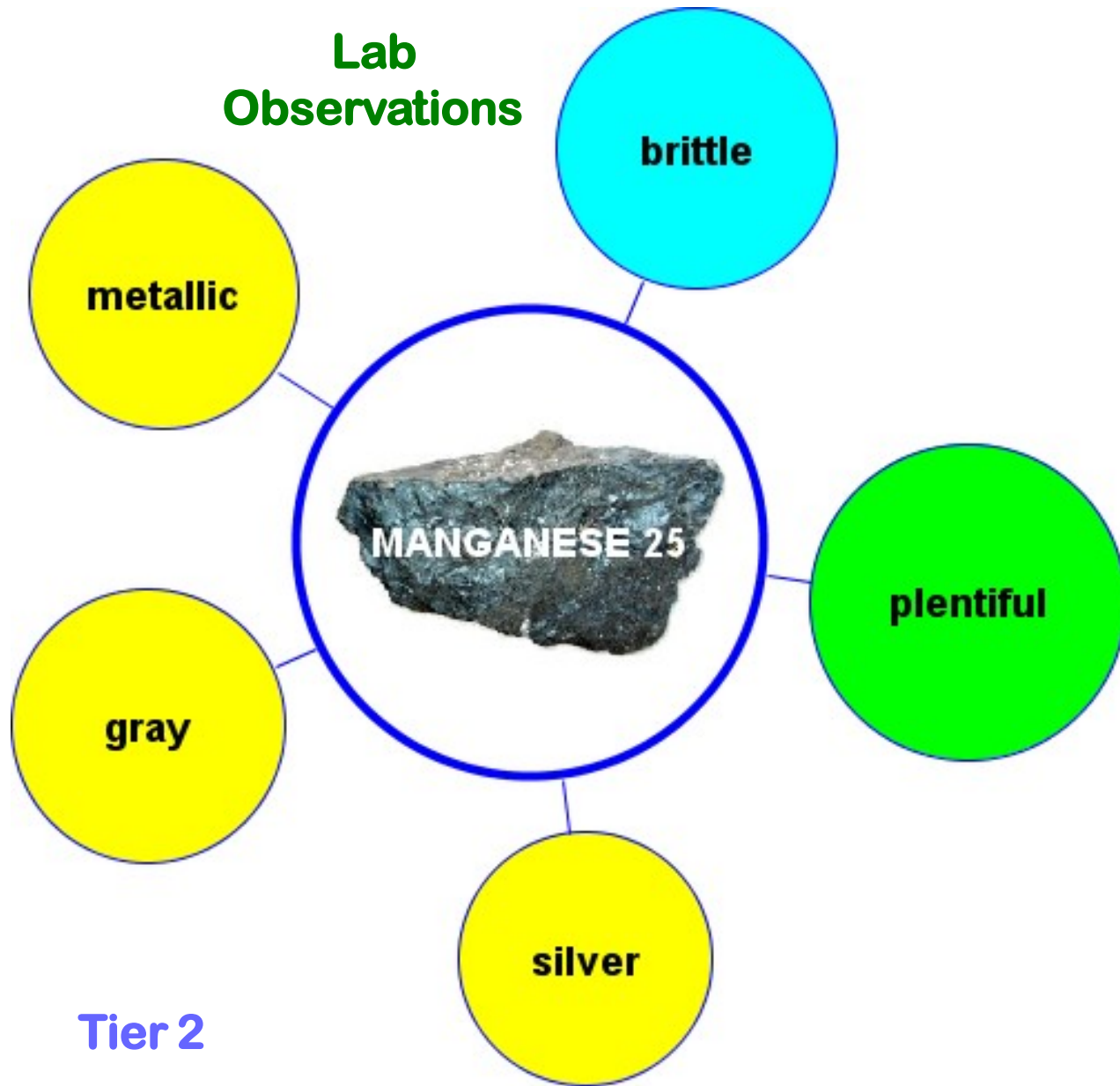


English or
Humanities

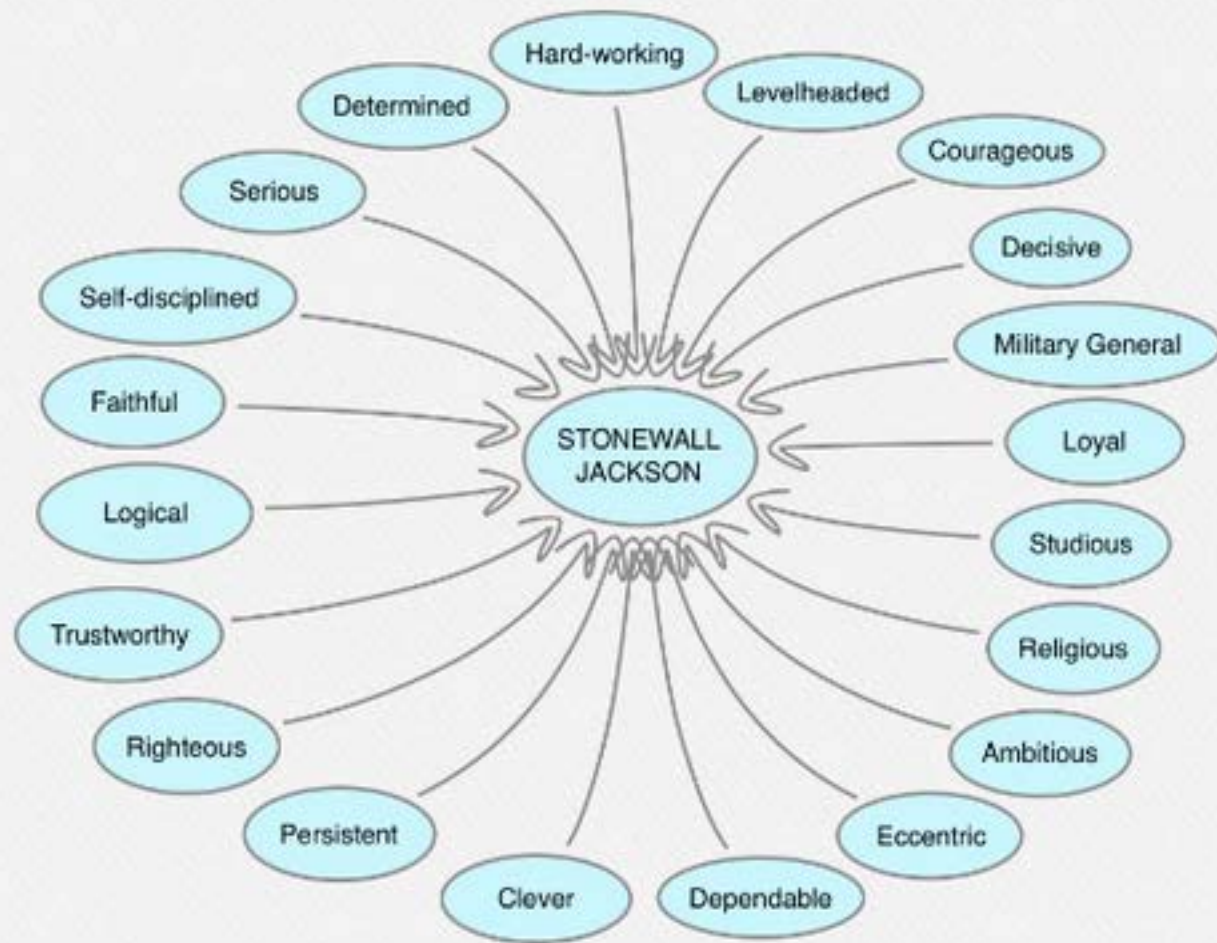
Bubble Map: Science



**Lab
Observations**



Tier 2



Preschool Rocks!



talkative



playful



inquisitive



energetic



brilliant



Preschoolers



polite



sweet



persistent

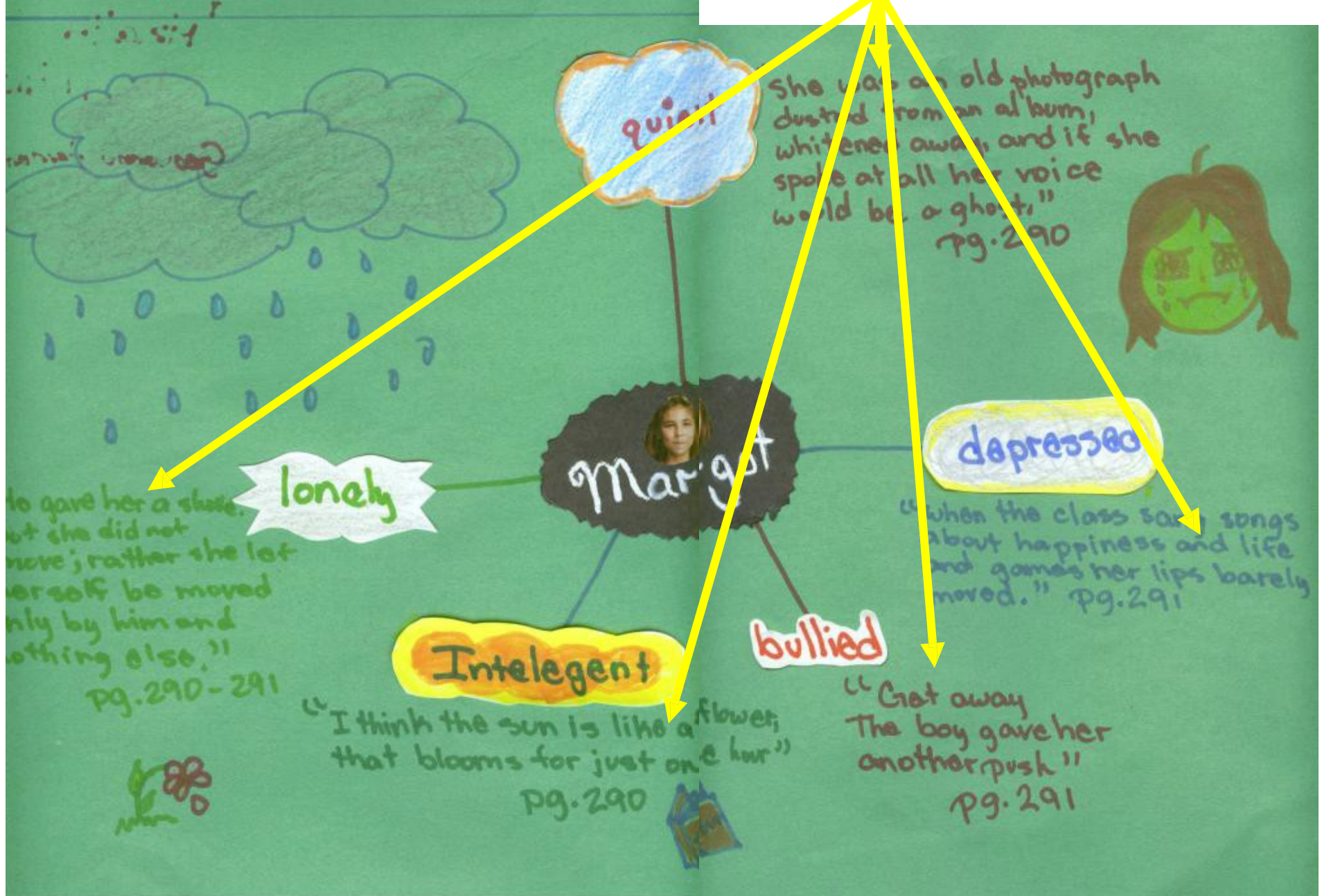


helpful



All Summer in a Do
by: Ray Bradbur

Source: What evidence is there to support your inferences?



Map: Lady Macbeth

concerned

p. 65 line 3

Lady Macbeth: "Say to the king, I would attend
his leisure For a few words." - William Shakespeare
(speaking to the
servant)

afraid

p. line 52

Macbeth: "Give me the daggers.
Sleeping and the dead are
pictures 'Tis the eye
of childhood that fears a
faded devil. If he do bleed, I'll
wash the faces of the grooms withal,
must seem their guilt."

William Shakespeare

→ shows
voice to her
winning

Fake

p. 54 line 116

Lady Macbeth: "Help me
hence, ho!"

(Lady Macbeth is carried
out)

- William Shakespeare

good!

GUILTY

p. 106 line 50

Lady Macbeth: "Here's the smell
of the blood still. All the perfumes of
Arabia will not sweeten this little
hand. Oh, oh, oh!"

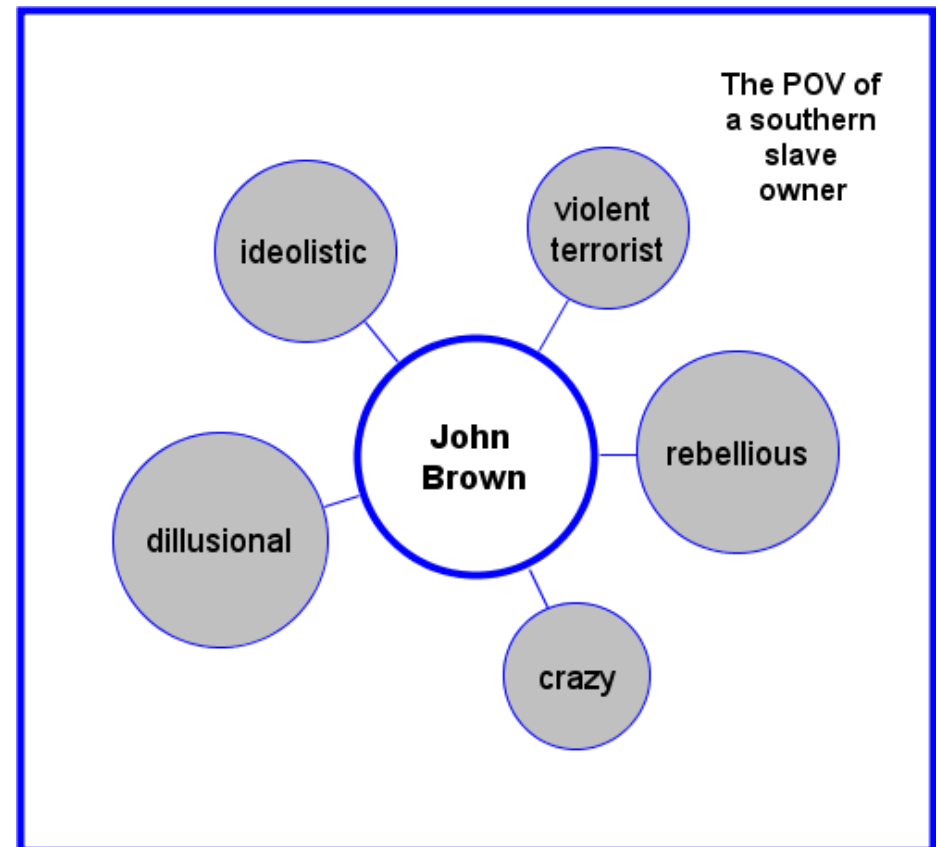
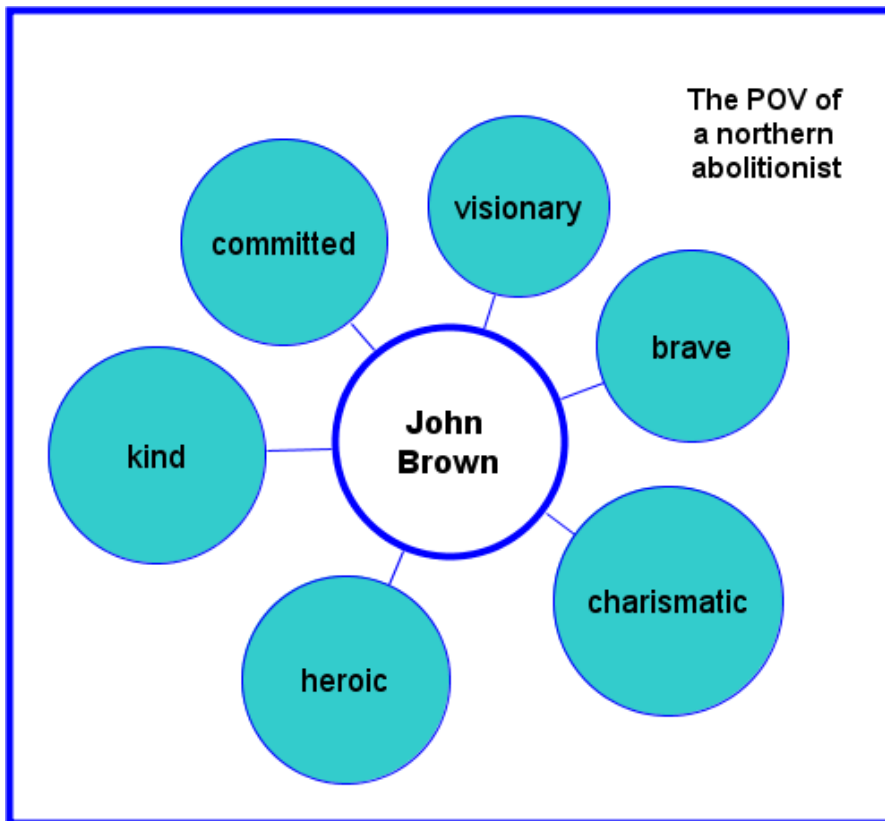
- William Shakespeare

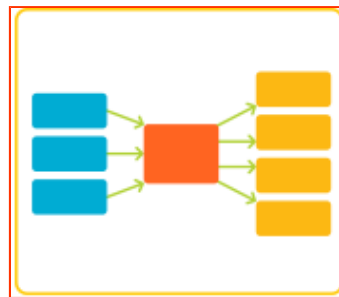
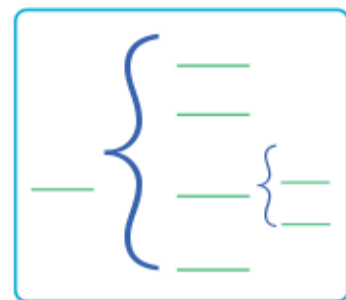
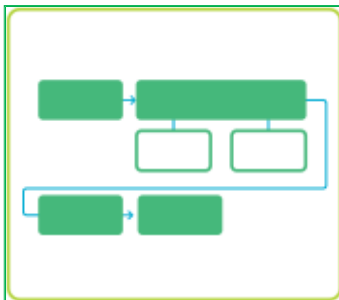
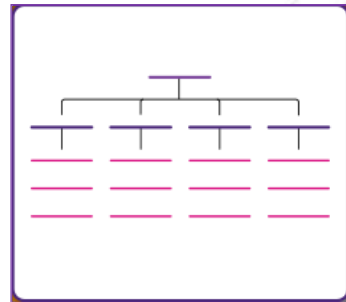
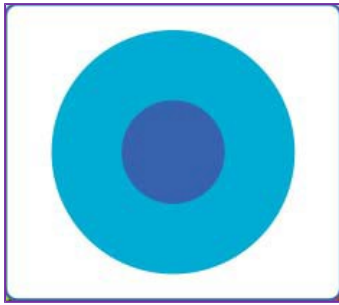
determined

p. 41 line 60

Lady Macbeth: "We fail? But screw
your courage to the sticking-place.
And we'll not fail!"

- William Shakespeare



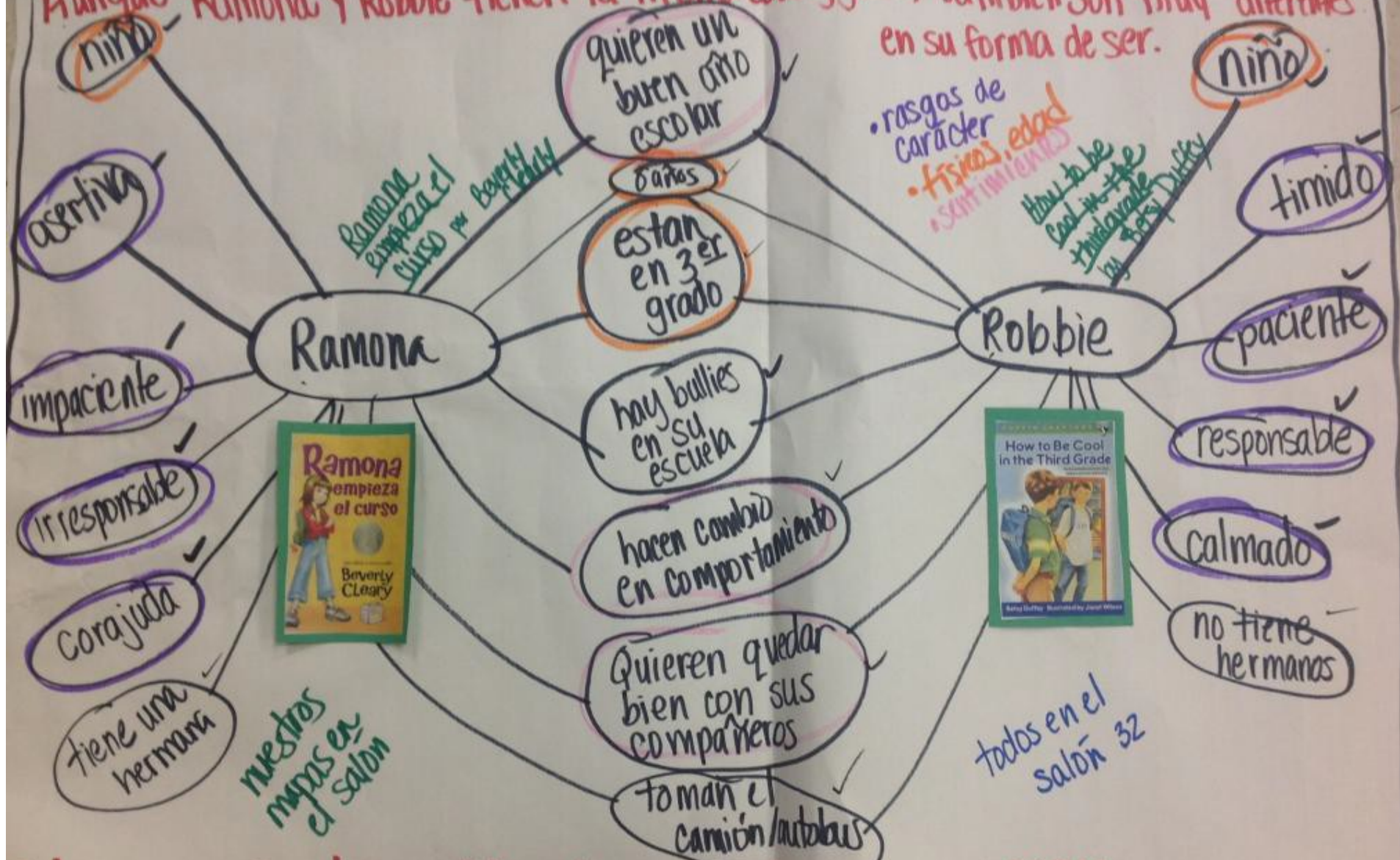


Double Bubble Map

How are _____ and _____ alike?
What is the most important difference in...?

Comparing and Contrasting

Aunque Ramona y Robbie tienen la misma edad y grado, también son muy diferentes en su forma de ser.



Todos somos iguales y diferentes a muchas otras personas.

I found out from my observation in lab.

I observed parallel venation in leaves and netted venation in leaves in lab.

Textual support

Teacher support

<http://www.botanical-online.com/botanical.htm>

Jessica Lopez



One cotyledon

Both seeds come from plant

Two cotyledons

Petals in groups of 3's

Both germinate

Petal in groups of 4's/5's

Parallel venation in leaves

Both have food

Netted venation in leaves



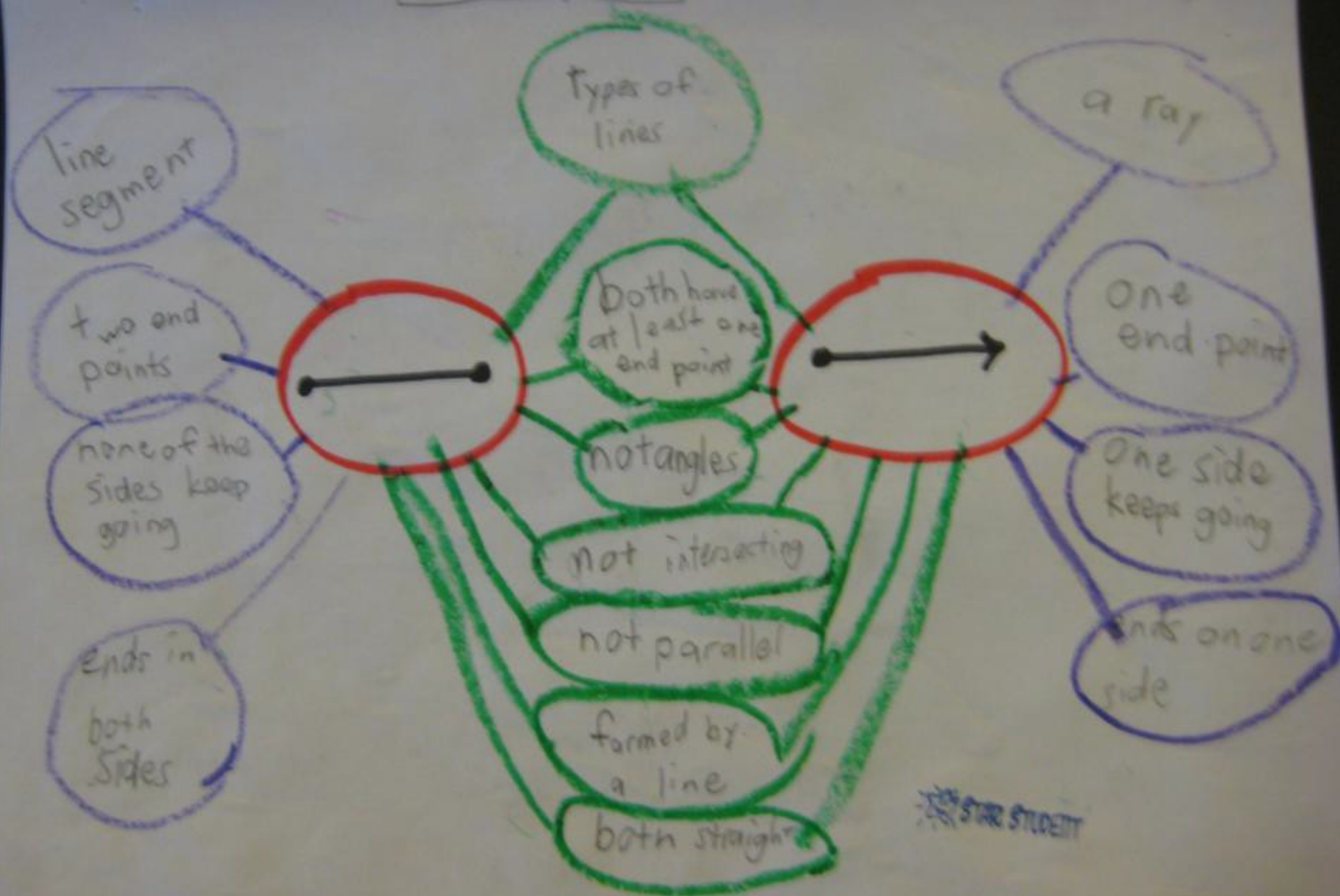
Both produce fruits

Discovery video How plants grow?

I found out petals in monocot in groups of 3's and dicot being in groups of 4's/5's.



Emmanuel & Kaley



STUD STUDENT

Notes*

Standard

50/50

It is Expository or Persuasive Writing

They are Both text.

It Deals with Narrative Writing.

It gives true information

Informational Text

They Both deal with reading standards

Literary Text

It tells a story.

It's an example of biography, autobiography, encyclopedia, and newspaper

They can be found in essays or paragraphs.

It is poem, poetry, adventure, mystery, and fairy tales.

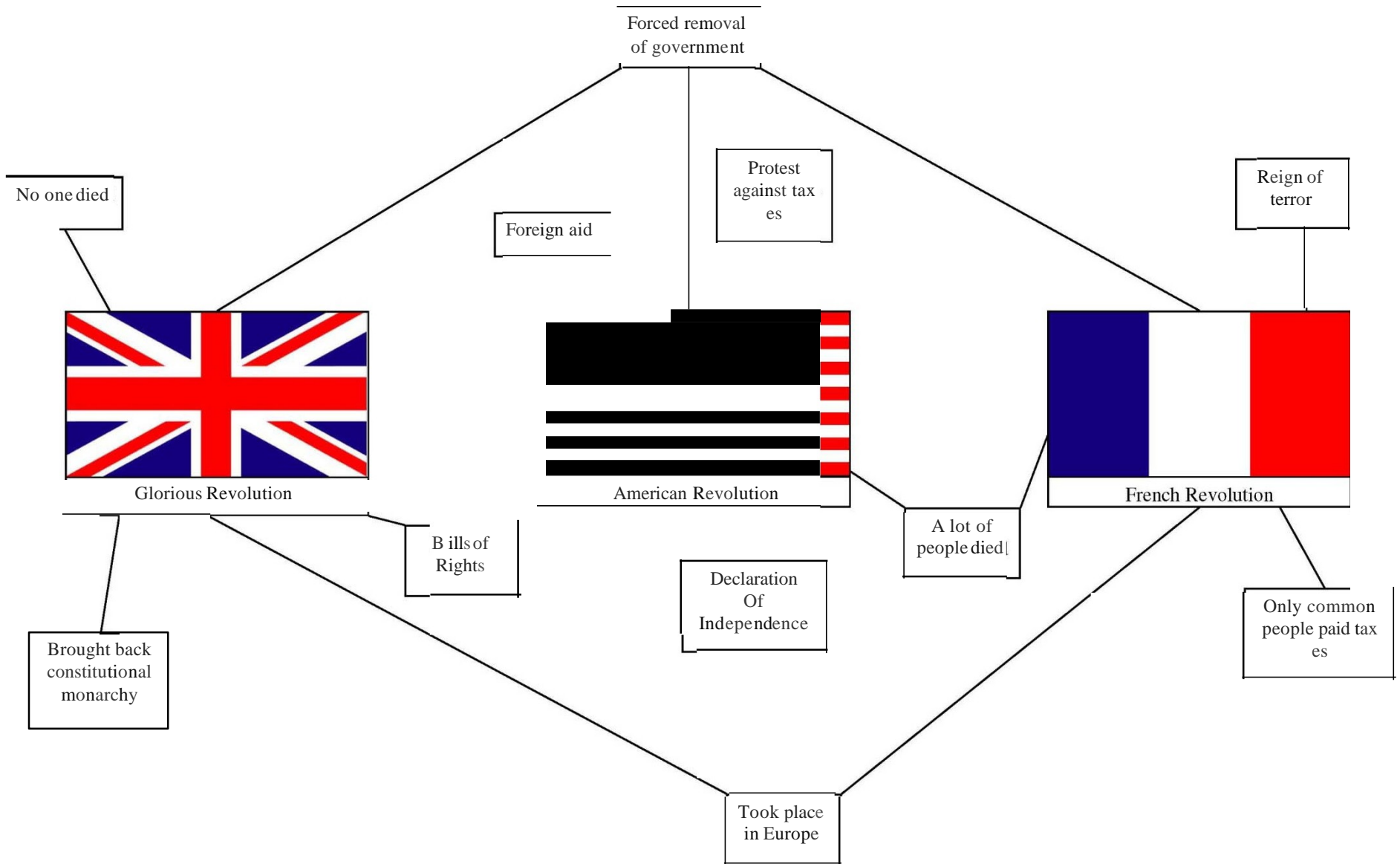
Teacher

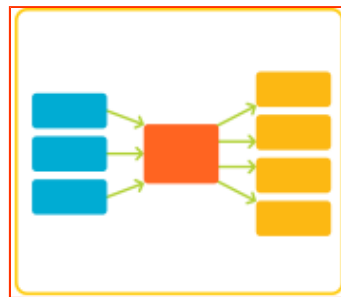
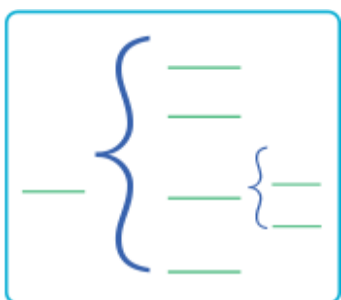
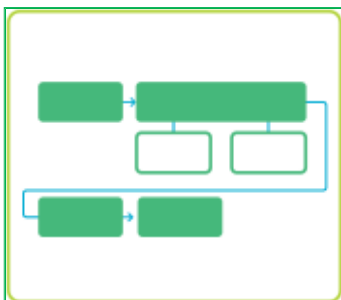
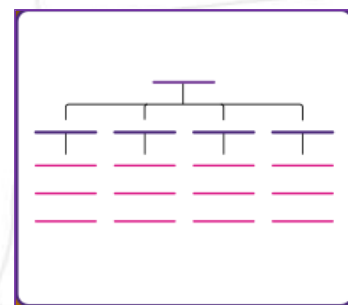
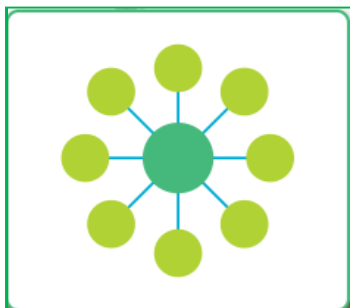
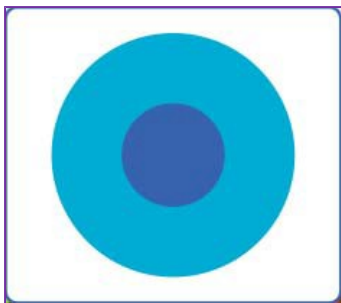
Myself

Computer

Powerpoint

The Glorious, American, and French Revolutions





Tree Map

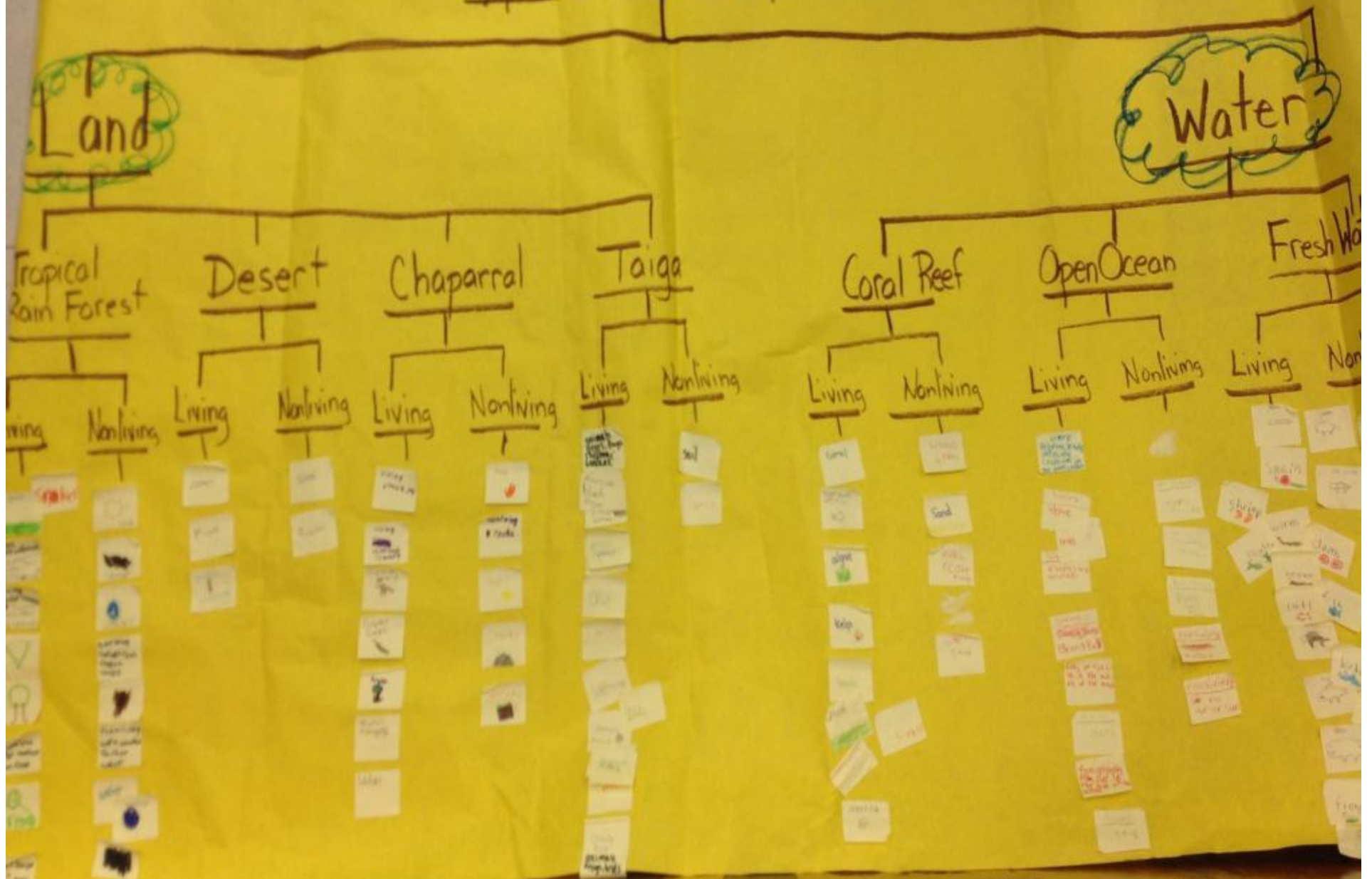
Which of the following is a detail about...?

A _____ is a member of which of following categories?

Main Idea and
Details
Classifying



Types of Ecosystems

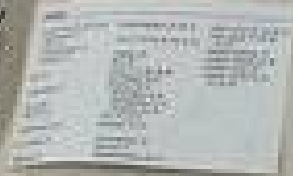


Non-Fiction Text Features

caption



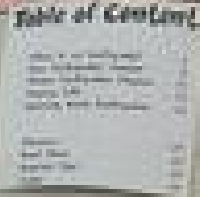
index



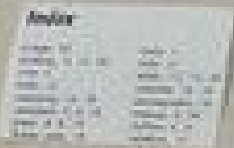
photo



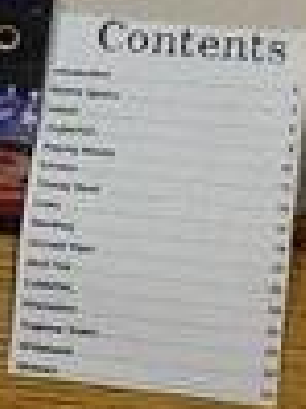
Table of Contents



map



Contents



The Brand New Kid

by Katie Couric

Characters

Lazlo



Ellie



Miss Kincaid



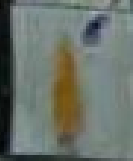
Garrie



Mrs. Gasky



Ricky



Susie McGraw



Setting

School



desks



recess



walking home



Lazlo's house



Problem

Lazlo is getting teased.



Solution

Ellie was nice to Lazlo.



The Cay

Character

curious
Phillip
11 yrs old
young

Setting

Caribbean
on the island of
Curacao
in the city of
Willemstad
in 1942 during
WWII

Problem

shipwrecked
&
blind
gets stuck
on a raft
with a black
guy.

Plot see flow map

Solution

many
aircrafts
came by
but a destroyer
saved him.

I will be able to classify sentence types.

Sentence types

Statement

My dog is named Trooper.

The dog caught the ball.

I like to eat pizza.

We live in North America.

Mrs. Cocke read a book.

Command

Get out your reading book.

Go clean your room.

Take out your homework folder.

Go feed the dogs.

Question

Do you like that story?

Do you like to go to the beach?

That was such a good book?

Do you know what time it is?

How many dogs do you have?

What continent do we live in?

How many kids are in your class?

Exclamation

Help, there is a fire!

Yikes, watch out for the spider!

That car was as fast as lightning!

Man, that roller coaster was scary!

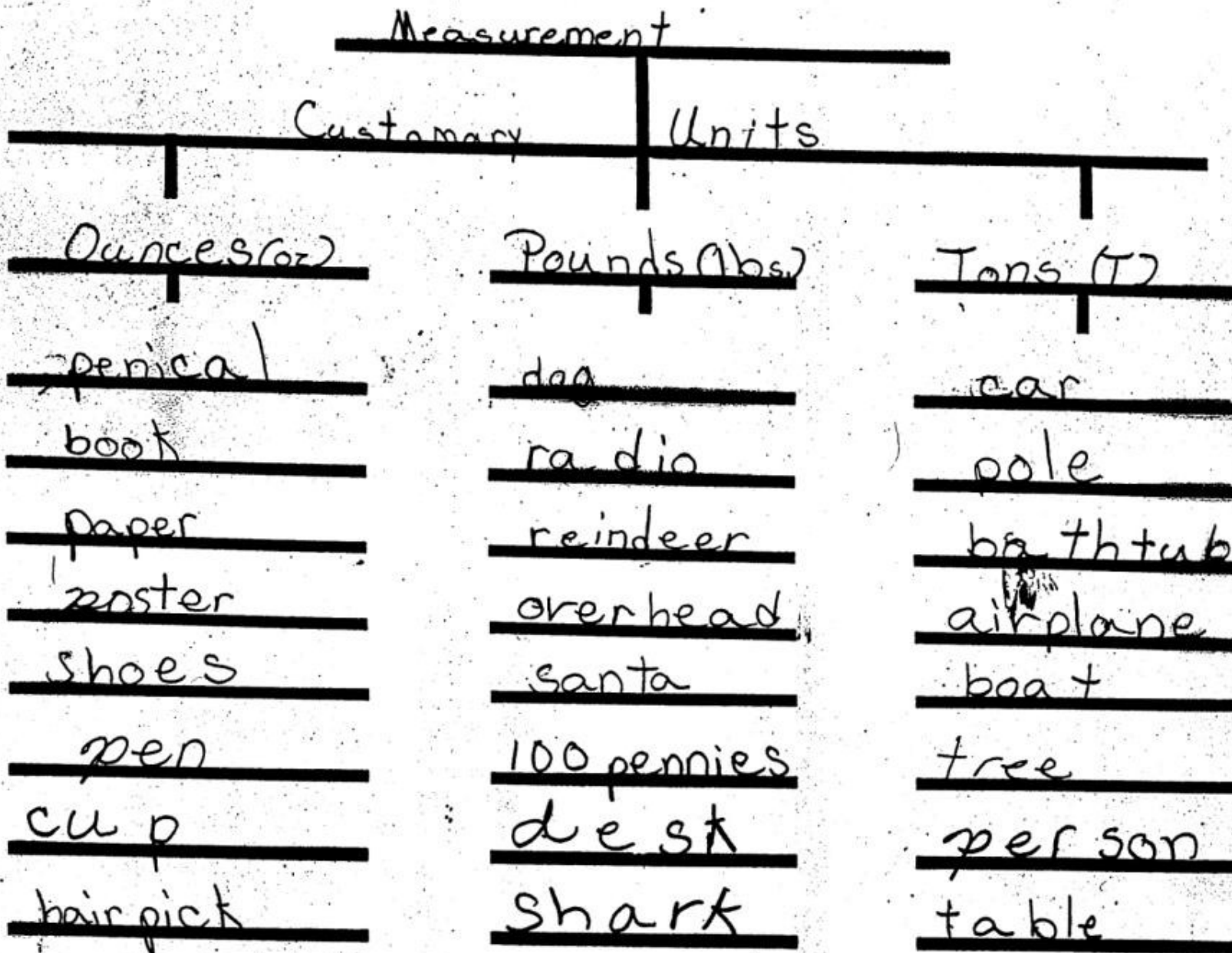
P.K.

Lorenz

name Naomi

Great for Assessment!

4th GRADE

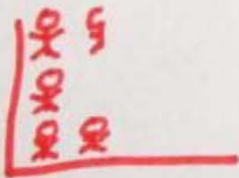


TREE MAP

Graphs

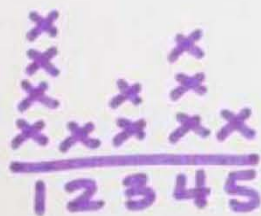
pictograph

use pictures or symbols to represent amount of data



line plots

show frequencies of values



bar graphs

display countable data that are group in categories



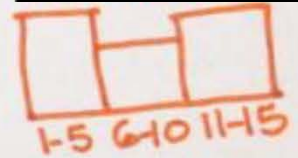
line graphs

shows change over time



histogram

shows the frequency of occurrences within each interval.



M6D1c. Choose appropriate graphs to be consistent with the nature of the data.

- Math 6th grade -

Functions

$$f(x) = x$$

Linear

Line

largest exponent
is 1

$f(x) = x$

x	f(x)
-2	-2
-1	-1
0	0
1	1
2	2



$$f(x) = x^2$$

Quadratic

U-shaped

largest exponent
is 2

$f(x) = x^2$

x	f(x)
-2	4
-1	1
0	0
1	1
2	4



$$f(x) = x^3$$

Cubic

S-shaped

largest exponent
is 3

$f(x) = x^3$

x	f(x)
-2	-8
-1	-1
0	0
1	1
2	8



Athens, Greece

Government

Council (500
men)

Assembly
(6,000)

Males over
18 yrs.
participated

women and
slaves not
considered
citizens

Athenian
citizens only

Economy

Geographically
based on
trade

Agora -
Marketplace

Pottery,
Furniture

own coins

Education

Purpose to
produce
good
citizens

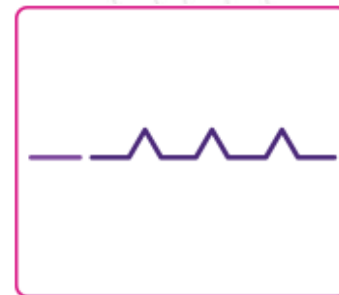
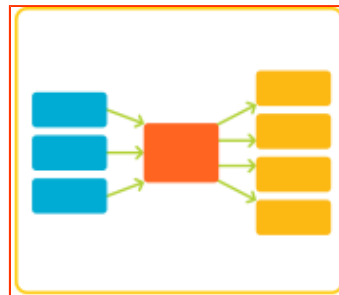
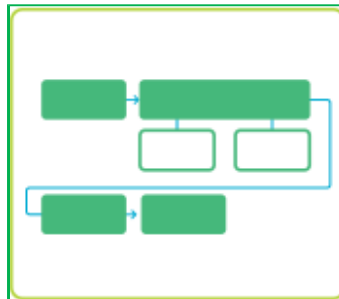
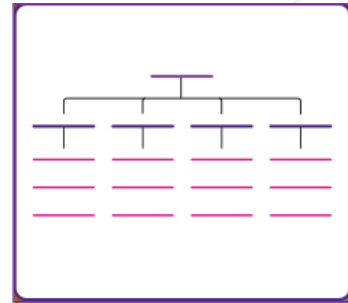
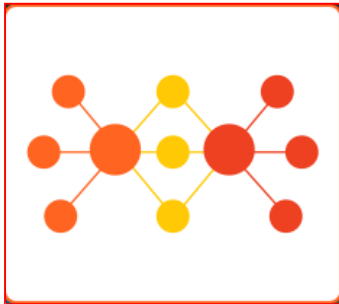
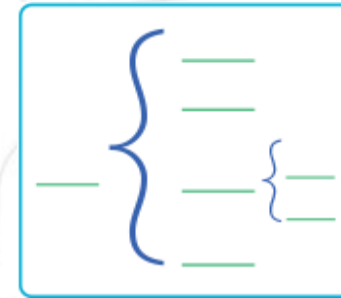
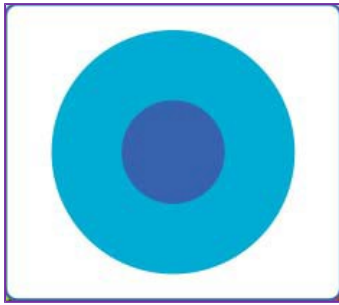
Boys 6-7 yrs
began formal
education
(reading,
writing, math,
literature)

18yrs -
Military

Girls - home
schooled in
cooking,
cleaning,
spinning
thread, cloth

usually
married at
15



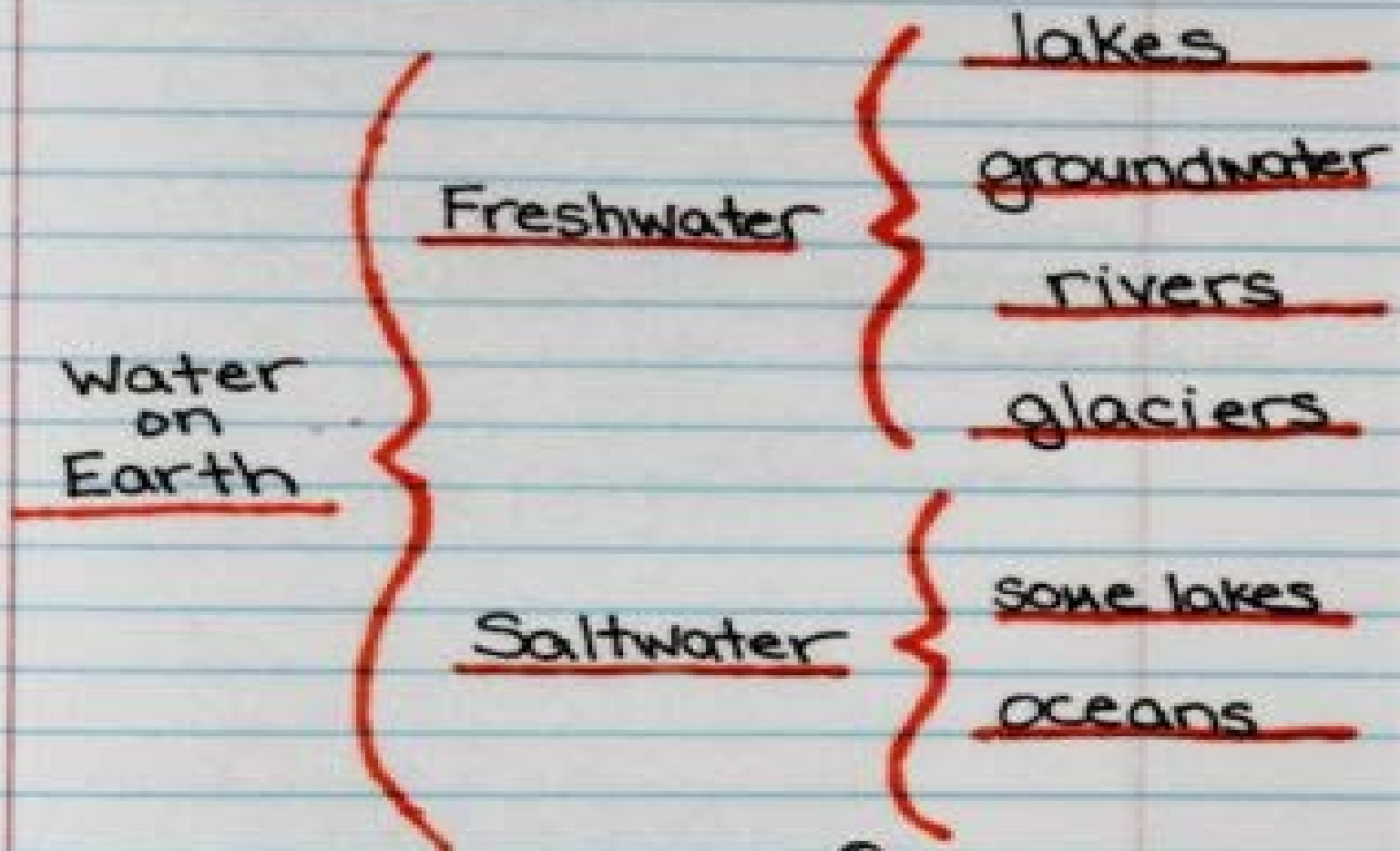


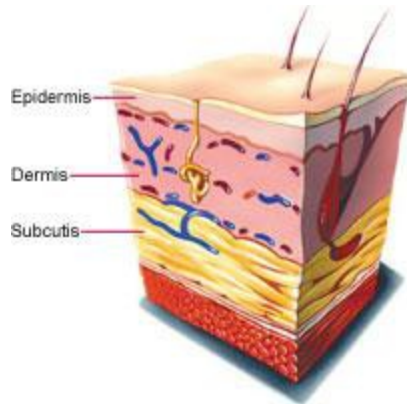
Brace Map

What are the parts of...?

Part to Whole Relationships

Water on Earth Brace Map





epidermis

epi
(top /
outer)

derm
(skin)

is

Add the
meaning of
each part in
parentheses.

**BODY
SYSTEMS**

DIGESTIVE

**MOUTH
ESOPHAGUS
STOMACH
SM. INTESTINE
LG.**

CIRCULATORY

**HEART
VEINS
ARTERIES
CAPILLARIES**

RESPIRATORY

**NOSE
TRACHEA
LUNGS**

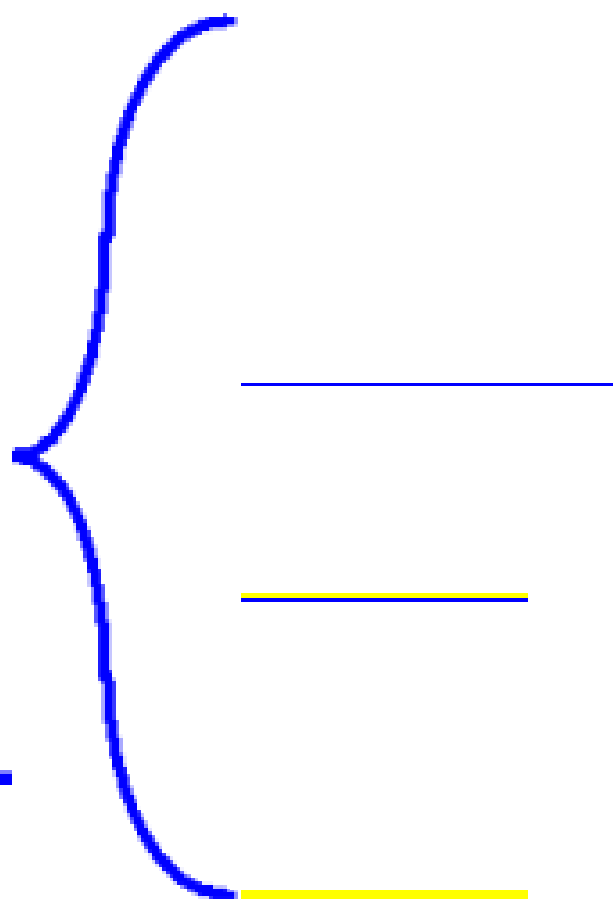
NERVOUS

**BRAIN
SPINAL CORD
NERVES**

**We need to know how to
convert % to decimals.**

We could use 10%.

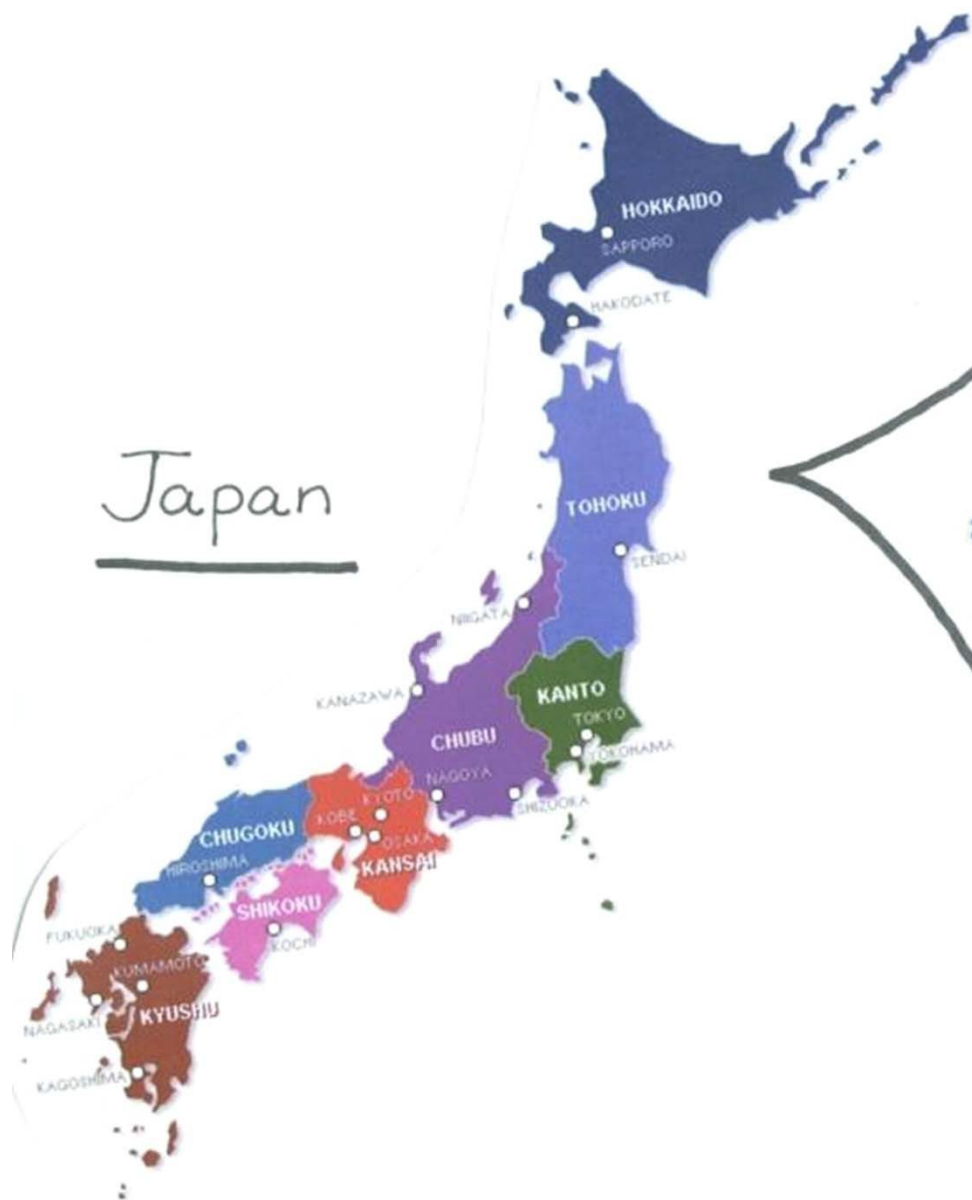
**A vice president
took a client to
lunch. The lunch
cost \$44.00. She
left a 20% tip.
What was the total
cost of the lunch?**



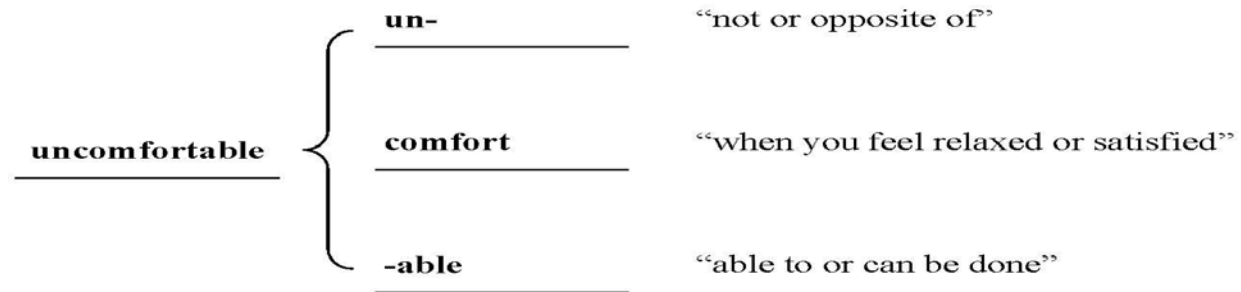
**We have to know that this
is a two step problem.**

**We need some prior knowledge
about what a “tip” is.**

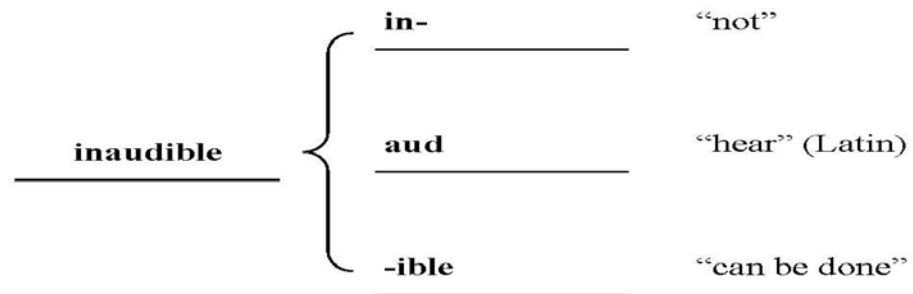
Japan



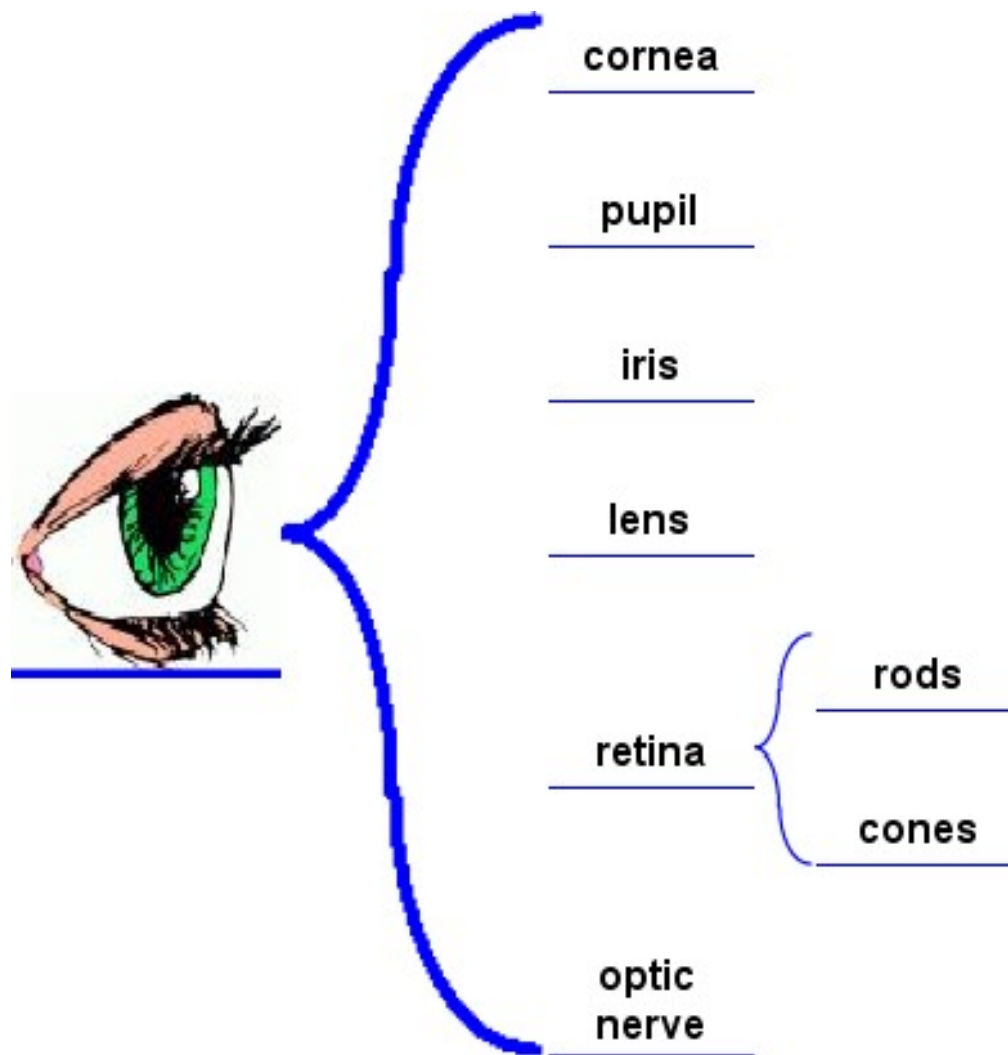
Word Part Clues

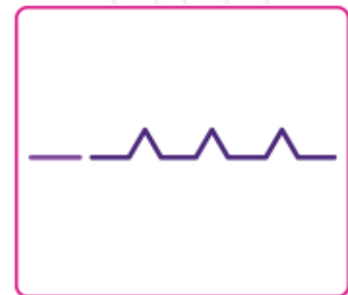
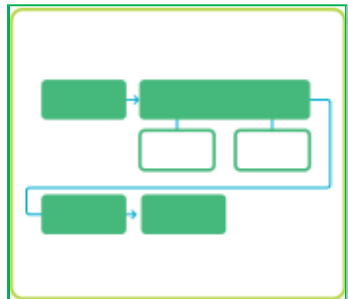
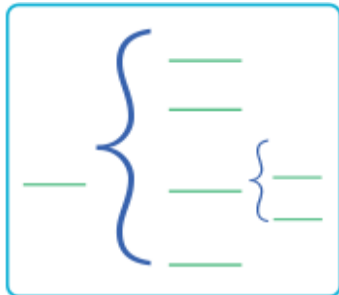
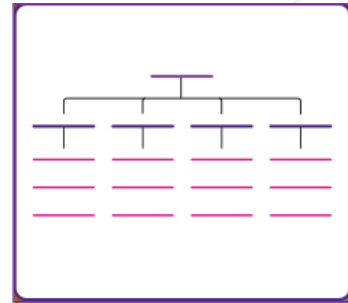
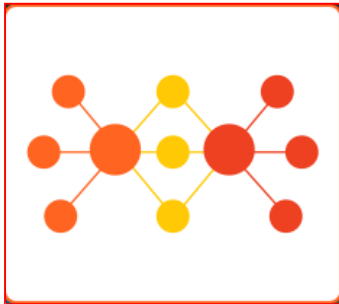
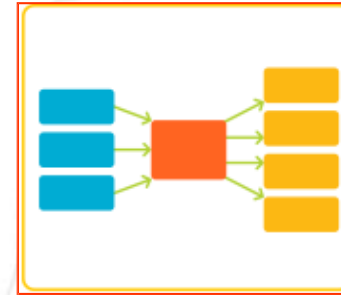
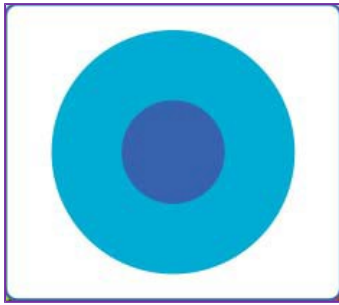


Meaning: “not able to feel relaxed or satisfied”



Meaning: “not able to hear”





Multi-Flow Map

Why did _____? What are the
benefits of _____?

Cause and Effect

Observations from our experiment

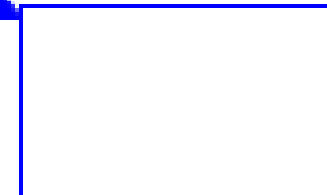


**The Lima
Bean Plant
Grows**



Observations from our experiment

**What if the
lima bean
plant
doesn't get
sunlight.**

An empty rectangular box with a blue border, intended for an observation.An empty rectangular box with a blue border, intended for an observation.An empty rectangular box with a blue border, intended for an observation.An empty rectangular box with a blue border, intended for an observation.

Lightening

Very hot
and dry weather

Strong winds
cause small fires
to spread

people misusing
matches and lighters

Online
References

California
Wildfires

P.O.V.
California
Residents

Ashes
everywhere

people have
to leave their
homes and things
behind

Innocent people may
be hurt or worse, die

Frustration

Harmful
Smoke and
Chemicals in
the air

Animals die
or suffer

We loose
trees and
grass

P.O.V.
Rescue
workers

Time For Kids
news article

Causes and Effects of the Industrial Revolution

Causes

Revolution

America was no longer giving cheap British supplies. We needed more factories.

Science was popular and developed. So, ideas were born.

There was a demand for machinery such as trains. To produce trains, factories are needed.

Everyone had the opportunity to succeed. This gave rise to another chance.

Industrial Revolution

The successful people became rich and famous.

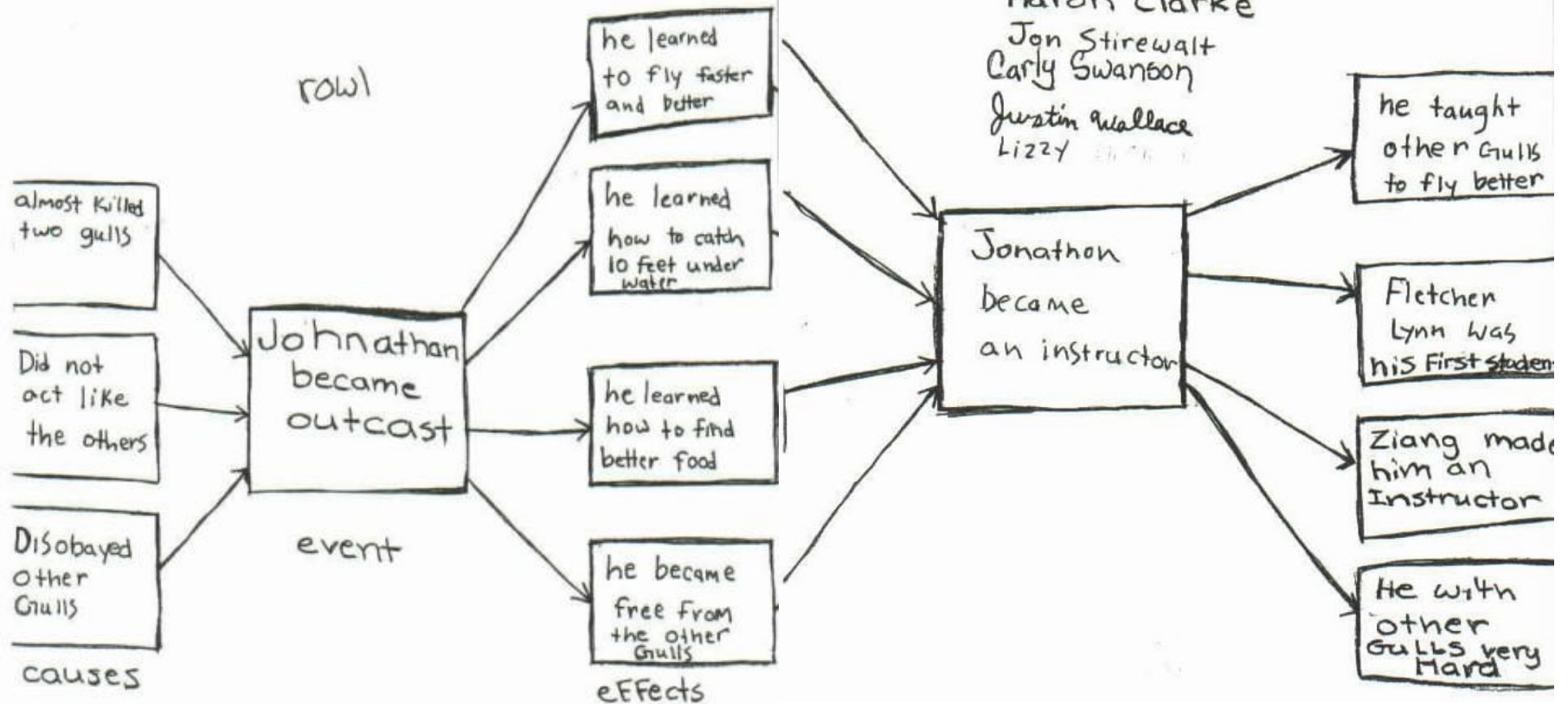
Life was much more convenient with all the inventions.

In the Civil War, the Union had an advantage in the factories.

America became more advanced in technology.

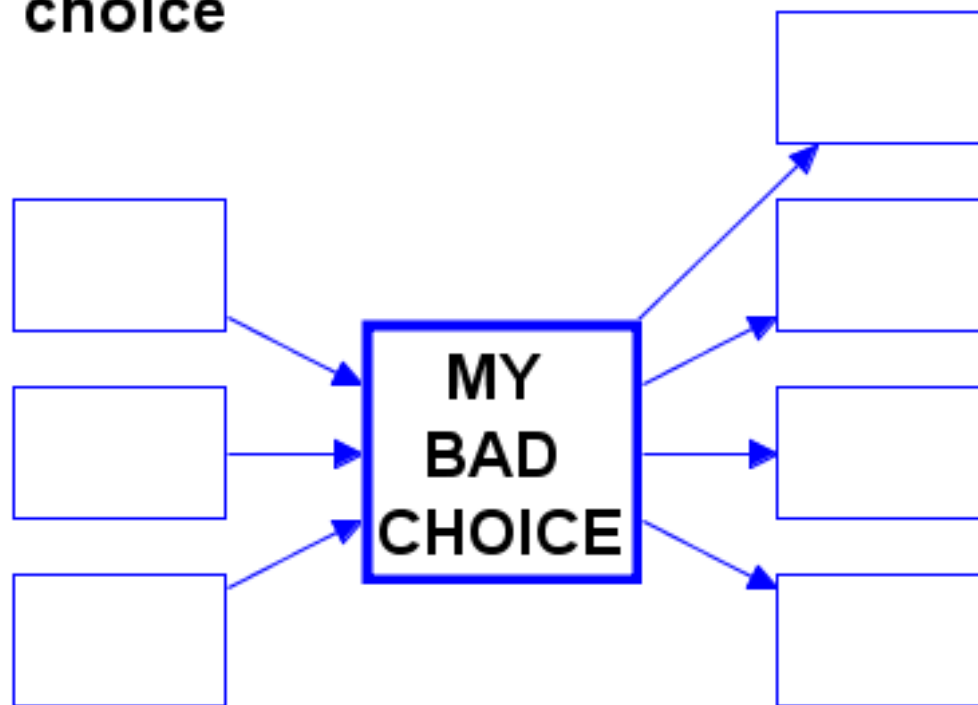
Jonathan Livingston Seagull

Map developed by
6th Grade LA at
- NORTHWEST Middle School
Cabarrus Co., NC



**Why I
made
a bad
choice**

**What
happened
because of
my bad choice**



IF

THEN

THINKING LIKE
A
MATHEMATICIAN

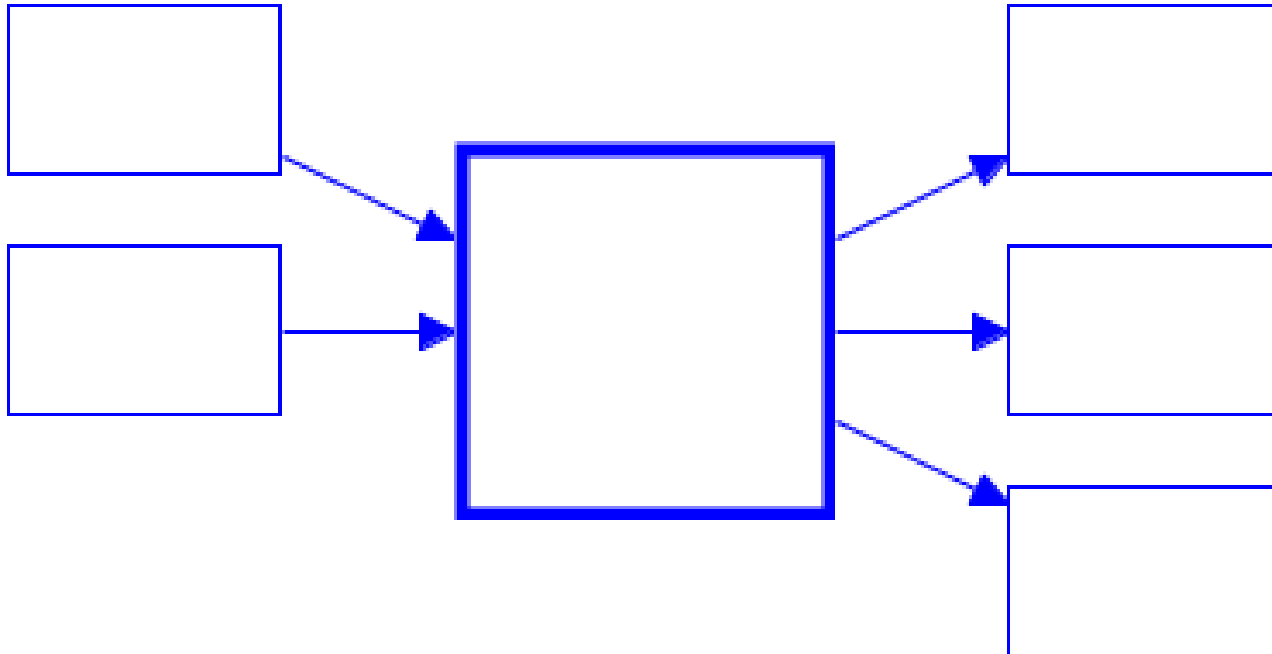


THINKING MAPS

IF

IF

THEN



THINKING LIKE
A
MATHEMATICIAN

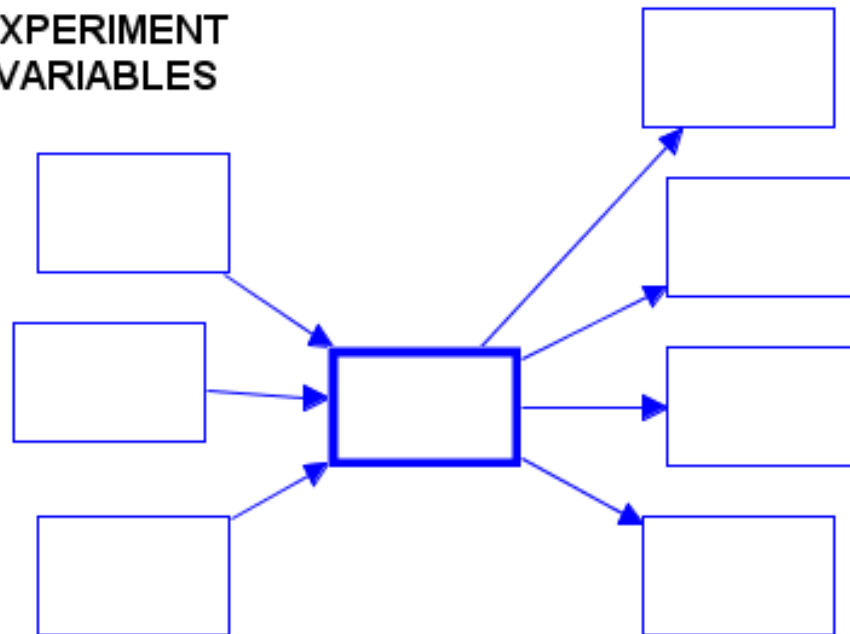


THINKING MAPS

***I THINK
(HYPOTHESIS)***

**RESULTS
BASED ON
LAB /
EXPERIMENTS**

**EXPERIMENT
VARIABLES**



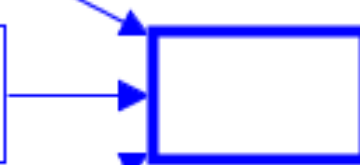
**THINKING LIKE A
SCIENTIST**

***BASED ON MY RESEARCH,
I CONCLUDE...***



THINKING MAPS

POSSIBLE
CAUSES OR
CONTRIBUTING
CAUSES



CONFLICT
RESOLUTION



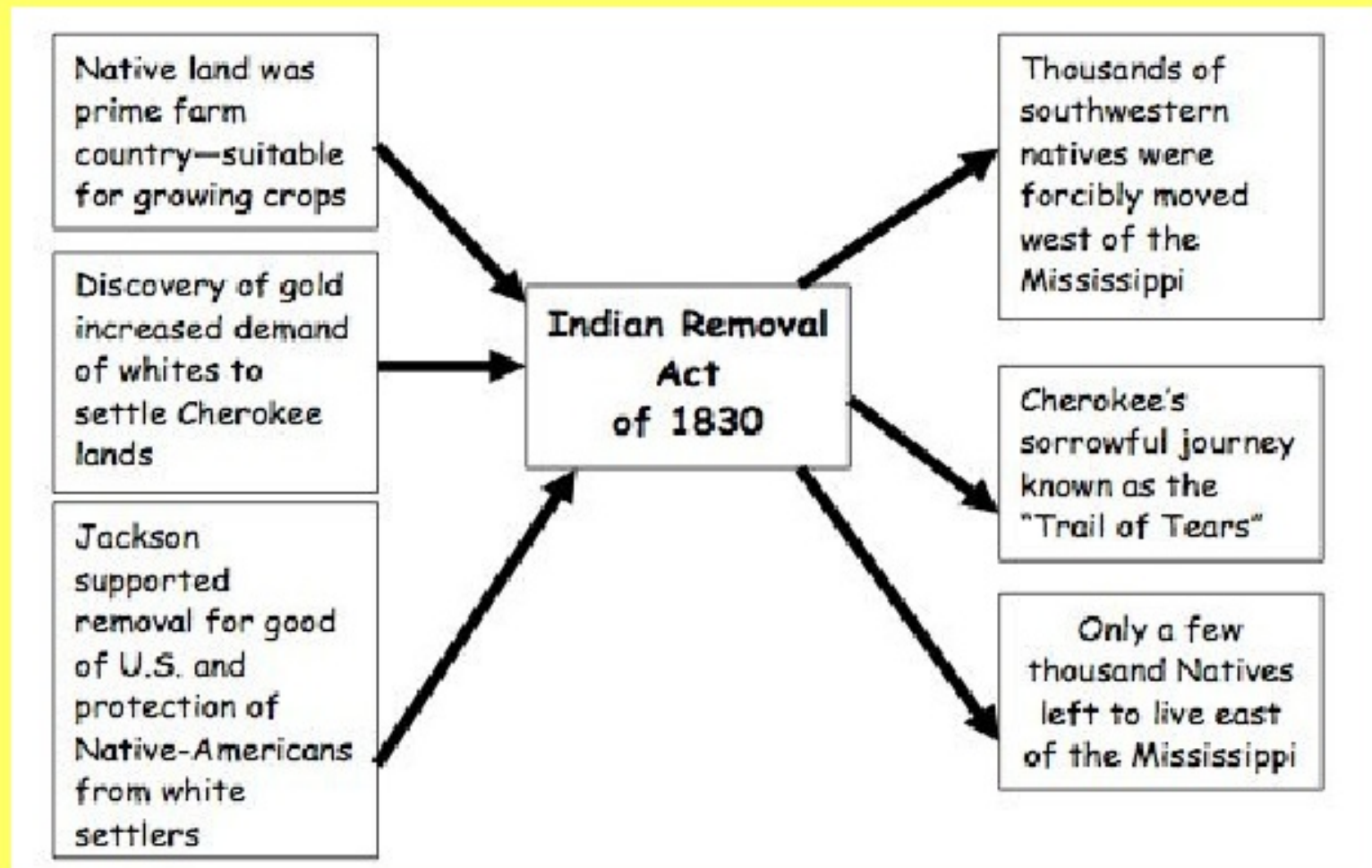
THEME

THINKING LIKE A LITERACY CRITIC



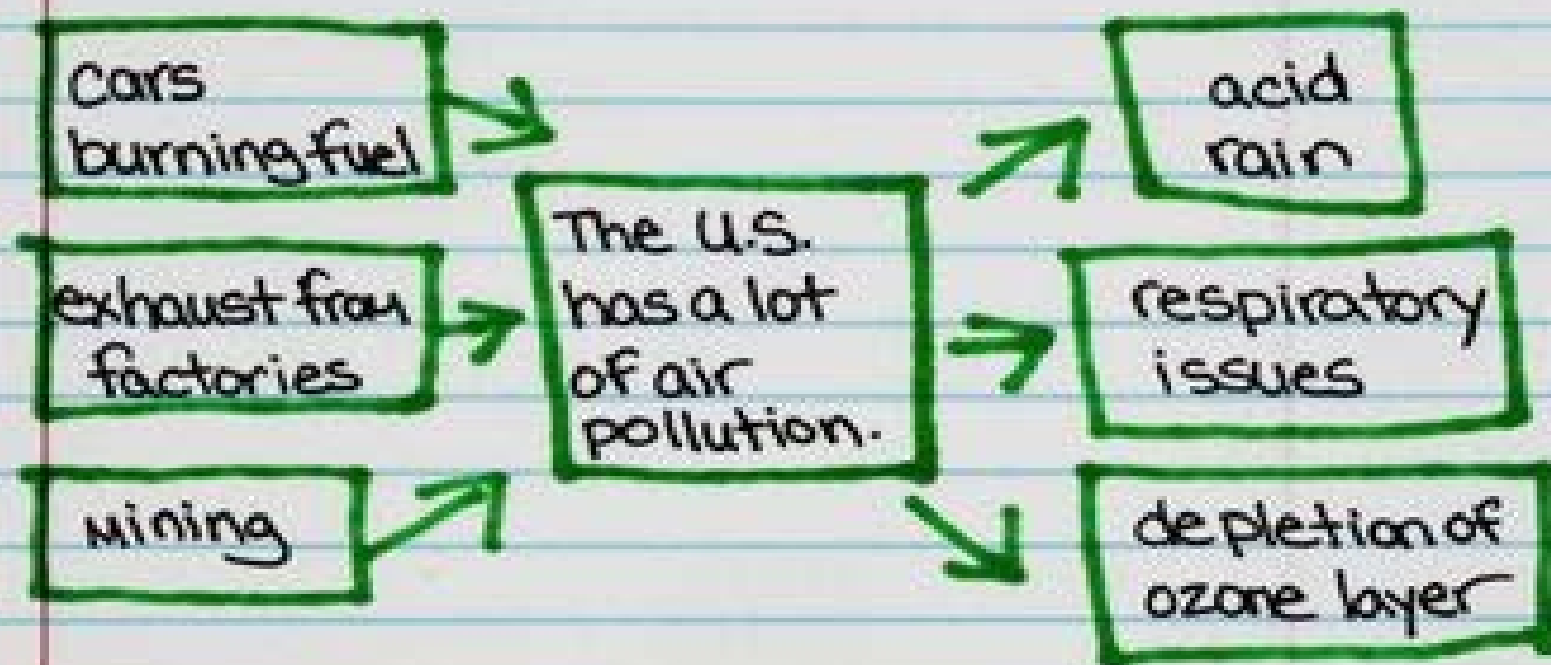
THINKING MAPS

Multi-Flow Map :: *for analyzing cause and effect*

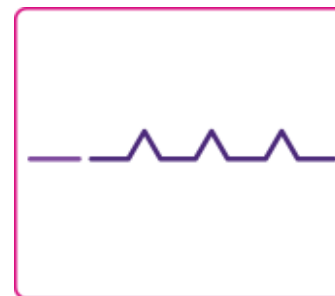
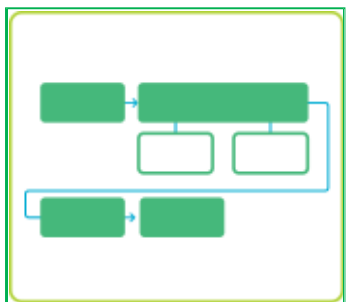
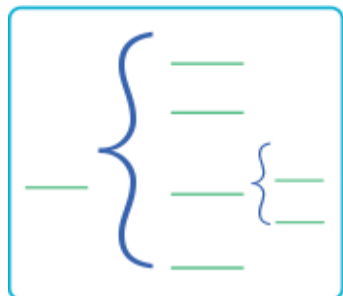
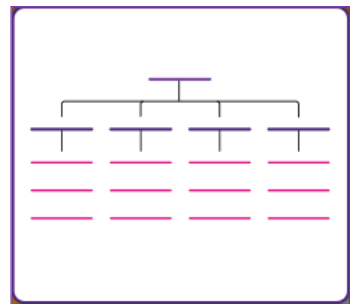
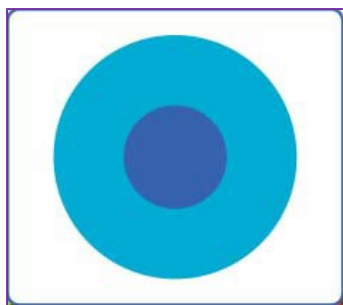


Source: <http://tinyurl.com/4e9msj>

Pollution Multi-Flow Map



We obtained information from the EPA to present this information.



Bridge Map

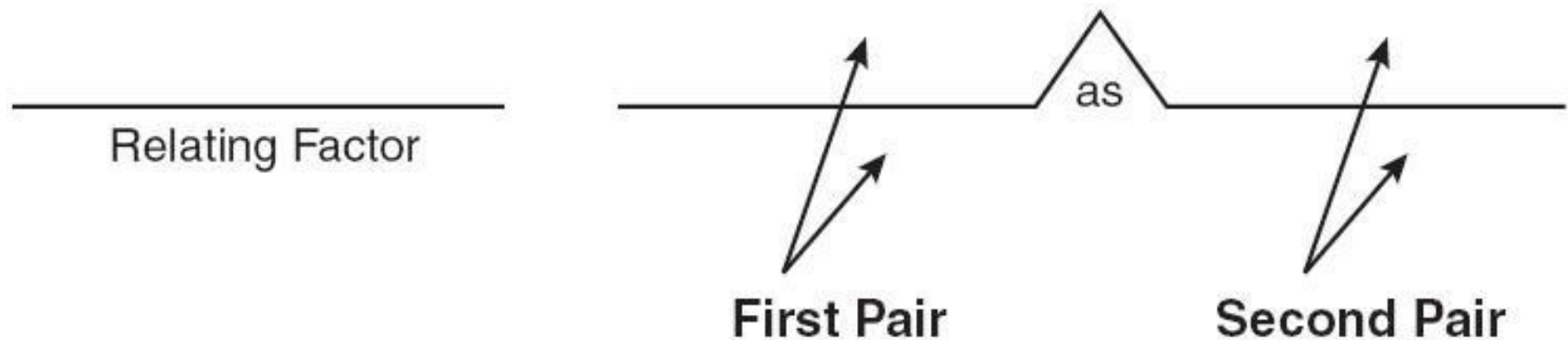
How are _____ and
_____ related?

Seeing Analogies
Relationships



Drawing the Map

THE BRIDGE MAP





Note Taking Guide

Identify the **THOUGHT PROCESS**

SEEING ANALOGIES

KEY WORDS

Identify the Relationship, Guess the Rule,
Symbolism, Metaphor, Allegory, Analogy, Simile



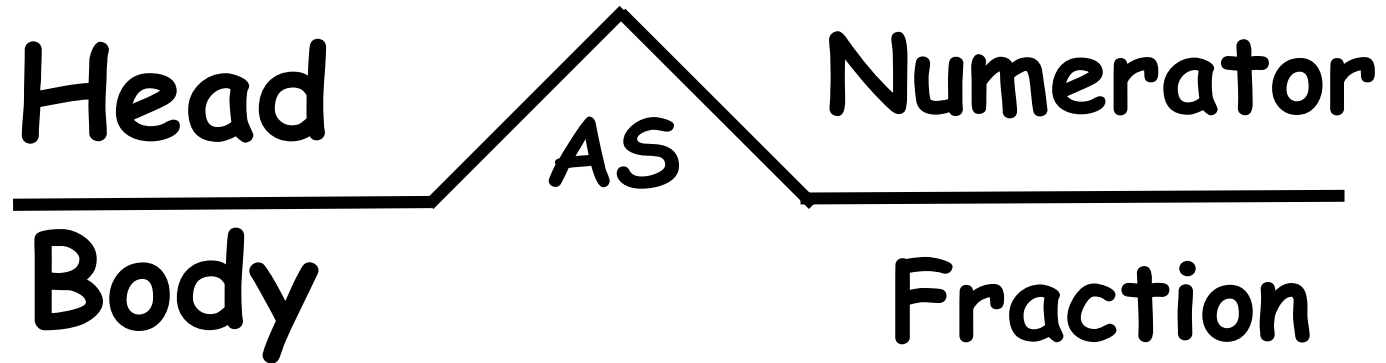
KEY INFORMATION

Page 68

The Bridge Map helps students identify the relationships between words. As long as the relationship remains the same, the Bridge Map can be extended beyond 2 pairs of words.



An apple is a type of fruit as a carrot is a type of vegetable.



Relating Factor: Is the top part of...



google.com/images

Whose Baby Am I? by John Butler



a calf
an elephant

as



a calf
a giraffe

as



a cub
a panda

as



a pup
the seal

as



an owlet
an owl



relating factor: is the baby of

¿De donde viene los Productos?

Salsa de
tomate



es
producto
de



tomate

Banca



es
Producto
de



albol

huevo



es
Producto
de



Gallina

miel



es
Producto
de



abeja

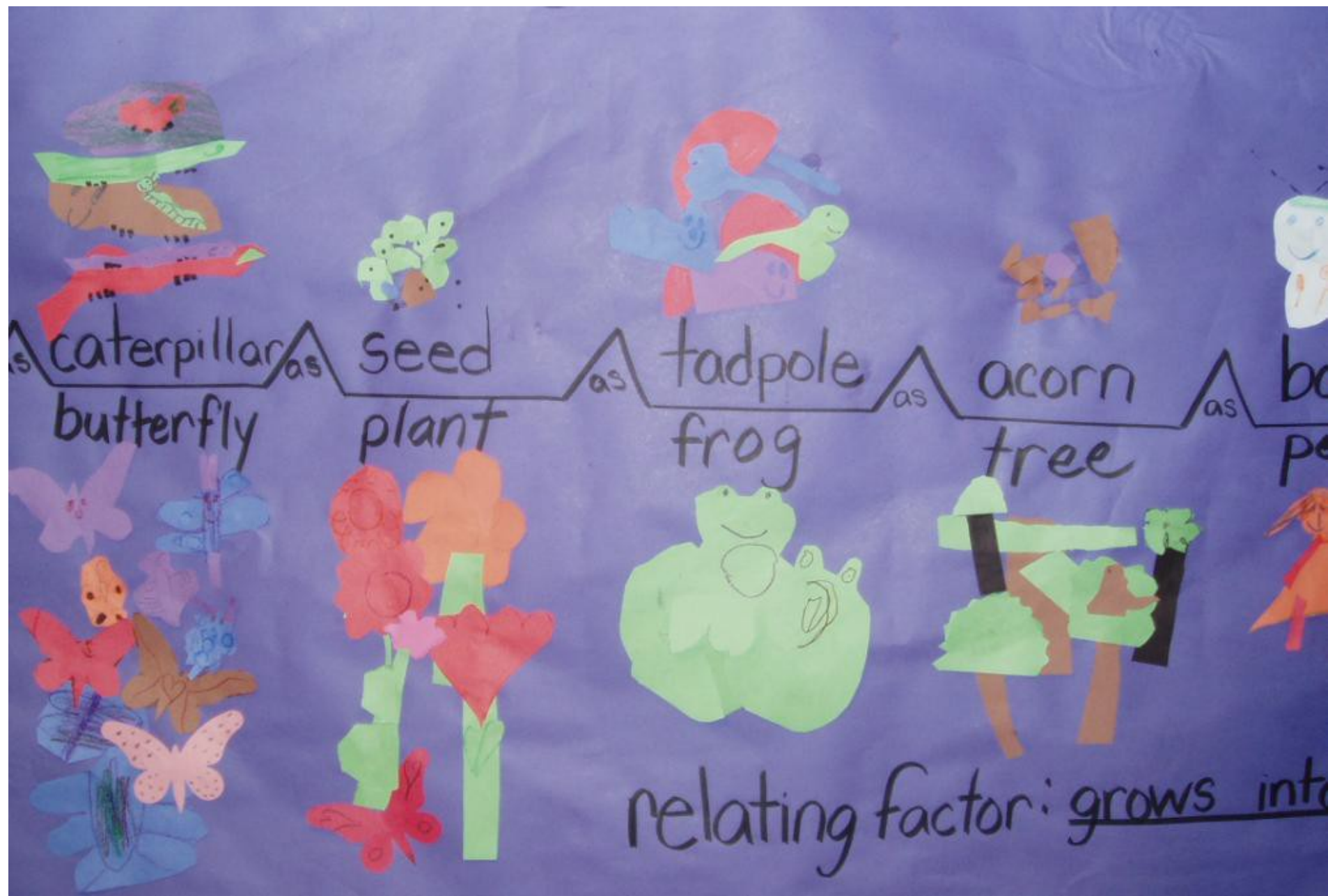
camiseta



es
Producto
de



algodon



Vocabulary Development

powers

Relating Factor

mitochondria

as

cell



Domain-specific
Vocabulary
Tier 3

**is the
middle of**

Relating Factor

median

**set of
data**

as



cream

**an oreo
cookie**

In

Summer



hot



shorts + a
tee-shirt.

RF: it can be

RF: and so I wear

In

Fall



Warm and
windy



a wind-
breaker +
jeans

In Winter



Cold and
rainy or
snowy



a hat, a
scarf, mittens,
a coat and
pants.

In the
Spring



Warm and
rainy



a raincoat, boots
and pants.

Relating
factor

makes decisions in

elected
representatives

Democratic
State

the leader

Fascist State

the central party

Authoritarian
State



AP Photo

**was a
catalyst for**

Relating Factor



www.behindthesceneshistory.com

**Rosa Parks'
refusal to give
up her seat on
the bus**

as

?

**Civil Rights
Movement**

?

**Major events in history often
have “trigger” causes.**

Support structure
relating factor

Spicules
Support structure
for
Sponges

Just like



shell support structure for Mollusks
Just like
exoskeleton support structure for arthropods
Just like
internal shell support structure for echinoderms
Just like
skeleton support structure for chordates

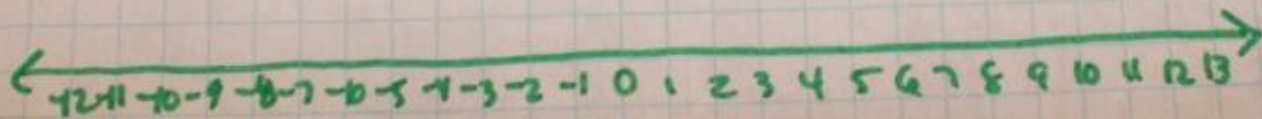
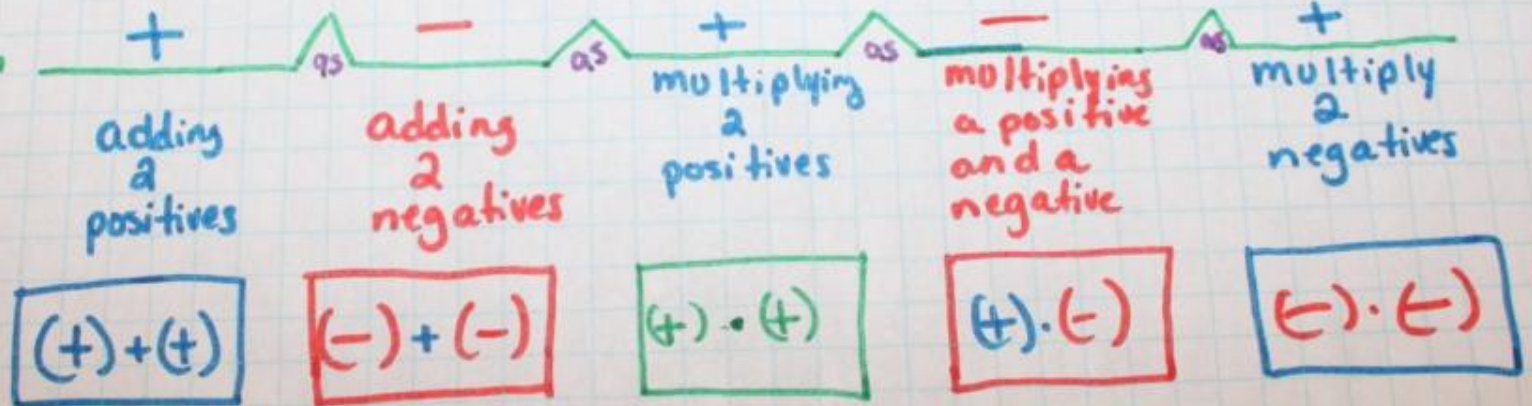
Understand support
structures in animals

simple → complex

Rules For Integer Operations

Multiplication and Addition

results from
R.F



..... By using the number line

Ways for introducing some of the maps

MONDAY: Introducing the Circle Map



Create a Circle Map to help us all know important things about you.

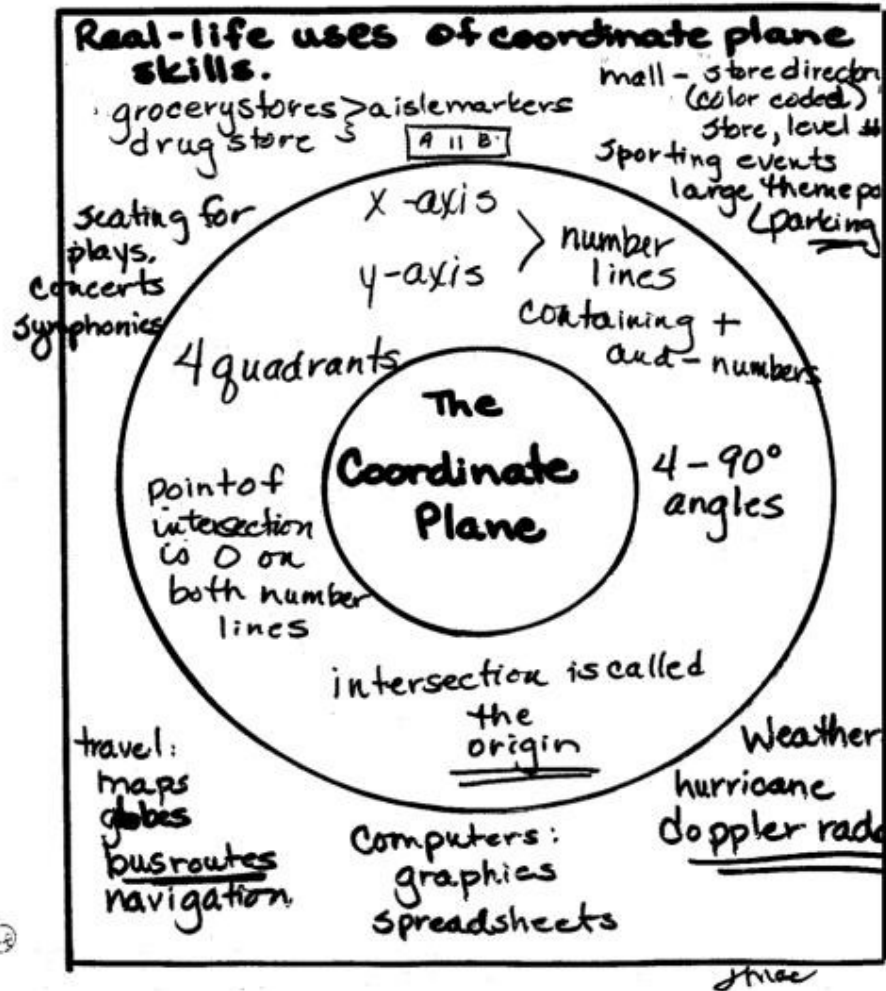


In the Frame of Reference, include key people and things that influence who you are.



Pair with one other person and share your information

TUESDAY: I DO



Teacher: What do you know about a coordinate plane?

No response from students.

Teacher: What if I told you some of the real-life uses of coordinate planes. I will write these in the Frame of Reference. (Teacher adds examples to the Frame.)

Teacher: Now let's try to define the coordinate plane based on these examples.

Teacher: Turn to your neighbor and tell him/her two of the defining characteristics of a coordinate plane

WEDNESDAY: WE DO

GEOLOGICAL
FORMATIONS



Geological formations are...

Teacher: Before we start our lesson on geological formations, work with a partner to brainstorm everything you already know about the topic



Add a Frame of Reference and write a brief definition based on the information in your Circle Map.



Be prepared to share your ideas with the whole group.

THURSDAY: YOU DO



Assignment:

Research a famous
American or
American symbol.



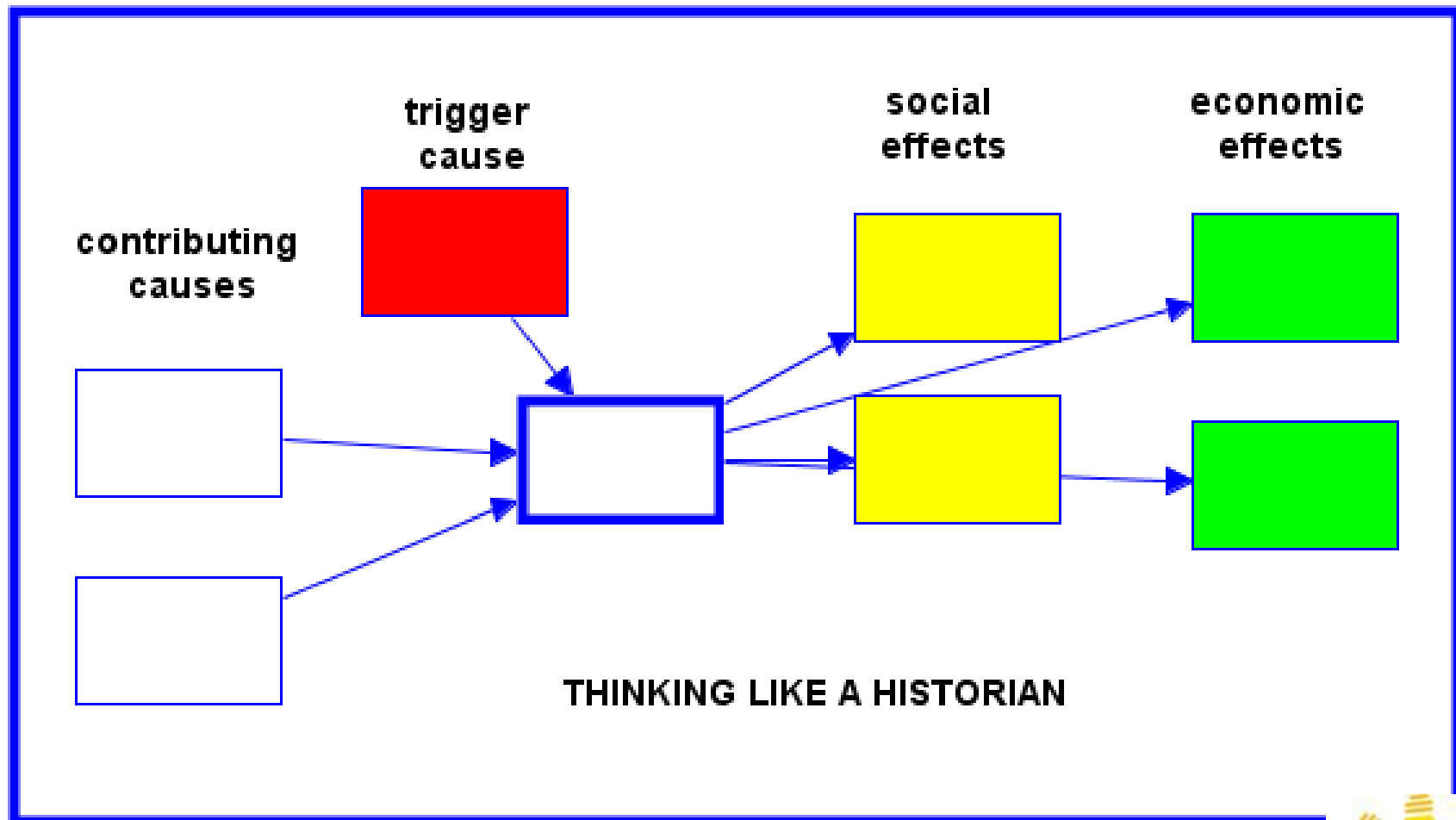
Take notes on the
information and then
choose key details to
create a "Who Am I?"
Circle Map.

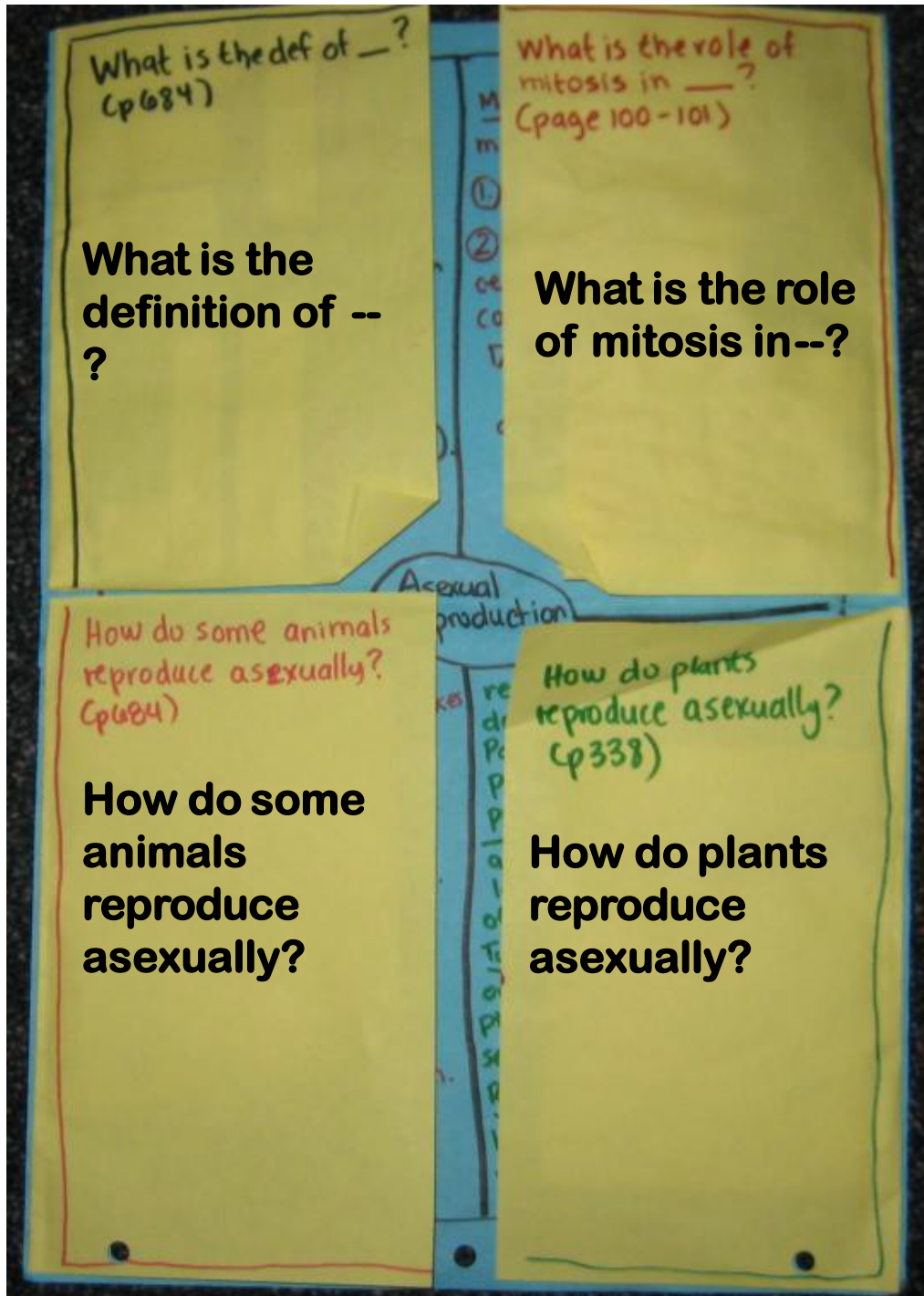
FRIDAY:

Independent Choice

Use a Circle Map to summarize anything that you have learned this week.

Additional Examples





Key Ideas and Details

“Ask and answer questions to demonstrate understanding...”

Remember the **question** you choose will determine the **map** that you use!

Advantages

Disadvantages

Advantages of asexual reproduction:

- 1. No genetic variation offspring
- 2. No way to change or adjust offspring to environment
- 3. If the environment changes drastically, all the organisms will suffer due to lack of genetic variation
- 4. Very susceptible to new diseases

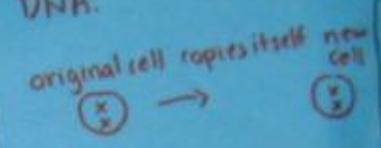
Disadvantages of asexual reproduction:

- 1. Produces offspring identical to the parent
- 2. No fertilization is required
- 3. Budding - produces only one parent, so organism must live time and energy finding a mate and making eggs
- 4. Budding

Asexual reproduction is reproduction that does not involve the union of sex cells and in which a single parent (original cell) produces offspring that are genetically identical to the parent (original cell).

Mitosis - a cell makes more cells by:

1. copying its DNA
2. dividing into 2 new cells each with a copy of the original DNA.



DNA NOT in a nucleus -
Ex: bacteria

Asexual Reproduction

Some animals reproduce asexually by:

- Budding - part of the parent pinches off and makes a new, independent organism (ex: hydra)
- Fragmentation - part of the parent breaks off and makes a new organism.
- Regeneration - when an organism loses a body part, that part may develop into an entirely new organism.
can regrow.

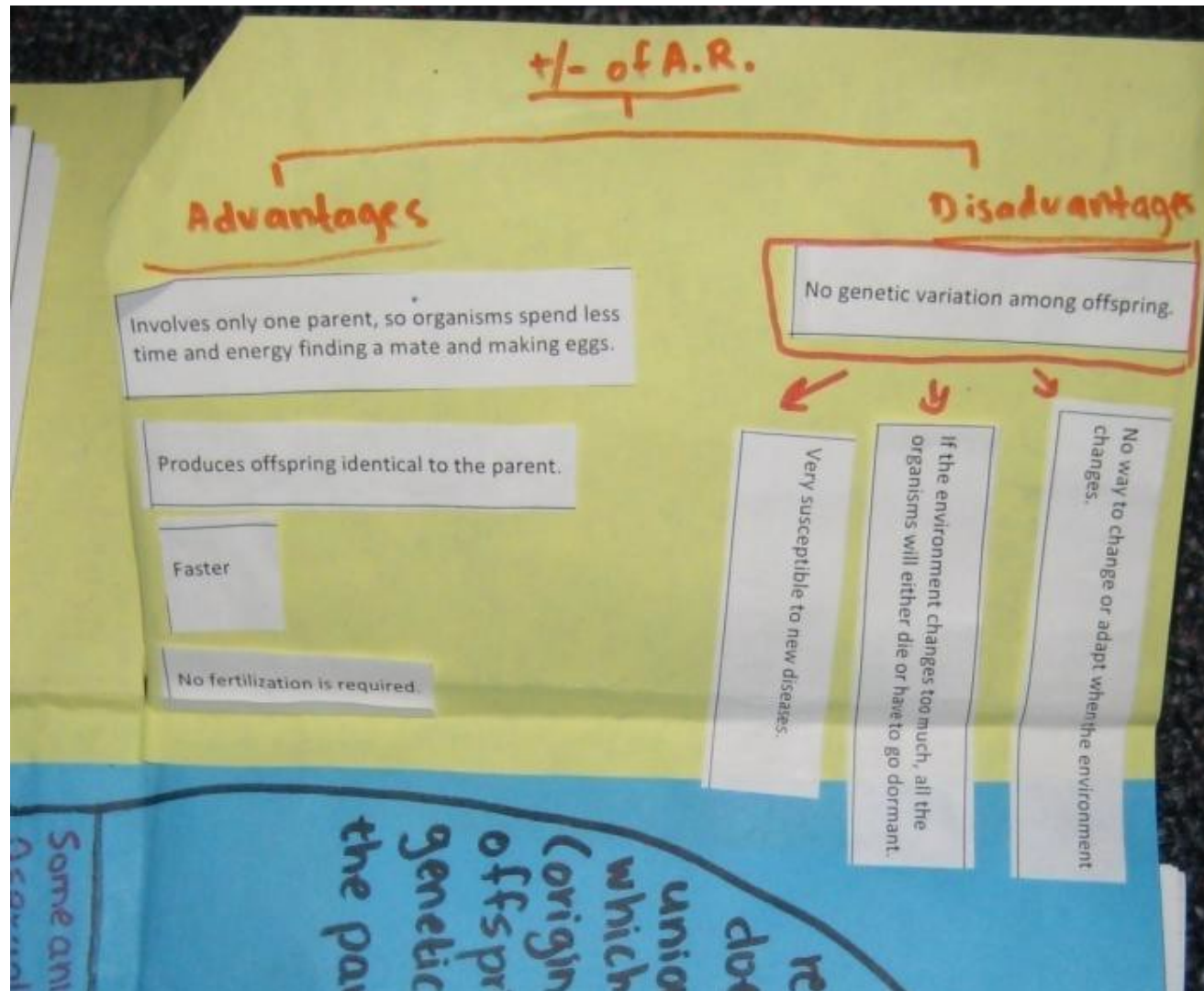
Plants that reproduce asexually don't need flowers to reproduce. Part of the root or stem produces a new plant.

- Plantlets - Tiny plants grow along the edges of a plant's leaves. These plantlets fall off and grow on their own.
- Tubers - underground stems, or tubers, can produce new plants after a dormant season.
- Runners - Above ground horizontal stems from which new plants can grow.

lizards and salamanders can also regenerate. This is called regeneration. This is because they have a special ability to regrow lost body parts. If a lizard loses its tail, it can regrow it.



“What are the advantages and disadvantages of asexual reproduction? What are the effects of the disadvantages?”



"What are the parts of a cell?"

DNA.

original cell copies itself → new cell

Plantlets - Tiny plants grow along the edges of a plant's leaves. These plantlets fall off and grow on their own.

Tubers - underground stems, or tubers, can produce new plants after a dormant season.

Runners - Above ground

CW#1 Parts of Cell Braze - Map p63 1/31/11 pd2

Cell Membrane and Cytoplasm

Cell Membrane - covers the outside of the cell, acts as a protective barrier, controls what comes in and out.

Cytoplasm - Fluid inside the cell, where the work is done

Parts of a Cell

Organelles - structures that perform specific functions

Genetic Material - DNA is the genetic material that carries the information needed to make new cells and new organisms. Passed from "parent" cells to new cells. Function: to control the activities of a cell.

Why is genetic material important?
It carries info needed to make new cells.

DNA in a nucleus -
Ex: people, plants, animals, fungus

DNA NOT in a nucleus -
Ex: bacteria



plans for

Relating Factor

A teacher

as

A chef

as

A gardener

**successful
students**

**satisfied
diners**

**thriving
plants**



*Great lessons don't happen by
accident any more than gardens
flourish without care.*

Music Champion

Solfege Hand Signs



Just
like

do

Just
like



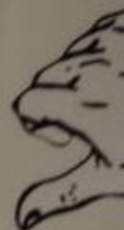
Just
like

re



Just
like

ti



fa

**USES
ARGUMENTS
TO**

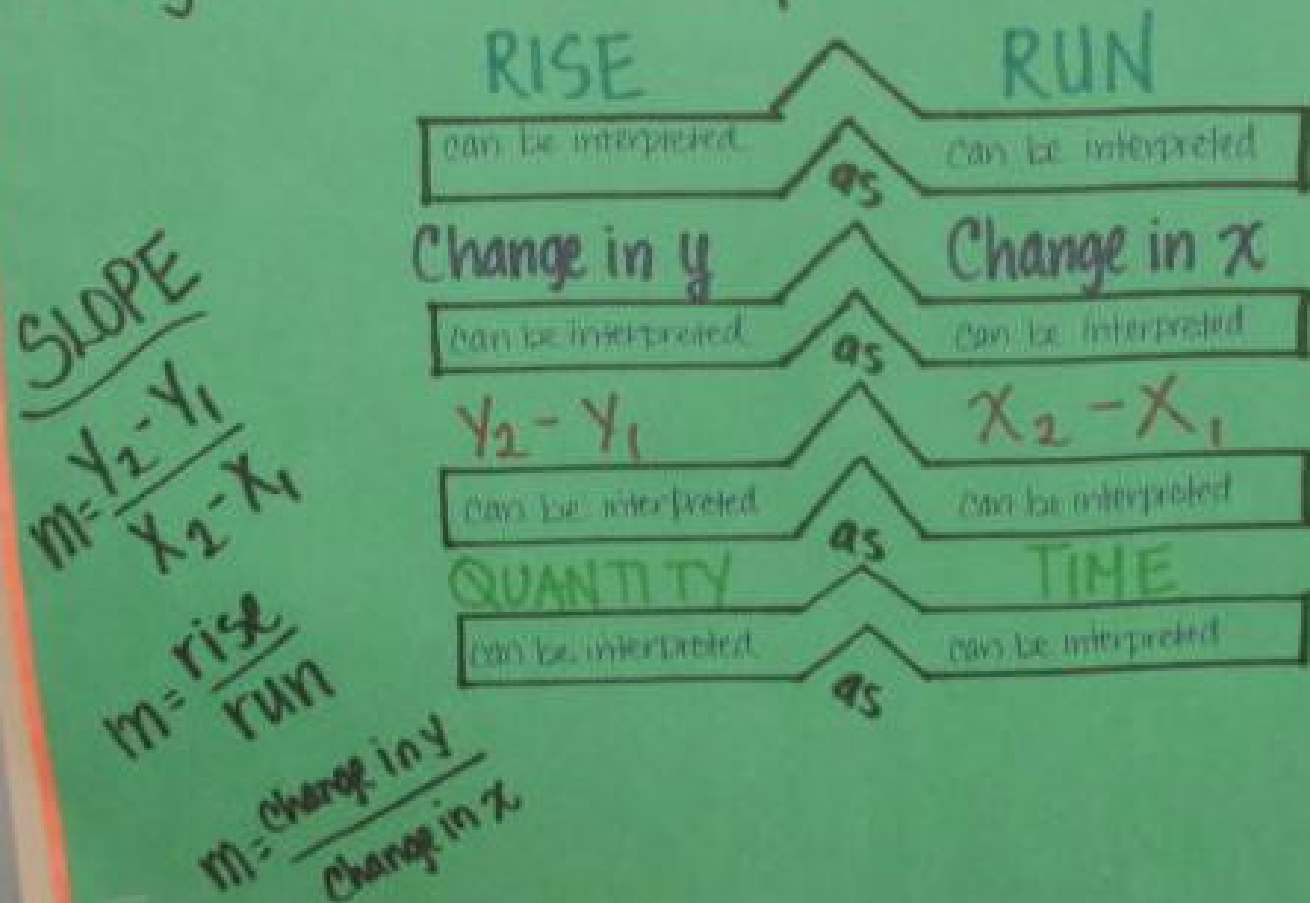
Relating Factor



ARGUMENTS ARE REASONED, LOGICAL, AND INCLUDE EVIDENCE.

SLOPE + RATE of CHANGE

Relating Factor: can be interpreted as

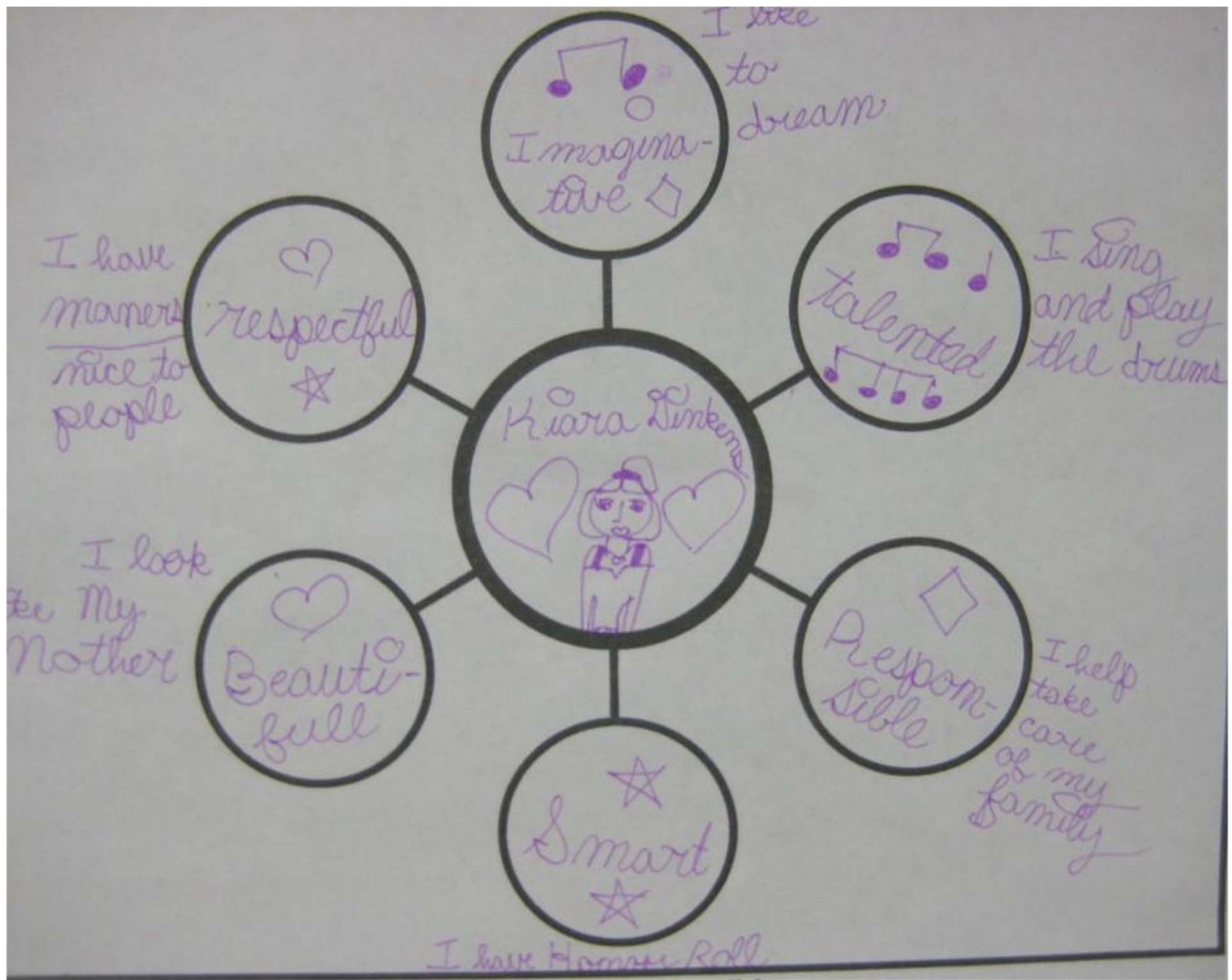


Rate of Change
Rate of change =
 $\frac{\text{change in quantity}}{\text{change in time}}$

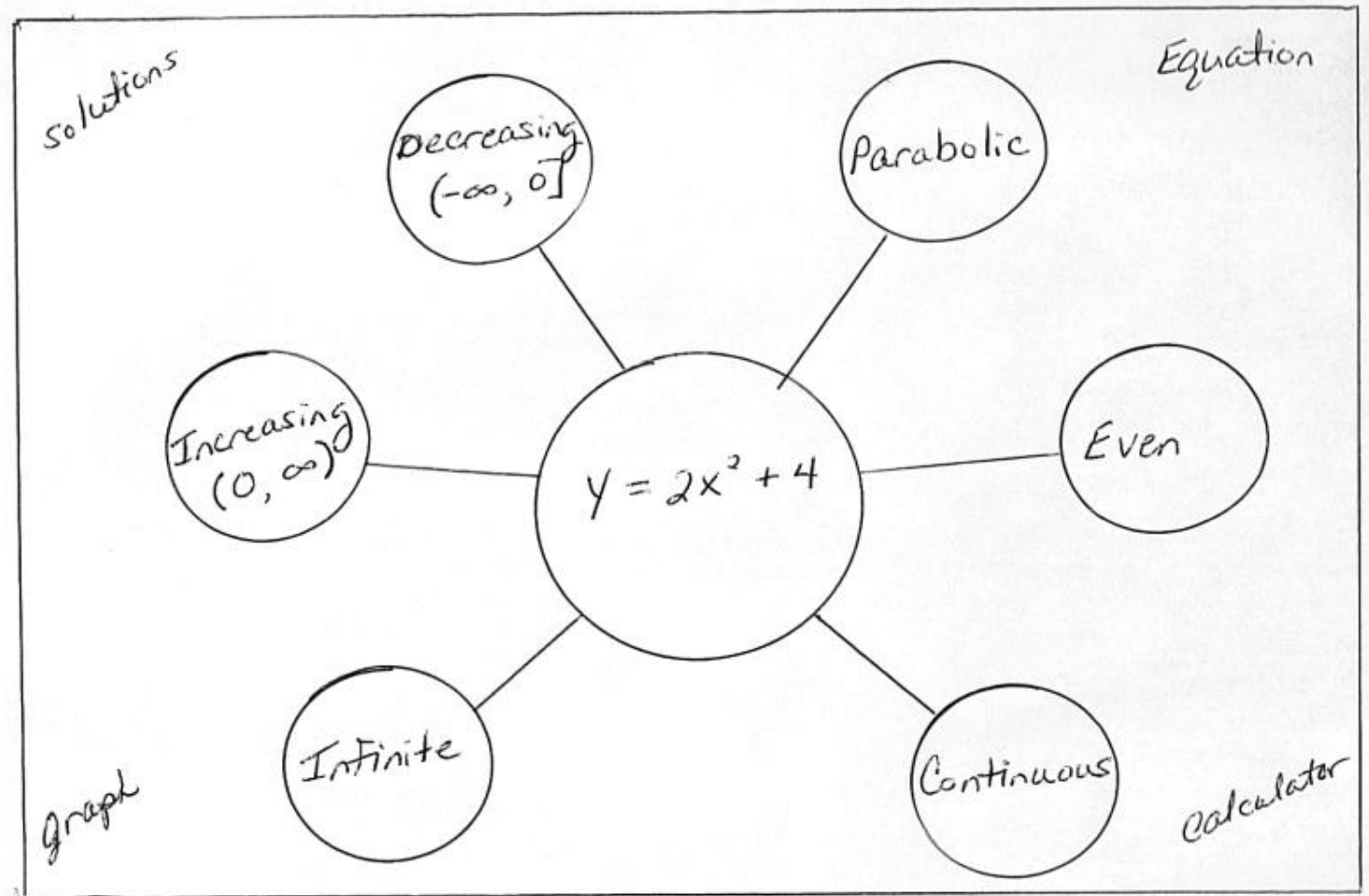
SLOPE
 $m = \frac{y_2 - y_1}{x_2 - x_1}$

$m = \frac{\text{rise}}{\text{run}}$

$m = \frac{\text{change in y}}{\text{change in x}}$



Frame: How do I know this?



Advanced Functions or Advanced Math



Europe

Christian

Knight

believed
that it was a
sin to
commit
suicide

swords

trained
warriors

protect
the
ruler

follow a
code of
honor

armor

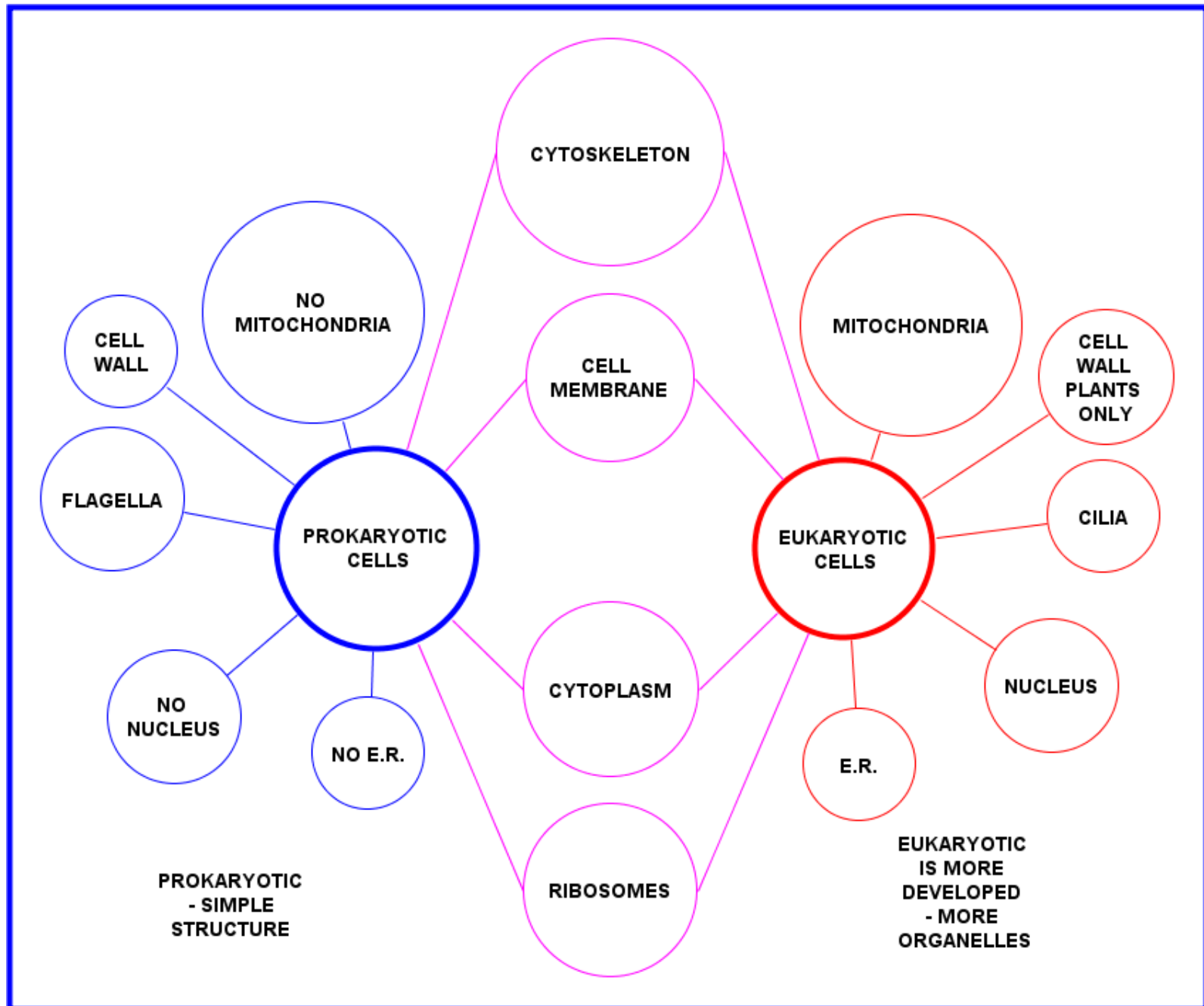


Japan

Samurai

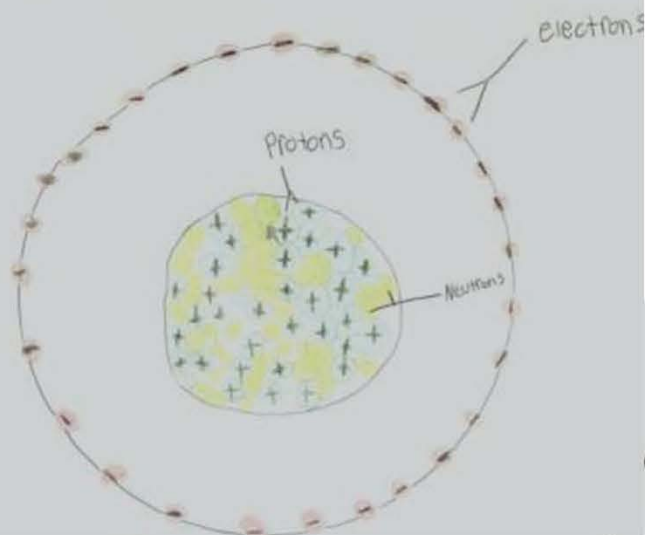
Buddhist

suicide
believed
to be
honorable

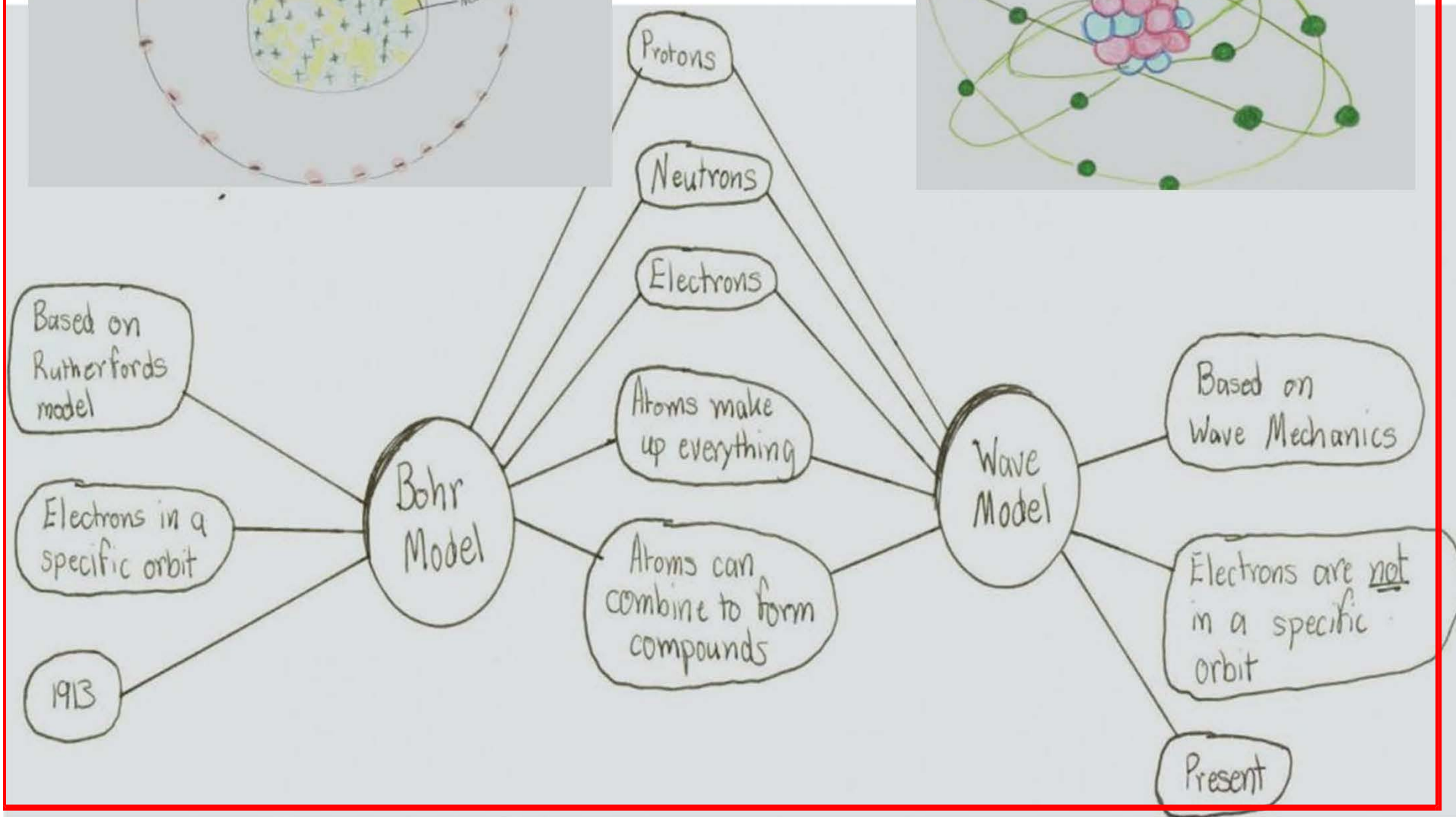
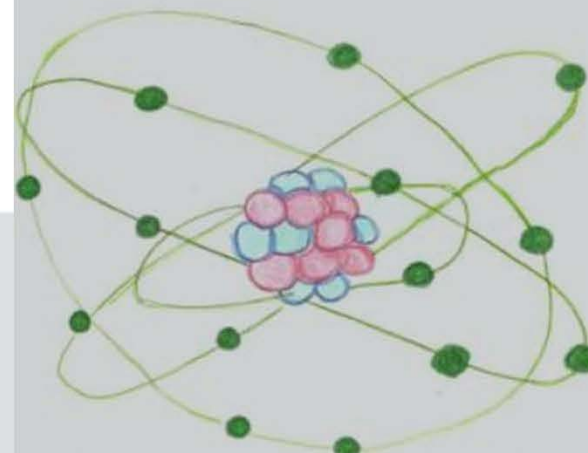


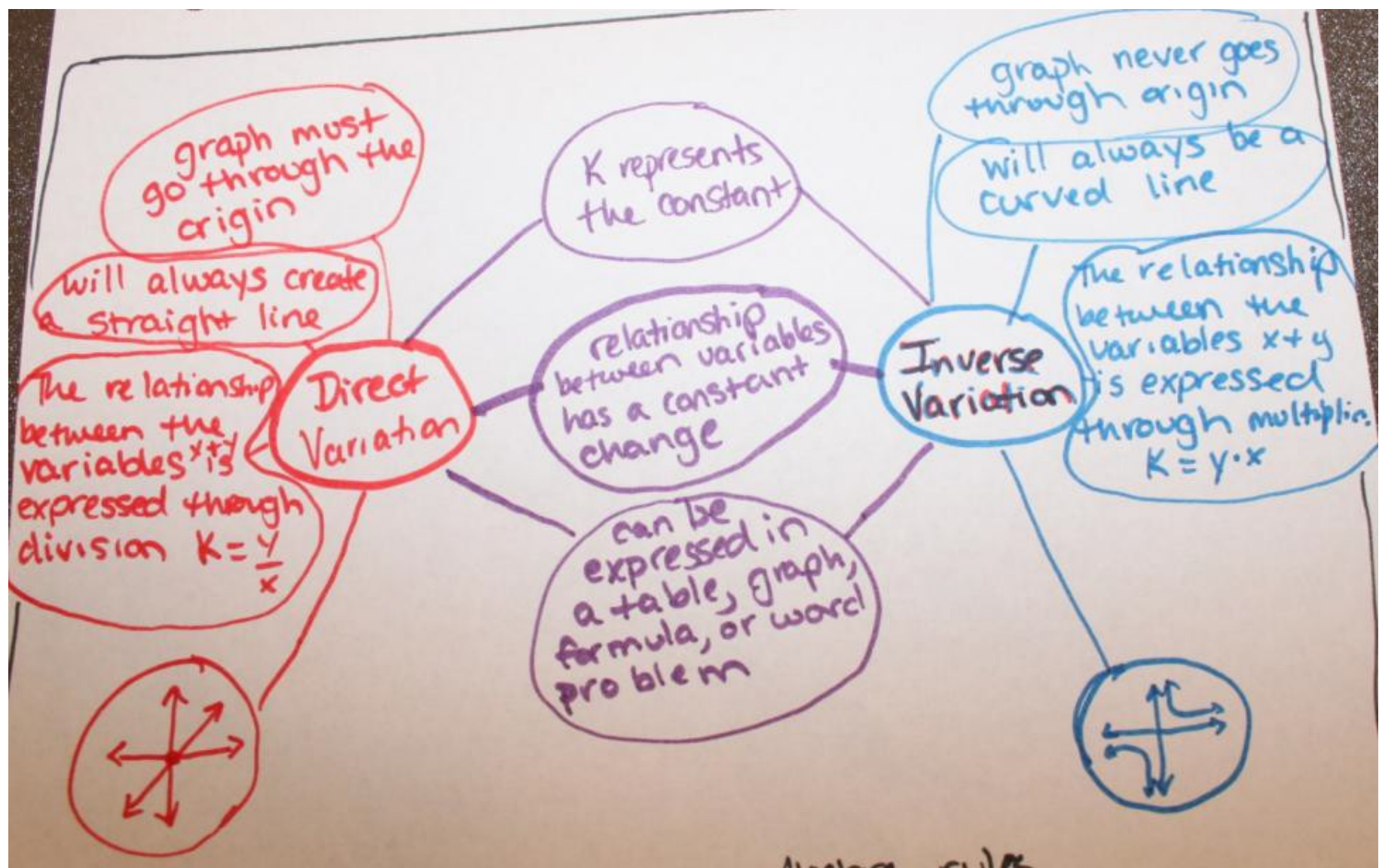


The Bohr Model



The Wave Model





It is important to know what animals are
Mamals, Birds, Reptiles, Amphibians, and Fish.

Textbook, class discussion,
journal, prior knowledge

I can classify
different animals
into 5 categories
according to
their traits.

Types of animals

Mamals



dolphin



cat



elephant

Birds



penguin



chicken



duck

Reptiles



snake



alligator



turtie

Amphibians



salamander



frog



toad

Fish



pufferfish



clown fish



shark

Kali Cauthen
Justin Harper

Real Numbers!

Rational

2,222

0.45

$\sqrt{144}$

$\sqrt{49}$

-212

0.123123...

$\frac{35}{5}$

-10

$\frac{\sqrt{81}}{3}$

-236,961

0.55

3.64

$\frac{42}{6}$

$\frac{\sqrt{18}}{\sqrt{2}}$

6.000

-3.25

-0.3

$\frac{\sqrt{25}}{\sqrt{49}}$

Irrational

2.364123...

$\sqrt{5}$

$-\sqrt{37}$

$\frac{\sqrt{181}}{12}$

$-\sqrt{163}$

0.31311...

$\sqrt{91}$

Types of Figurative Language



The puppy's bark was as loud as thunder.

The puppy was as angry as a wild animal.

The puppy ran as fast as a cheetah.

The puppy was as guilty as a criminal.

The puppy was as happy as a clown.

alliteration

The puppy was purring as fast as a train.

Sad sun sat softly.

The puppy was so fast it was like a rocket.

Even Clark Gable couldn't catch it.

The puppy was so fast it was like a rocket.

Simile

The puppy is as cute as a button.

The puppy is as fast as a cheetah.

The puppy is as happy as a clown.

The puppy looked like a statue.

Puppies were like little angels.

The puppy was as fast as a cheetah.

metaphor

The puppy is a silly goose.

You could kick the puppy out of there.

The puppy is a beautiful angel.

He is a puppy.

The puppy is an attention seeker.

The puppy was a beautiful angel.

The puppy was a beautiful angel.

hyperbole

The puppy was so cute that he drank up all the milk in the house.

The puppy likes to run a million miles an hour.

You touch my foot, and I'll bite you.

As the dog barked, the ground shook.

The puppy was so cute that he drank up all the milk in the house.

The puppy yelled at the top of his lungs.

personification

The puppy is smiling brightly and dancing to the music.

The puppy was so happy that it was dancing to the music.

The puppy was so happy that it was dancing to the music.

The puppy was so happy that it was dancing to the music.

The puppy was so happy that it was dancing to the music.

onomatopoeia

Whimper

The puppy whined when he had to go to the bathroom.

The dog was a whiner.

1000

Free Map

close ecological relationships between
2 or more organisms

Symbiosis

Mutualism

both species benefit

ants / acacia

+ / +

Commensalism

one species benefits, the
other is unaffected

demodex / humans

+ / 0

Parasitism

one species benefits,
the other is harmed

tape worm / human

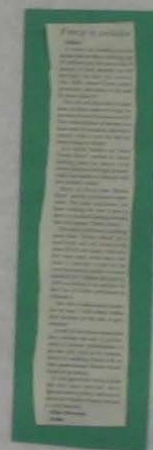
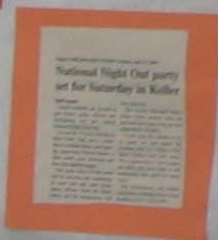
+ / -

Author's Purpose

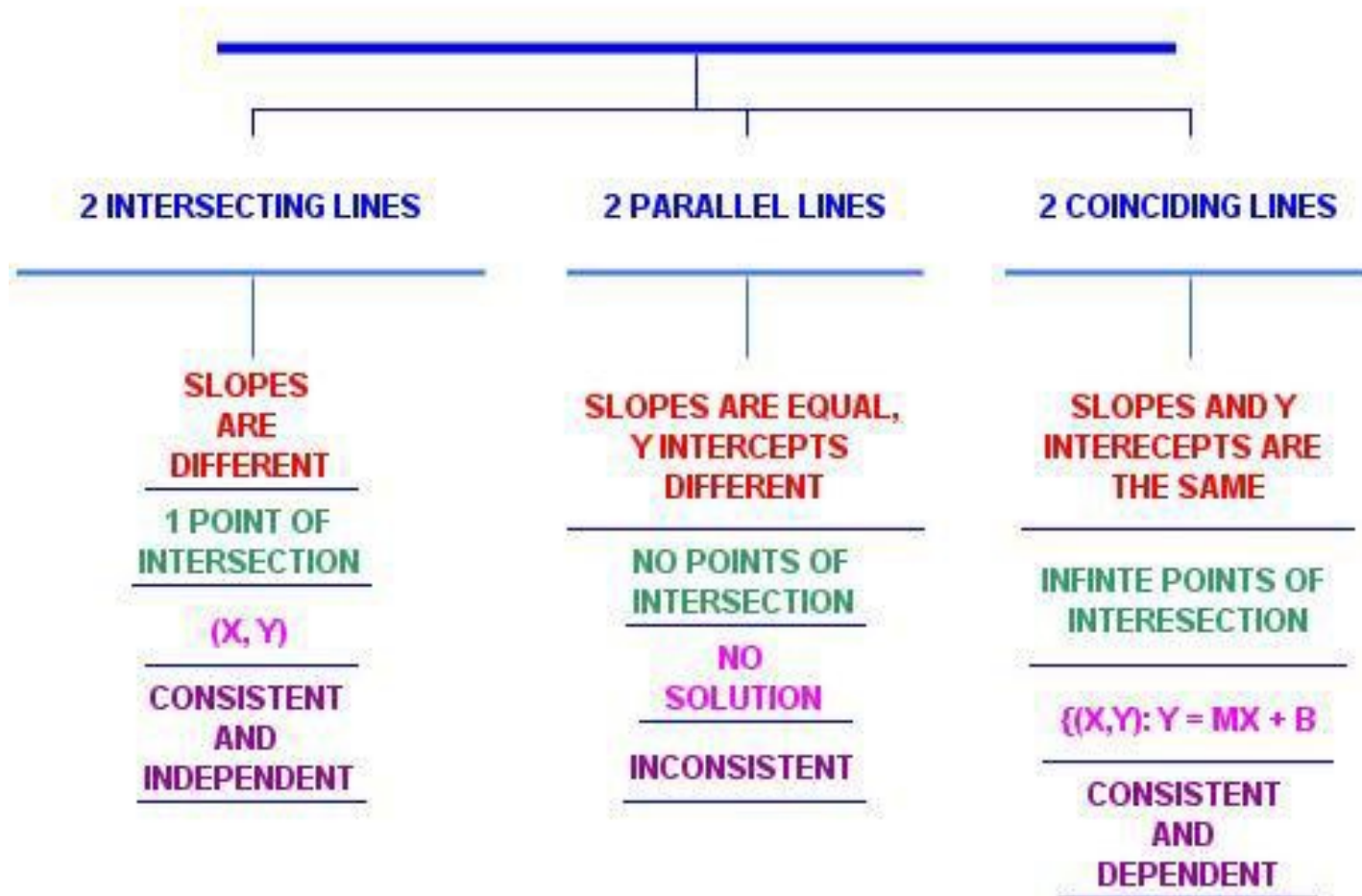
Inform

Entertain

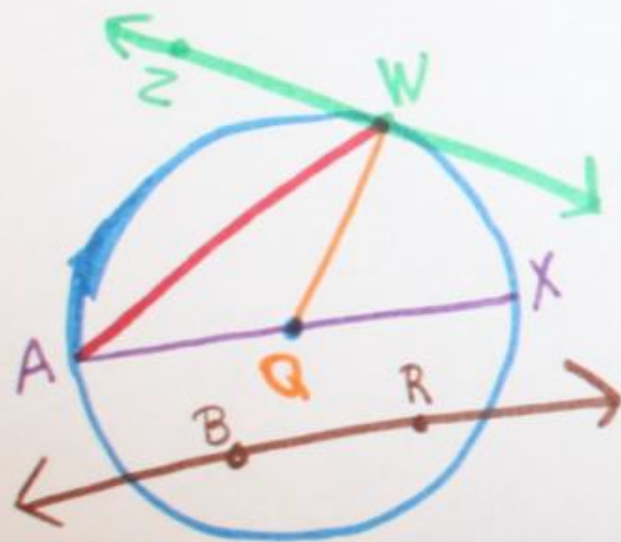
Persuade



SYSTEMS OF LINEAR EQUATIONS



Math II circles



diameter \overline{AX}

Tangent \overleftrightarrow{ZW}

Radius \overline{QW} \overline{QX} \overline{QA}

chord \overline{AW} \overline{AX}

Secant \overleftrightarrow{BR}

Central $\angle WQX$

Inscribed $\angle WAX$

center Q

arcs \widehat{AW} \widehat{AWX} \widehat{AXW}

Adding and Subtracting Matrices (MATH3)

Make sure
Matrices
have the
same
dimensions

If not
can't add

Add/subtract
corresponding
entries

Pay attention
to your
signs

Resulting
Matrix is
your
answer

Matrix
should have
same dimension

$$\begin{pmatrix} 2 & -5 \\ 11 & 4 \end{pmatrix} + \begin{pmatrix} -3 & -9 \\ 14 & 1 \end{pmatrix}$$

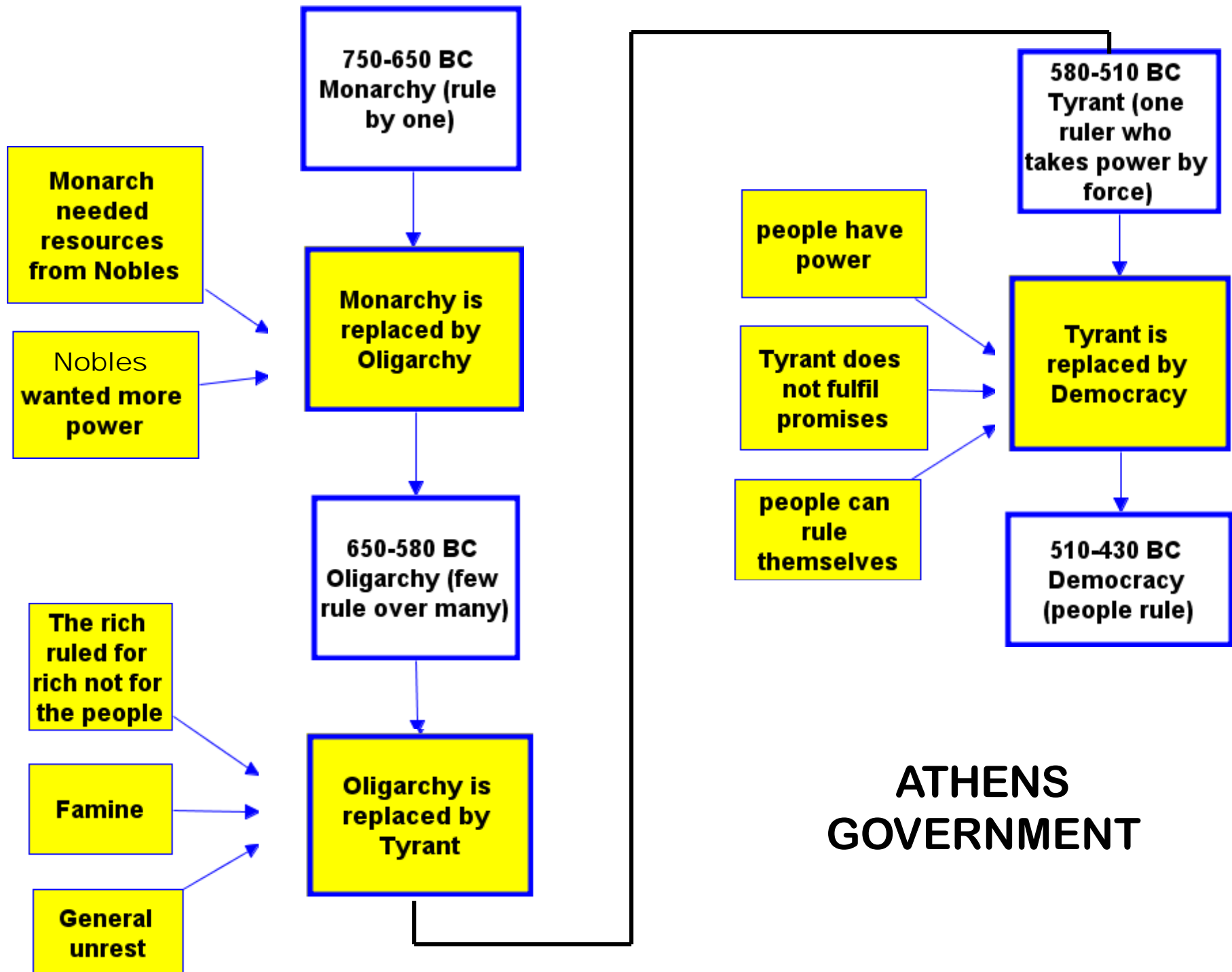
$$\begin{pmatrix} 2+(-3) & -5+(-9) \\ 11+14 & 4+1 \end{pmatrix}$$

$$\begin{pmatrix} -1 & -14 \\ 25 & 5 \end{pmatrix}$$

$$\begin{pmatrix} 2 & -5 \\ 11 & 4 \end{pmatrix} - \begin{pmatrix} -3 & -9 \\ 14 & 1 \end{pmatrix}$$

$$\begin{pmatrix} 2-(-3) & -5-(-9) \\ 11-14 & 4-1 \end{pmatrix}$$

$$\begin{pmatrix} 5 & 4 \\ -3 & 3 \end{pmatrix}$$



Flow Map

act ONE I



- the three witches tell Macbeth that he's going to be a king.
- (Banquo's sons will be king)



- Macbeth becomes a war hero (Thane of Cawdor)



- Macbeth sends a letter to Lady Macbeth saying that the witches said he's going to be king!



- Lady Macbeth forcefully wants to kill the king & tells Macbeth that she's going to do the murder.



- Macbeth talks to the King about coming over to their house.



- King plans to come over!
- Macbeth's perfect set up!!

Given
from the
picture
on page
p. 232 in
problem
#8

Given

$$\angle N \cong \angle P$$

$$\overline{NM} \cong \overline{PQ}$$

$$\angle NLM \cong \angle QPL$$

Angle
Angle
Side

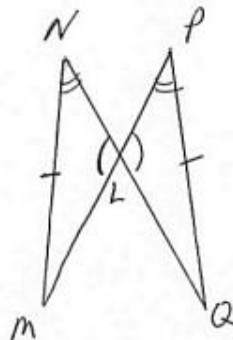
$$\triangle MNL \cong \triangle QPL$$

CPCTC

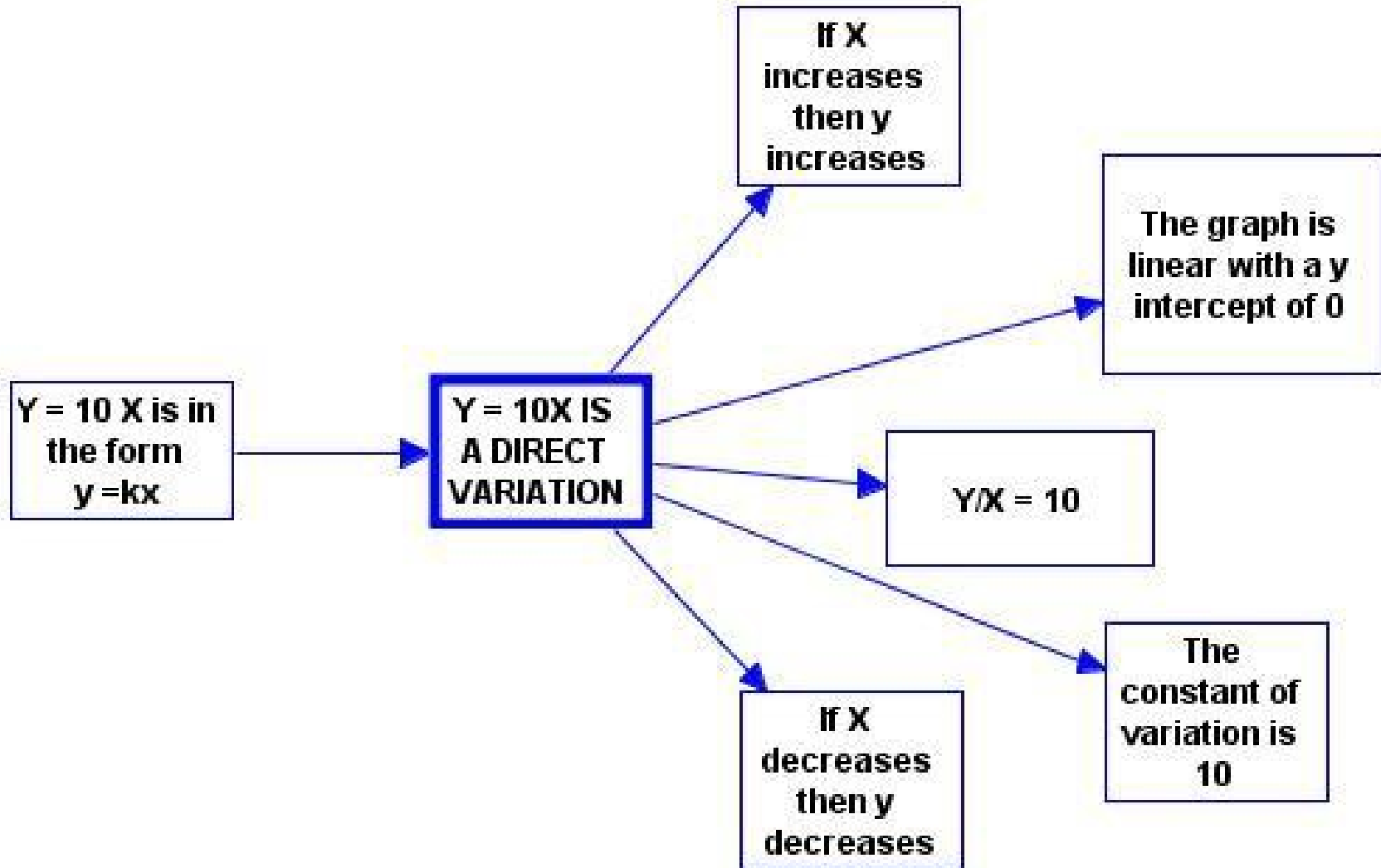
$$\angle M \cong \angle Q$$

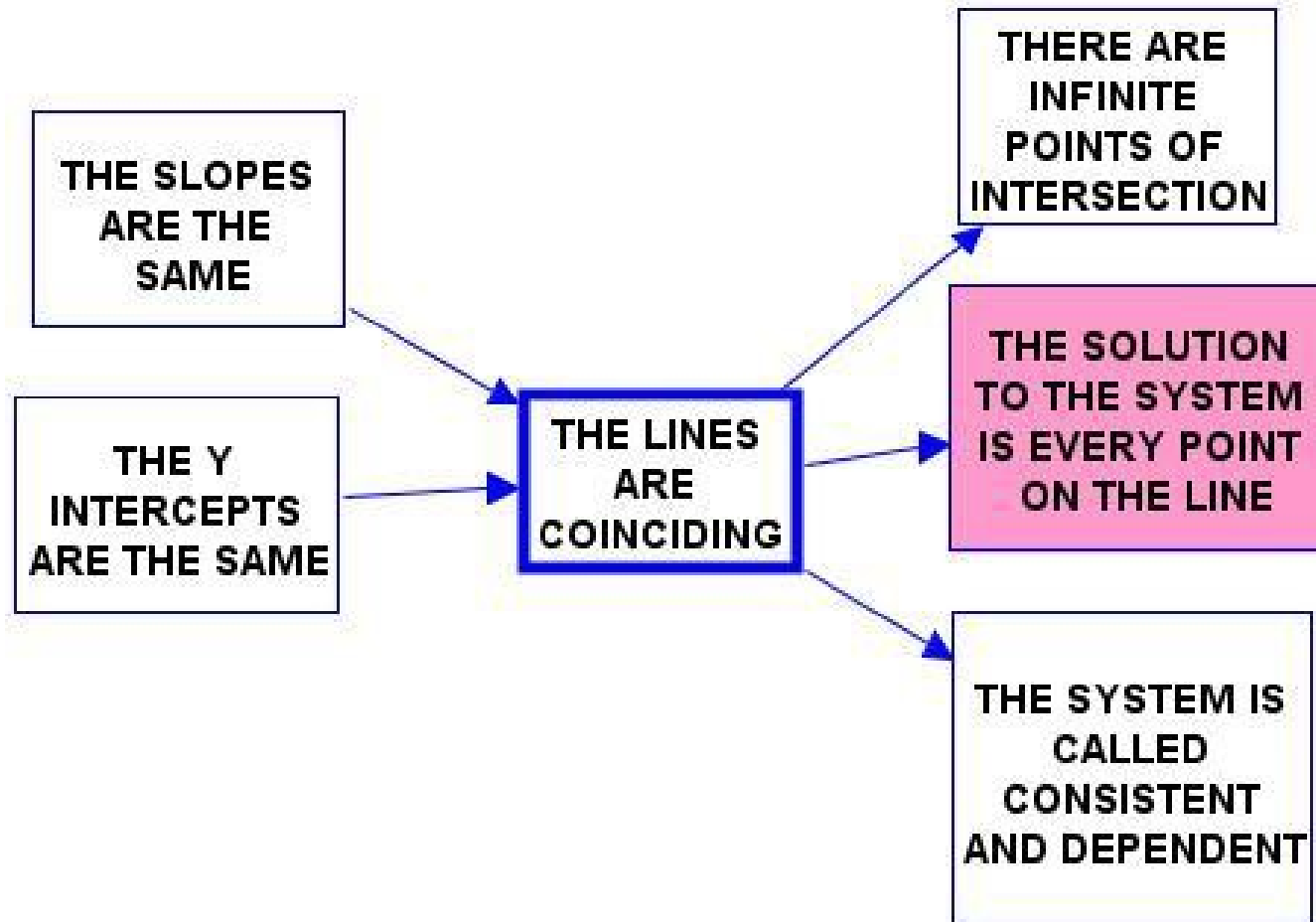
$$\overline{NL} \cong \overline{PL}$$

$$\overline{ML} \cong \overline{QL}$$



Corresponding parts
Of Congruent Triangles
Are Congruent





Causes

- Entangled Alliances
- Arch Duke Ferdinand assassinated
- Austria blames Serbia
- Military build up
- attempted annexation of Bosnia
- Germans declare war on France
- land disputes
- Nationalism
- Militarism
- Imperialism



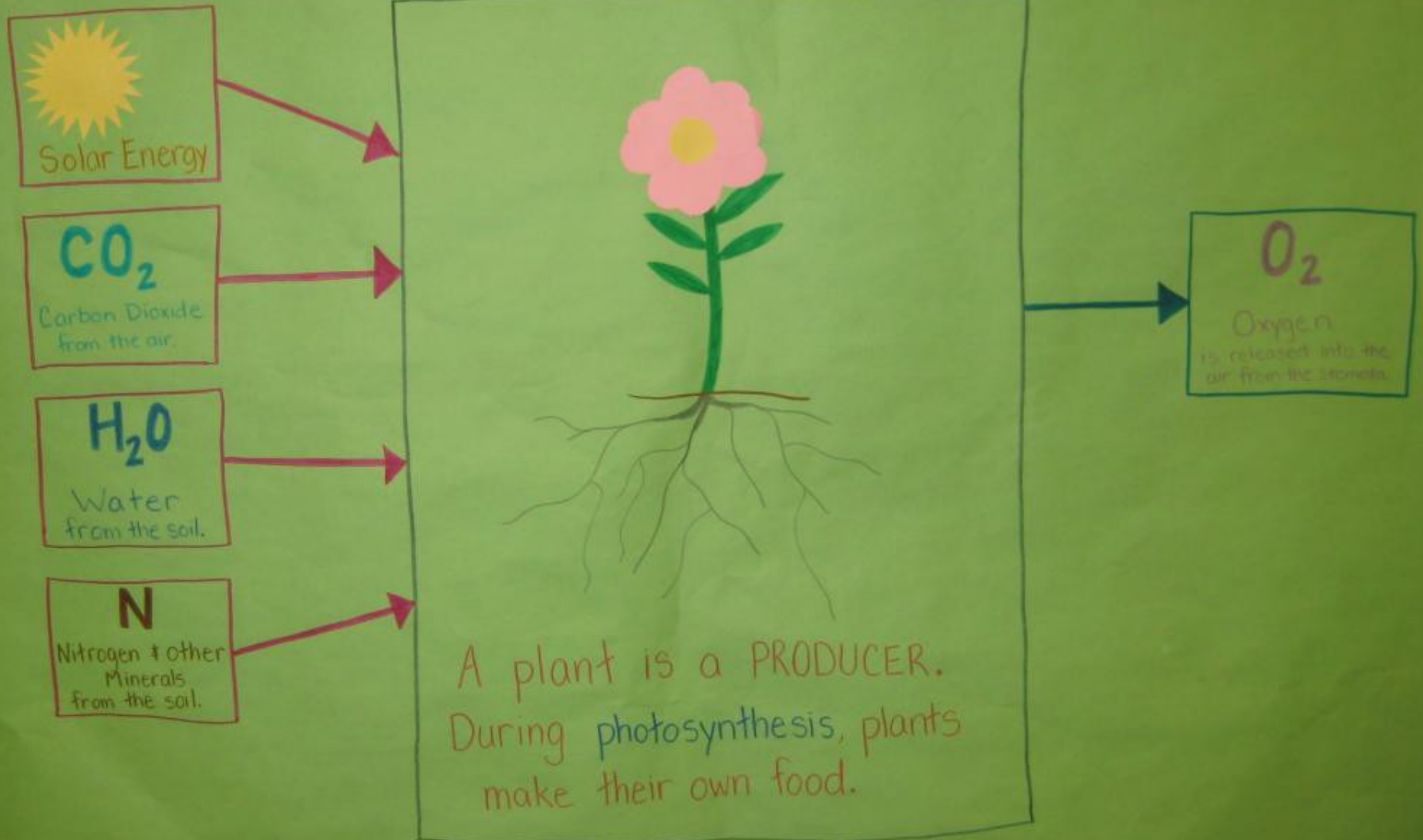
Effects

- Death of many people
- Sinking of the Lusitania
- Countries take side
- New weapons developed
- Huge trenches dug
- Use of poison gas
- Creation of the U-boat
- Boost in American economy
- Over 2 million howitzer shells were fired
- The Great Depression

We watched a video.

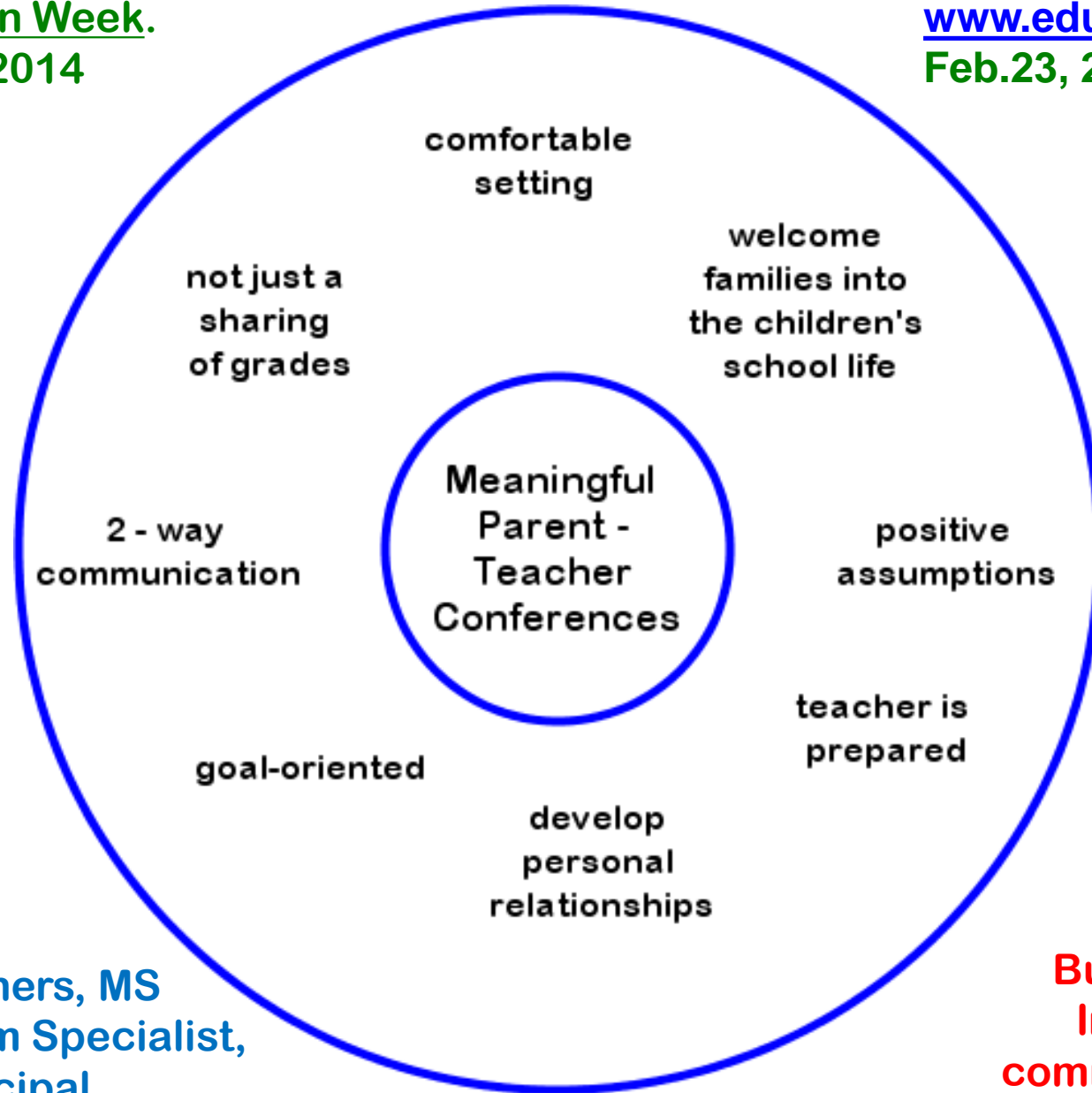


Photosynthesis



Education Week.
July 2014

www.edutopia.com
Feb.23, 2014



K-12 teachers, MS
Curriculum Specialist,
Asst. Principal

**Build trust
Improve
communication**



WHAT INFLUENCED MACBETH'S CHARACTER?

"DOUBLE, DOUBLE,
TOIL AND TROUBLE
FIRE BURN AND
CAULDRON BUBBLE"
4.1.10-11 MACBETH

"LIFE IS A TALE
TOLD BY IDIOTS"
MACBETH



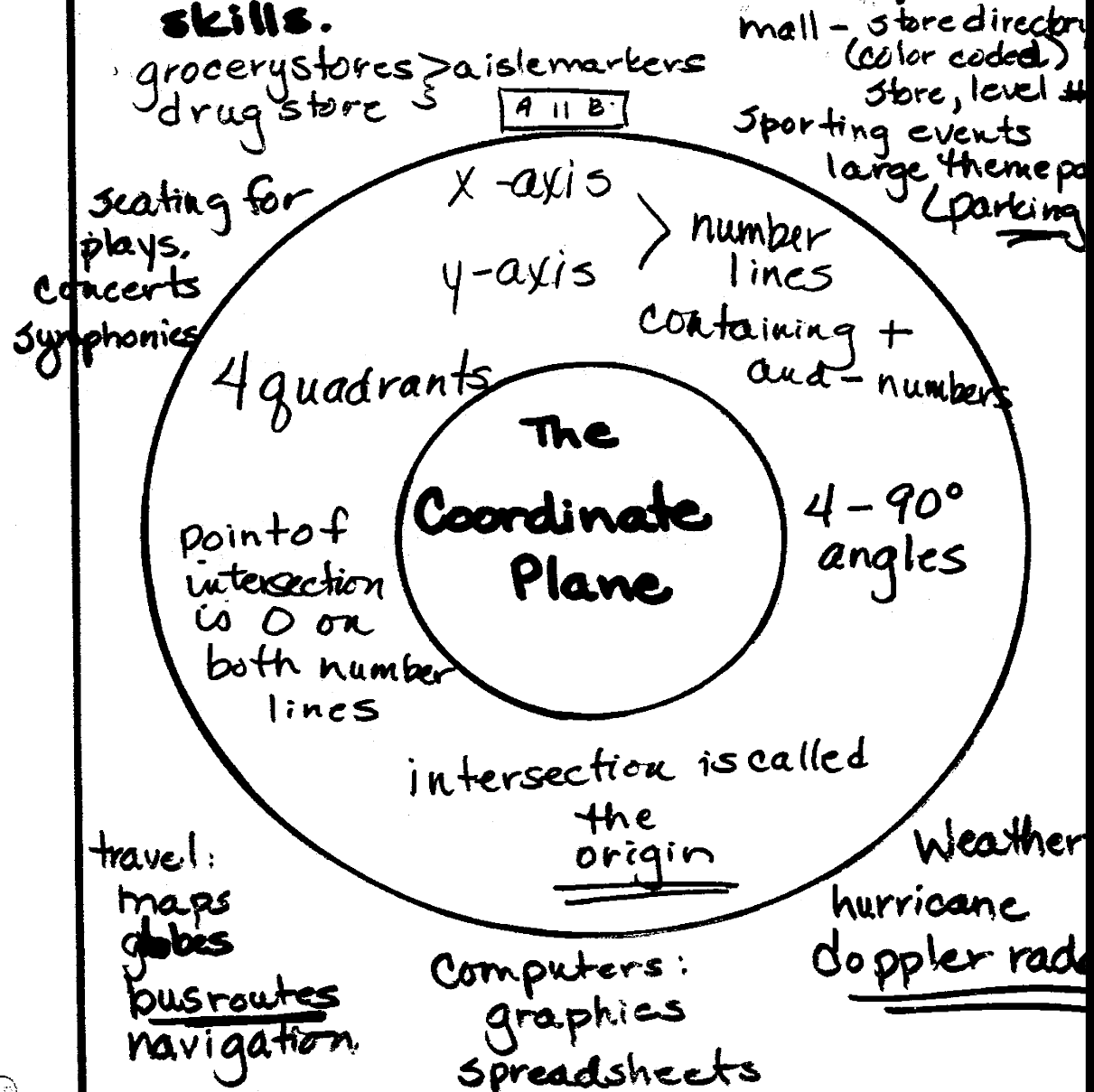
"HELL IS MURKY"

"WHY SHOULD
I PLAY THE
ROMAN FOOL?"

WHO INFLUENCES MACBETH'S CHARACTER?

SOURCE:
(MACBETH TEXT)

Real-life uses of coordinate plane skills.

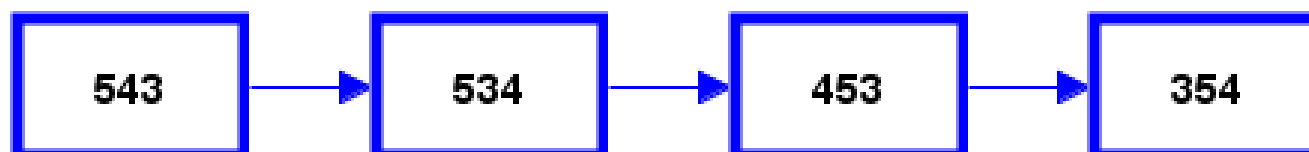


JHae

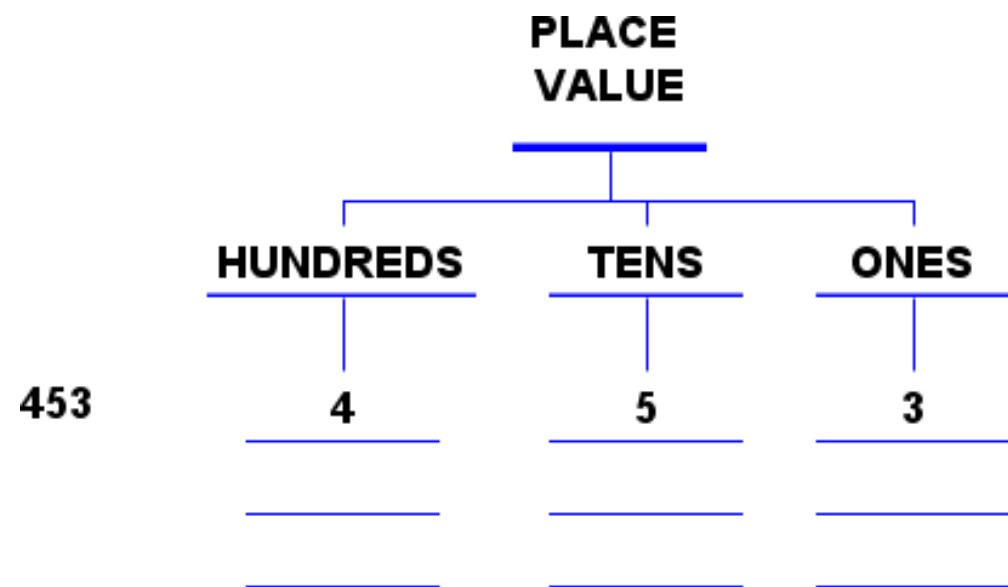
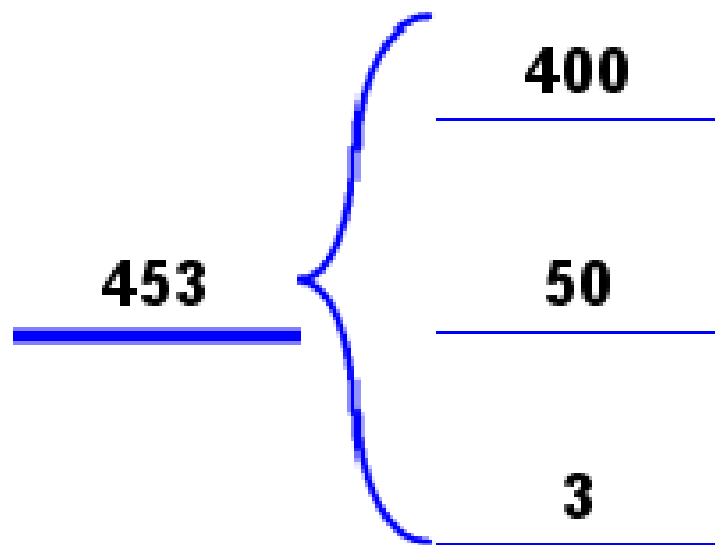
PLACE VALUE: ORDERING NUMBERS

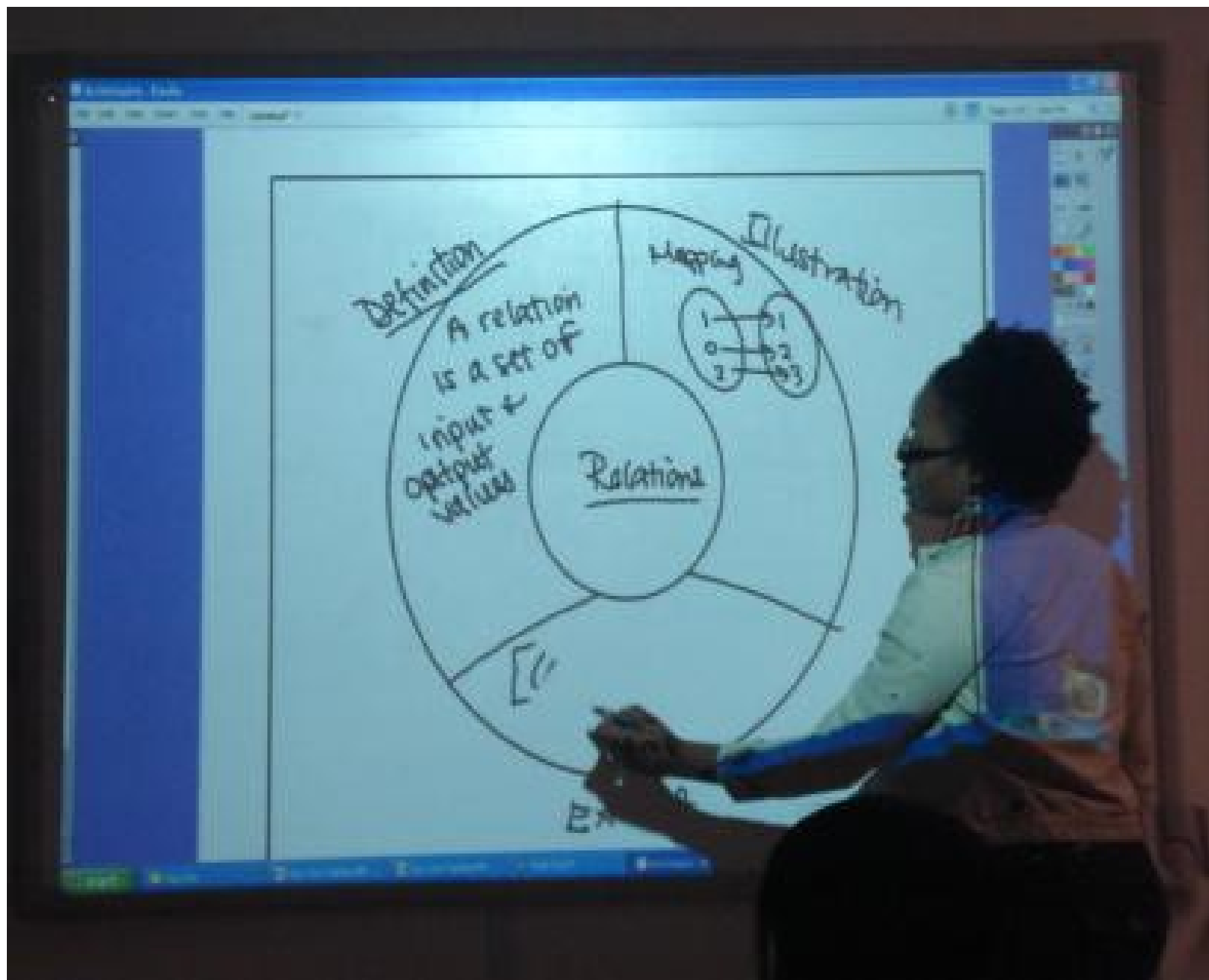


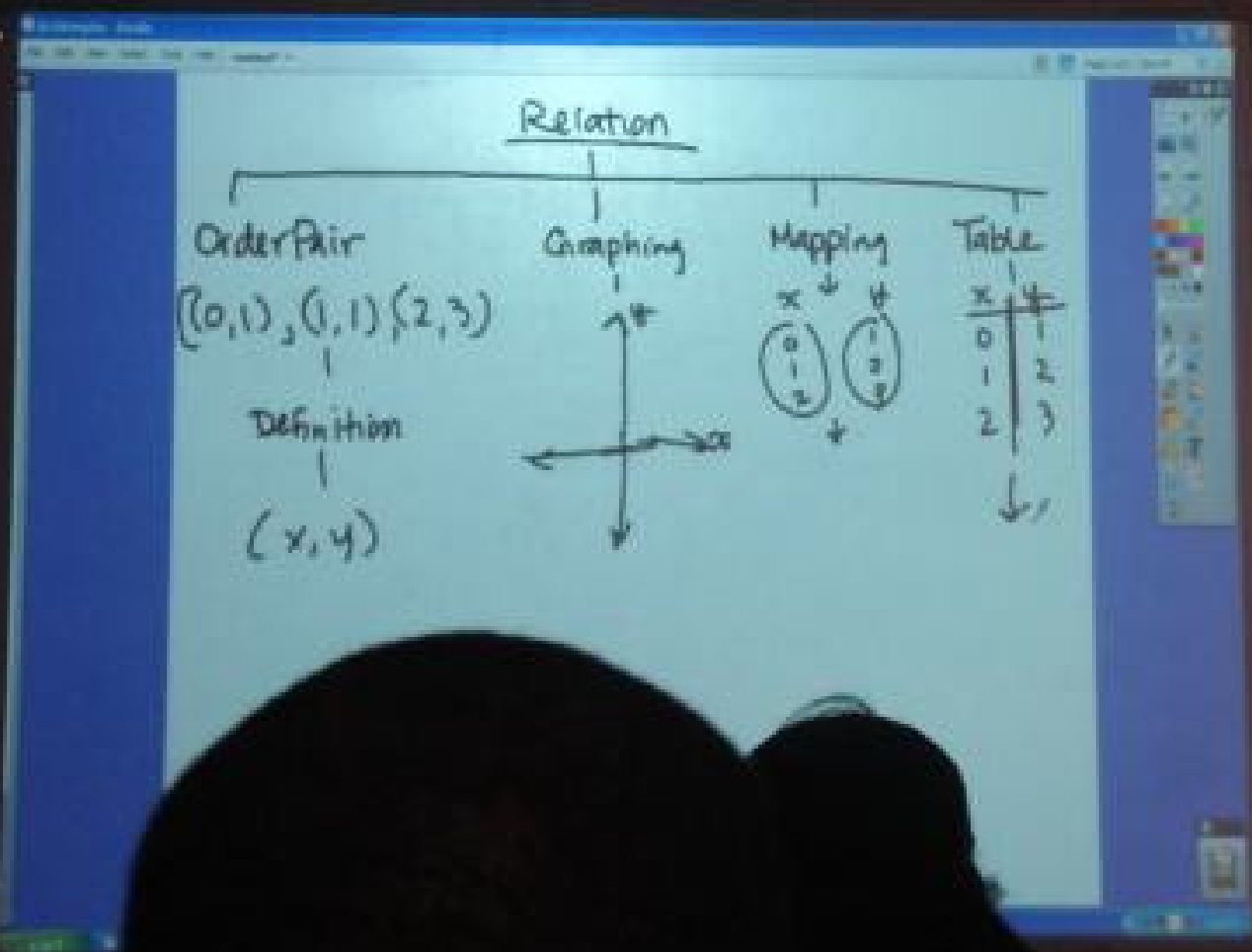
3 X 5 cards



is greater than

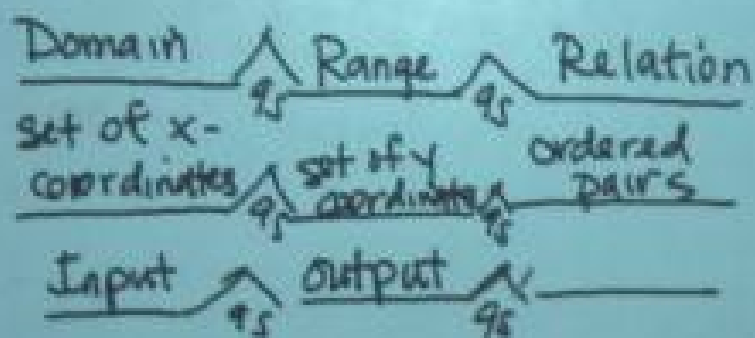






Relating Factor: can be interpreted as

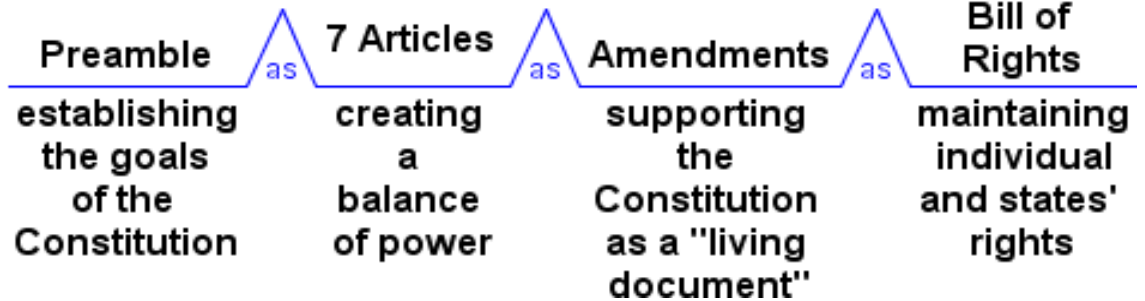
$\{(9,1), (1,0), (2,3)\}$



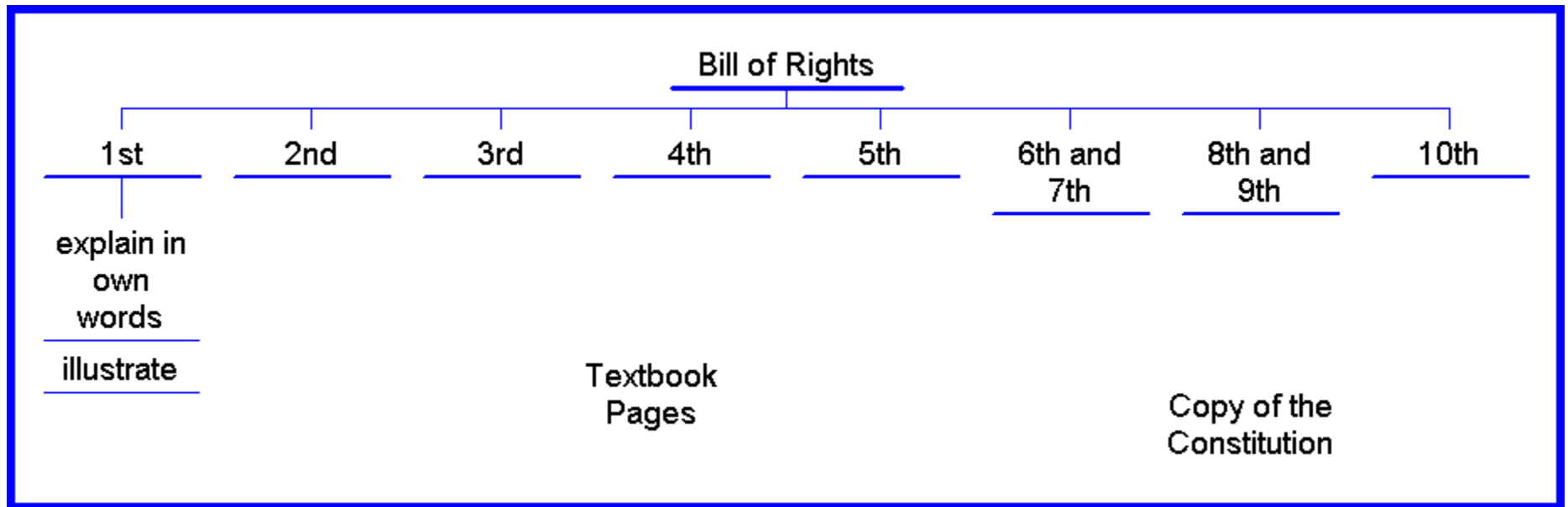
SET

has (have) the
purpose of

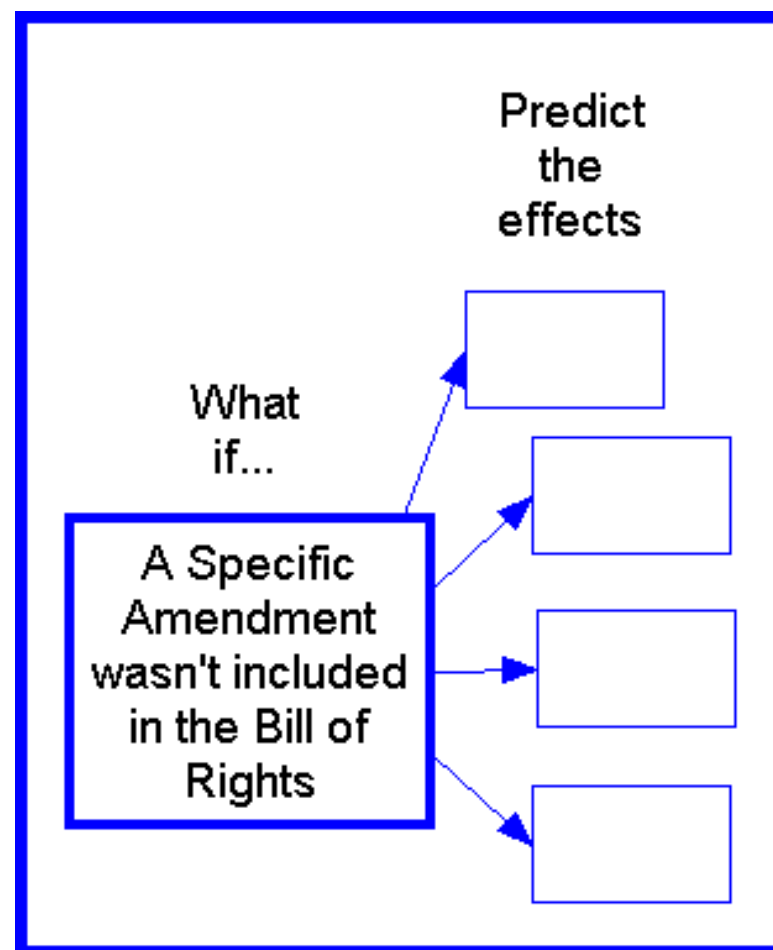
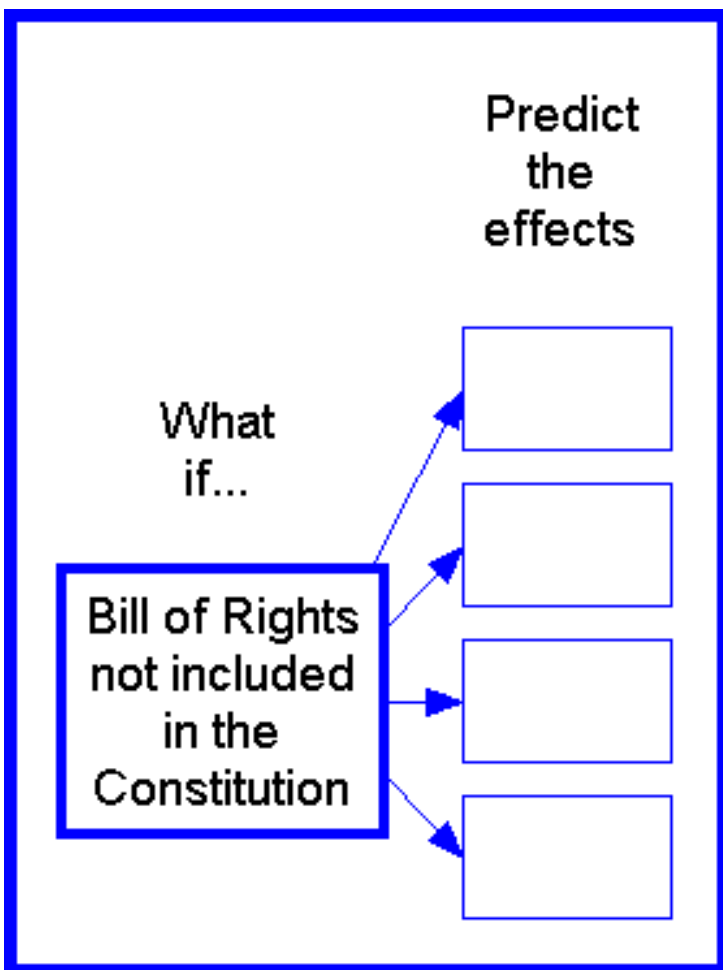
Relating Factor



TEACHER / STUDENT INPUT



REFLECTIVE THINKING



Options for
cafeteria noise
level

Play calming
music

Eat in
classroom

Harsher consequences
for misbehavior

Incentives

Yakker Trakker-
red, yellow, green
light

Have EAs supervise

Increased training of
adult supervisors

Recruit parent
volunteers

Mix level
students
Play instructional videos



We could get menus from several restaurants.

We could get prices from a grocery store.

How many people are in our class?

How much tax will we have to pay?

Where will we get it?

What kind of pizza will we order?

How much does each pizza cost?

How much would it cost for the class to eat pizza?

How much will the drinks cost?

How many slices are in one pizza?

How much will the plates and napkins cost?

How many slices of pizza will each student eat?

We could go online to look at prices or just call.

We could look at advertisements in the newspaper.