





**AGENDA**

**01**



Research

**02**



Concept  
Diagram

**03**



Linking Steps

**04**

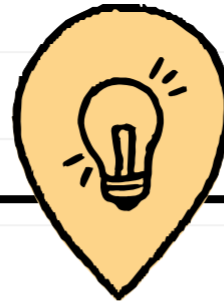


Knowledge  
Check & Work  
Time



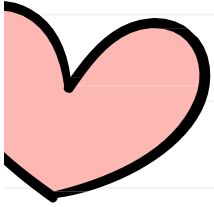
### **THE CHALLENGE**

Introducing  
difficult but  
important  
concepts to a  
diverse group of  
students



### **THE SOLUTION**

The Concept Mastery  
Routine helps  
students by allowing  
them to classify  
characteristics,  
explore examples,  
and construct a good  
definition.



**teachers who used the routine  
regularly throughout the  
semester had greater gains in  
student performance on tests.**

- The Research



# What Makes a Good Definition?

## Concept Definition

A definition must include the following in a complete sentence(s):

- the name of the Targeted Concept
- the name of the Overall Concept
- all of the Always Characteristics and
- any special rule joining the Always Characteristics.

*definition = 1 + 2 + Always present – special rules*

- **Linear functions** are those whose graph is a straight line. A linear function has the following form.  $y = f(x) = a + bx$ . A linear function has one independent variable and one dependent variable. The independent variable is  $x$  and the dependent variable is  $y$ . slope represents a relationship of addition or subtraction.
- **Mammal** a warm-blooded vertebrate animal of a class that is distinguished by the possession of hair or fur, the secretion of milk by females for the nourishment of the young, and (typically) the birth of live young.
- **Democracy** a system of government by the whole population or all the eligible members of a state, typically through elected representatives.
- **Theme** an idea that recurs in or pervades a work of art or literature.

# CONCEPT DIAGRAM

**Key Words**

U.S. Civil War

Northern Ireland

citizens

one nation

ethnic

many nations

social rights

"Desert Storm" in Kuwait

CONVEY CONCEPT

OFFER OVERALL CONCEPT

NOTE KEY WORDS

CLASSIFY CHARACTERISTICS

**Civil War** **1** **armed conflict**

Always Present + Sometimes Present 0 Never Present

groups of

within

about

**Concept**

**This word or phrase represents the targeted concept for the lesson.**

**A concept is a category or class into which events, ideas, or objects can be grouped.**

EXPLORE EXAMPLES

1990's

PRACTICE WITH NEW EXAMPLE

TIE DOWN A DEFINITION

A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about distribution of power.

# The Concept Test

- A concept is a category or group of members that share the same characteristics
  - Fraction
  - Sport
  - Mammal
  - Democracy

Can I think of 3 examples of \_\_\_\_\_?

If not, it may be an example of a concept.

# Concept or Example?

- Kindness
- Supply
- Collaboration
- Ibram X. Kendi
- France
- Energy
- Invertebrate
- Meiosis
- Species
- Genre
- Somewhere over the Rainbow
- Essay
- Troportion
- Trapezoid
- Variable
- $Y=2x-4$
- Square



# Concept Ladder

			Matter	
			Living Things	
			Animalia	
			Vertebrates	
Amphibians	Reptiles	Fish	Birds	Mammals
			Blue Jay	

# CONCEPT DIAGRAM

2

## Key Words

U.S. Civil War

Northern Ireland

citizens

one nation

ethnic

many nations

social rights

"Desert Storm" in Kuwait

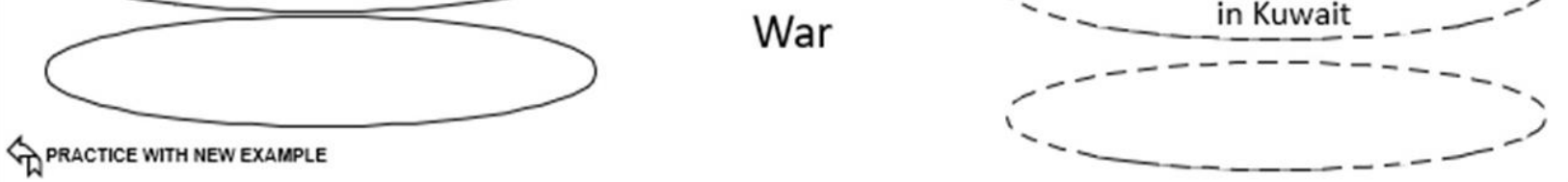
- CONVEY CONCEPT
- OFFER OVERALL CONCEPT
- NOTE KEY WORDS
- CLASSIFY CHARACTERISTICS

Civil War

armed conflict

**Overall Concept**

**An Overall Concept is the category or class into which the targeted concept and similar concepts can be grouped.**



PRACTICE WITH NEW EXAMPLE

TIE DOWN A DEFINITION

A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about distribution of power.

3

# CONCEPT DIAGRAM

## Key Words

U.S. Civil War

Northern Ireland

citizens

one nation

ethnic

many nations

social rights

"Desert Storm"  
in Kuwait

CONVEY CONCEPT

OFFER OVERALL CONCEPT

NOTE KEY WORDS

CLASSIFY CHARACTERISTICS

groups

within

about

EXPLORE EXAMPLES

United States

1990's

PRACTICE WITH NEW EXAMPLE

TIE DOWN A DEFINITION

Civil War

armed conflict

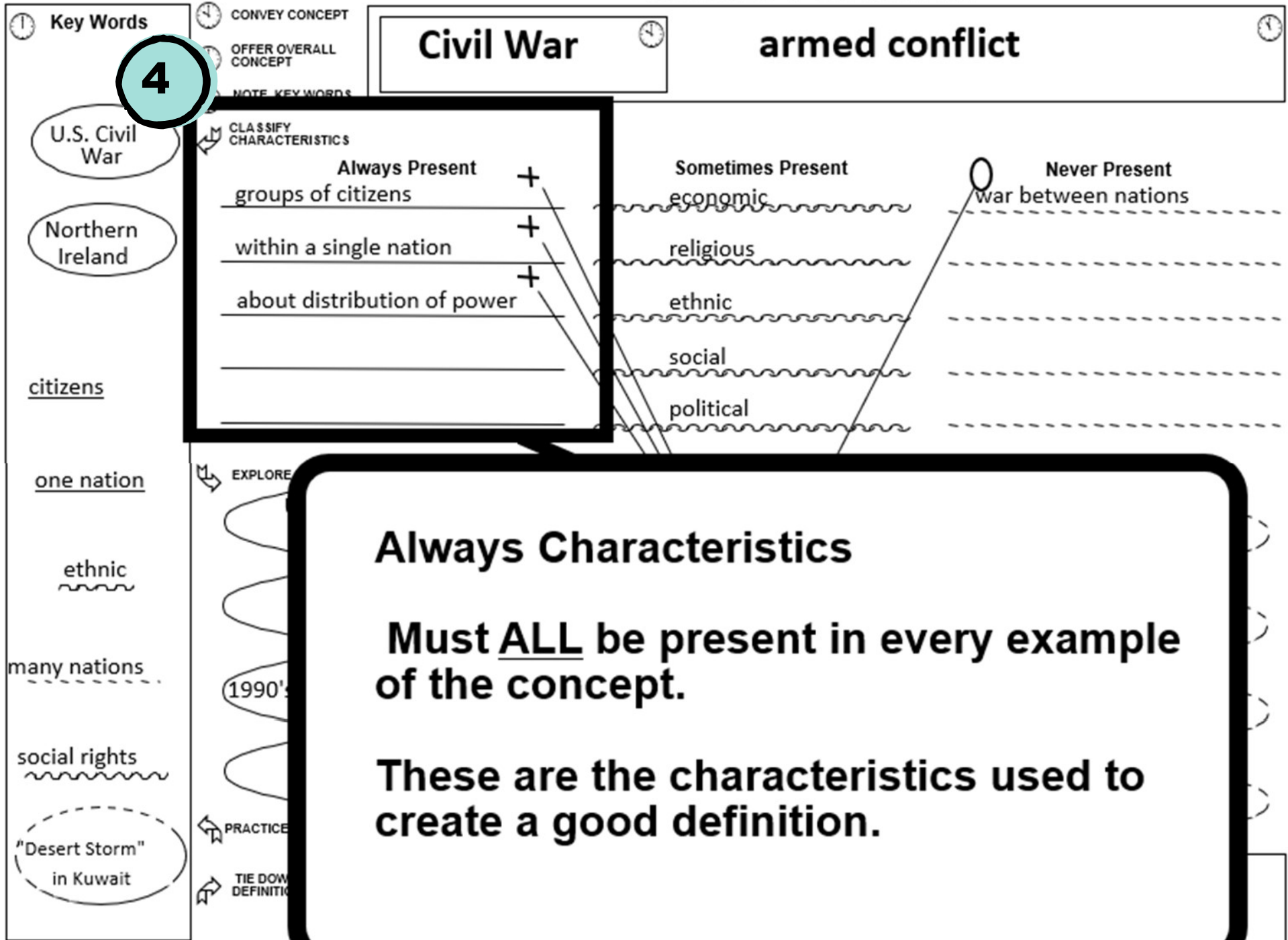
## Key Words

These words are associated with the targeted concept.

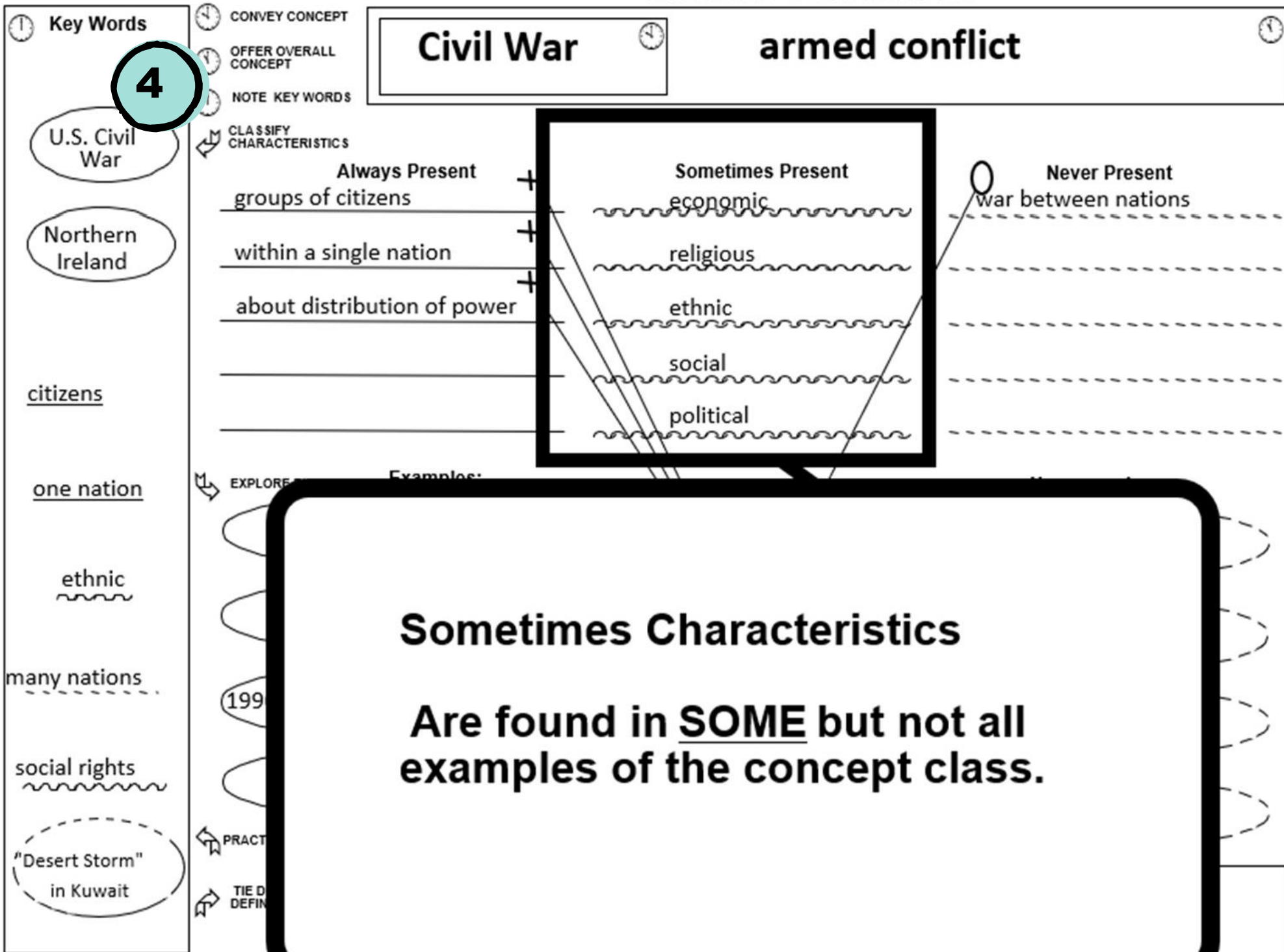
They are generated through brainstorming with students.

A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about distribution of power.

# CONCEPT DIAGRAM



# CONCEPT DIAGRAM



# CONCEPT DIAGRAM

Civil War

armed conflict

4

U.S. Civil War

Northern Ireland

citizens

one nation

ethnic

many nations

social rights

"Desert Storm" in Kuwait

CONVEY CONCEPT

OFFER OVERALL CONCEPT

NOTE KEY WORDS

CLASSIFY CHARACTERISTICS

Always Present

groups of citizens

within a single nation

about distribution of power

EXPLORE EXAMPLES Examples:

U

1990's

PRACTICE

TIE DOWN DEFINITION

+

+

+

Sometimes Present

economic

religious

ethnic

social

political

Never Present

war between nations

Nonexamples:

## Never Characteristics

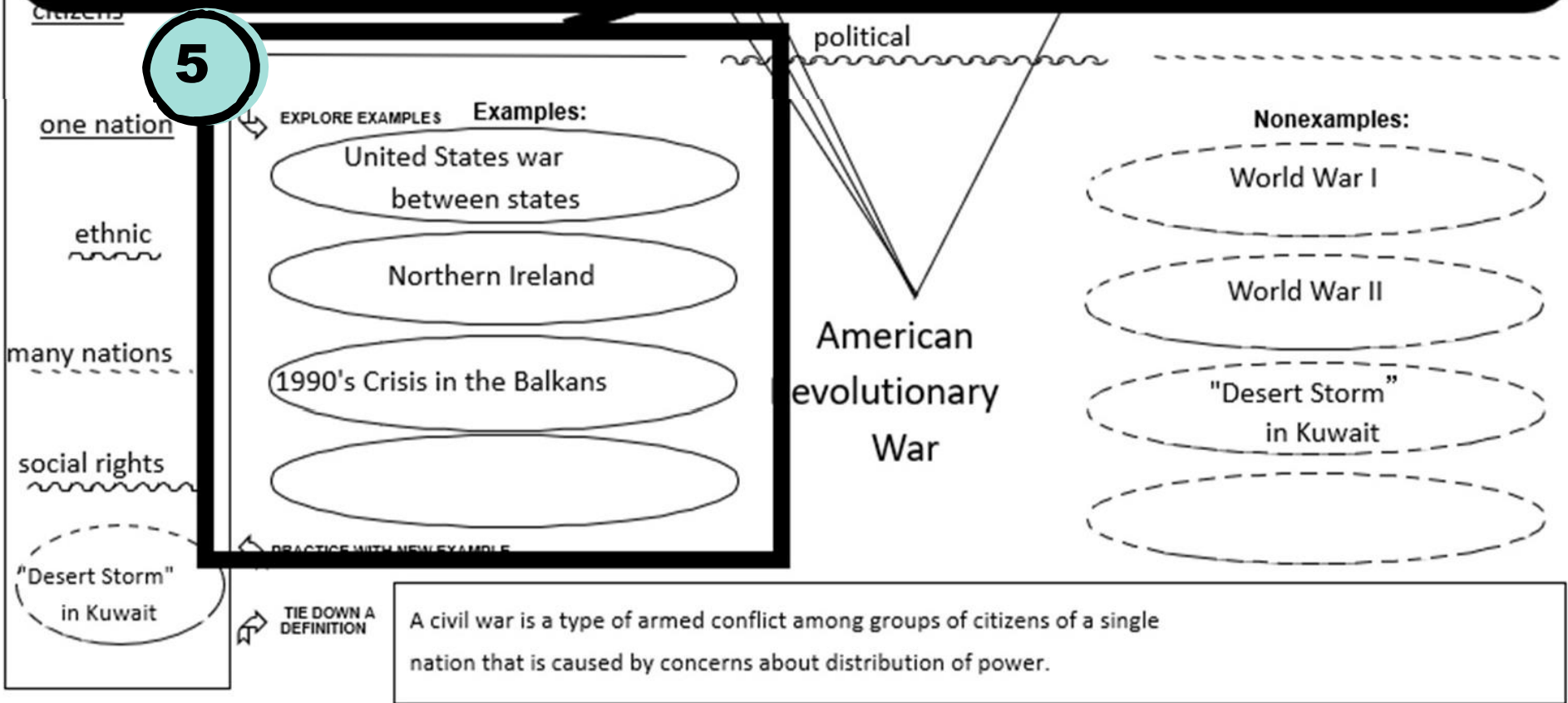
Can **NEVER** be present in examples of the concept class.

Ask Me  
Questions

# Examples

Examples are instances that possess all of the Always Characteristics, none of the Never Characteristics, but some of the Sometimes Characteristics.

5



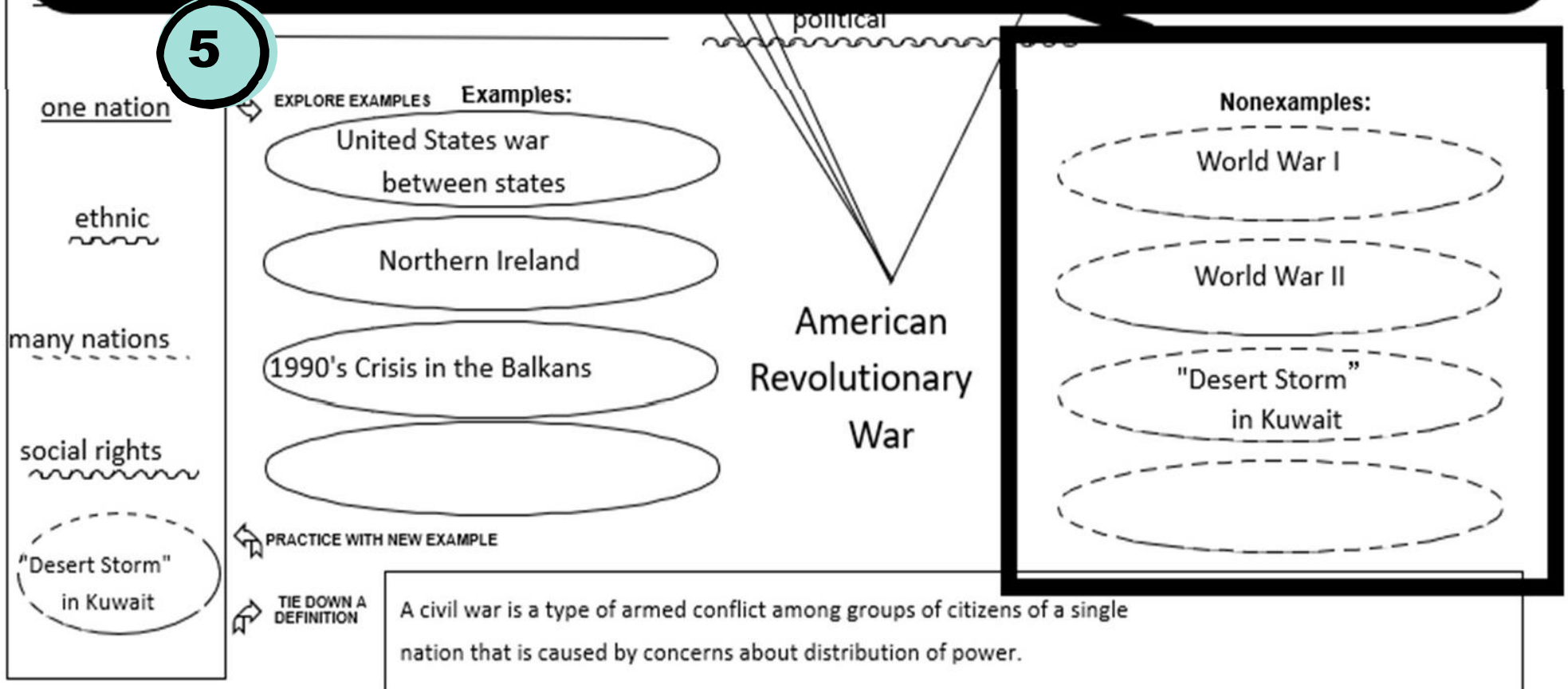
TIE DOWN A DEFINITION  
A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about distribution of power.



## Nonexamples

**Nonexamples are instances that are missing one or more of the Always Characteristics and/or have one or more of the Never Characteristics.**

5

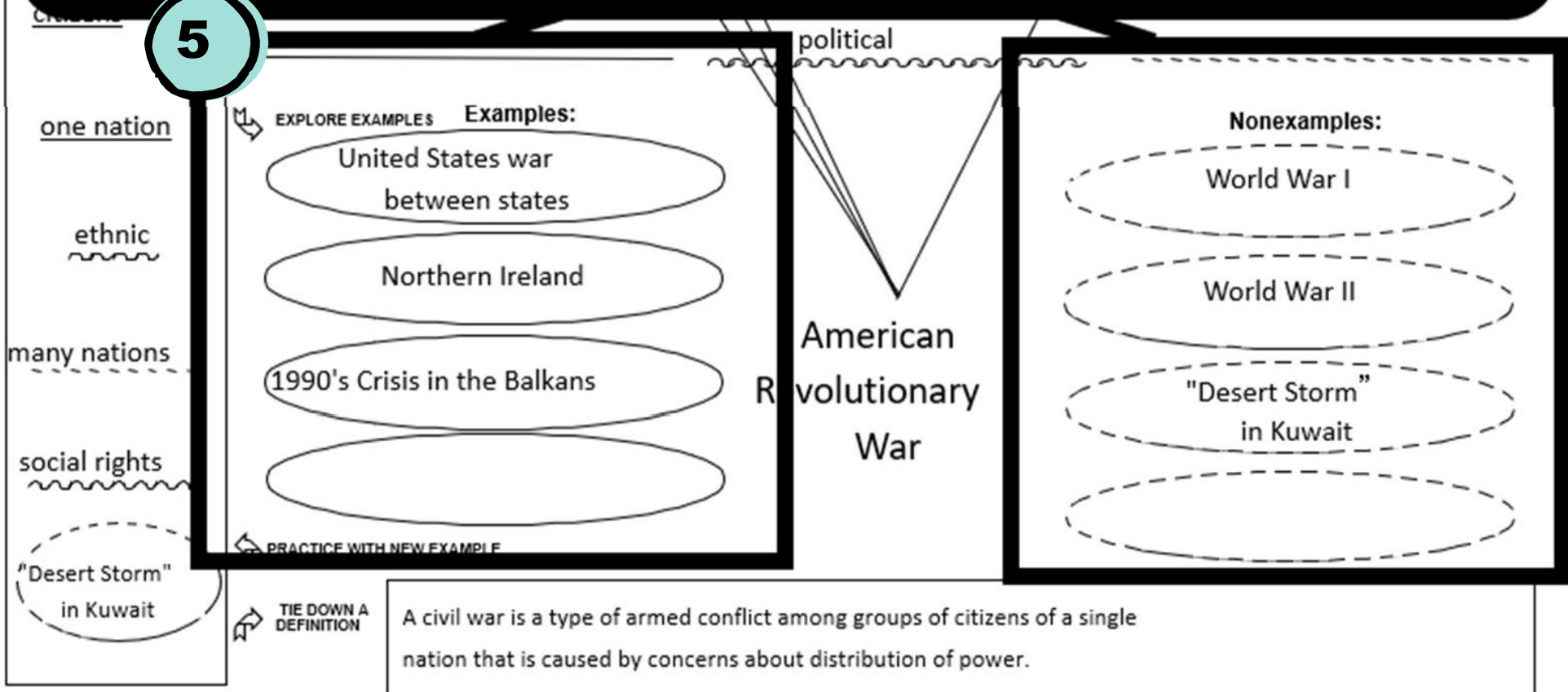


## Pairs of Examples and Nonexamples

Construct the first pair of examples and nonexamples so that students can easily distinguish between them.

Then, construct pairs of examples and nonexamples that are increasingly more difficult to distinguish from each other.

5

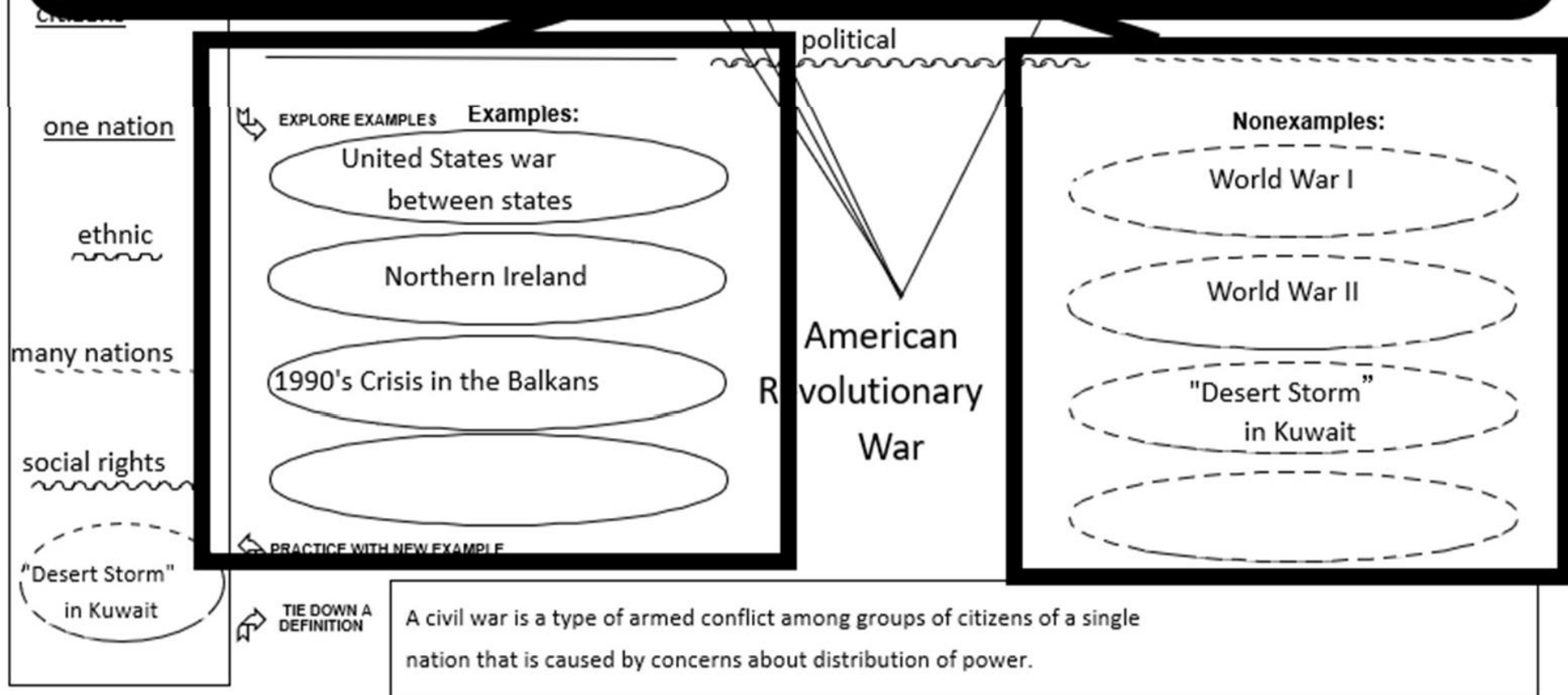


## CONCEPT DIAGRAM

### Pairs of Examples and Nonexamples

Construct the first pair of examples and nonexamples so that students can easily distinguish between them.

Then, construct pairs of examples and nonexamples that are increasingly more difficult to distinguish from each other.



# CONCEPT DIAGRAM

## Key Words

U.S. Civil War

Northern Ireland

citizens

one nation

ethnic

many nations

social rights

"Desert Storm" in Kuwait

## Testing Ground

This space is used to list possible examples to be sorted into either examples or nonexamples columns.

Good for small groups!



6

Northern Ireland

1990's Crisis in the Balkans

American Revolutionary War

World War II

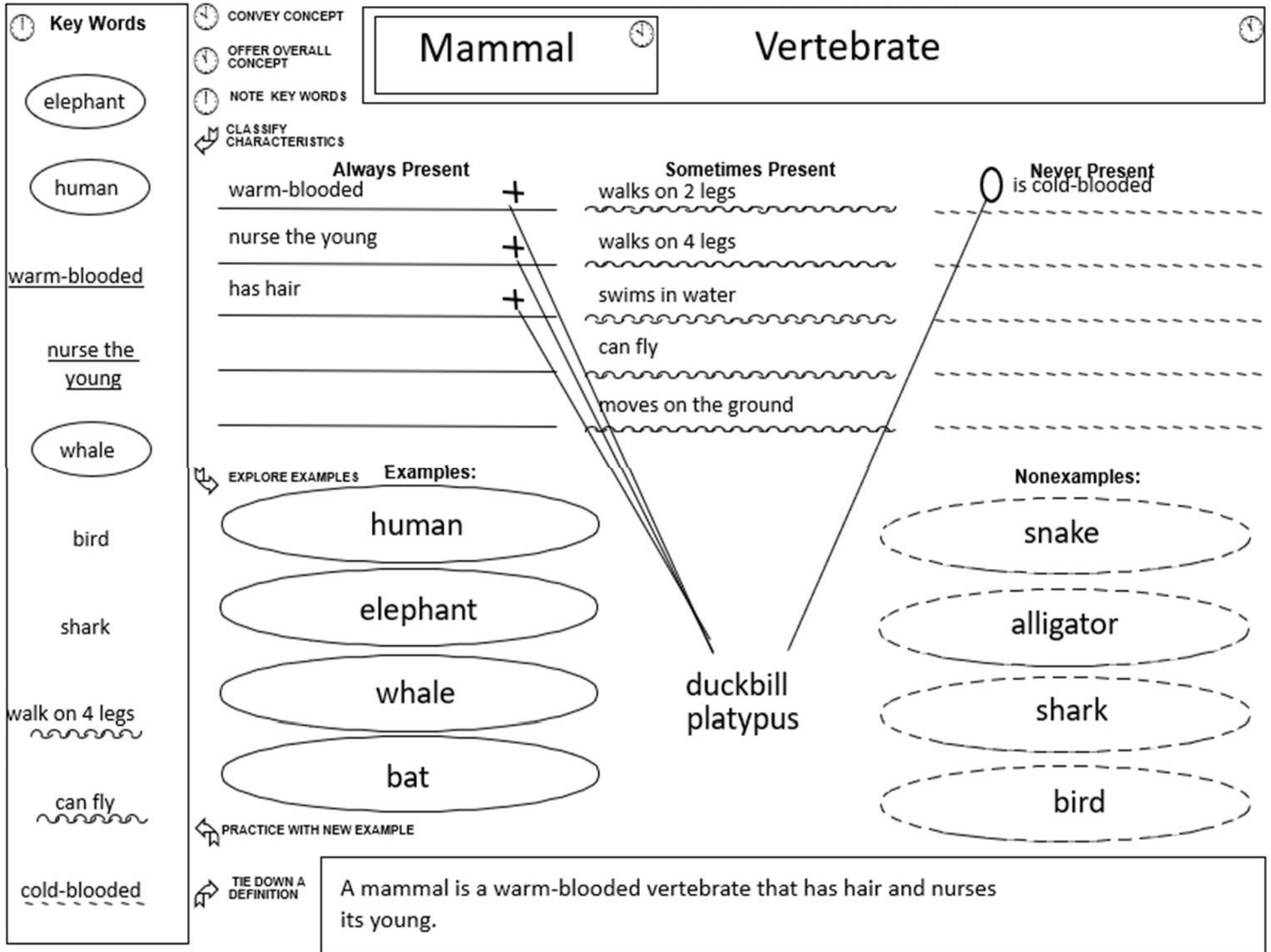
"Desert Storm" in Kuwait

PRACTICE WITH NEW EXAMPLE

TIE DOWN A DEFINITION

A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about distribution of power.

# CONCEPT DIAGRAM



- 🕒 CONVEY CONCEPT
- 🕒 OFFER OVERALL CONCEPT
- 🕒 NOTE KEY WORDS
- 👉 CLASSIFY CHARACTERISTICS

👉 EXPLORE EXAMPLES

👉 PRACTICE WITH NEW EXAMPLE

👉 TIE DOWN A DEFINITION

# CONCEPT DIAGRAM

Key Words      CONVEY CONCEPT      OFFER OVERALL CONCEPT

Civil War      armed conflict

## Concept Definition

A definition must include the following in a complete sentence(s):

- the name of the Targeted Concept
- the name of the Overall Concept
- all of the Always Characteristics and
- any special rule joining the Always Characteristics.

*definition = 1 + 2 + Always present – special rules*

7

PRACTICE WITH NEW EXAMPLE


TIE DOWN A DEFINITION

A civil war is a type of armed conflict among groups of citizens of a single nation that is caused by concerns about distribution of power.

# CONCEPT DIAGRAM

Key Words

Always Co-construct!




- CONVEY CONCEPT
- OFFER OVERALL CONCEPT
- NOTE KEY WORDS

resent

If you are struggling to draft try a different sequence...

1, 2, 7, 4, 5, 6, 3



PRACTICE WITH NEW EXAMPLE

TIE DOWN A DEFINITION

# The **CONCEPT** Linking Steps

**C**

Convey the concept Name

**O**

Offer the overall concept name

**N**

Note the key words

**C**

Classify the Key Words

**E**

Explore Examples

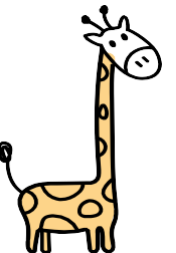
**P**

Practice with a new example

**T**

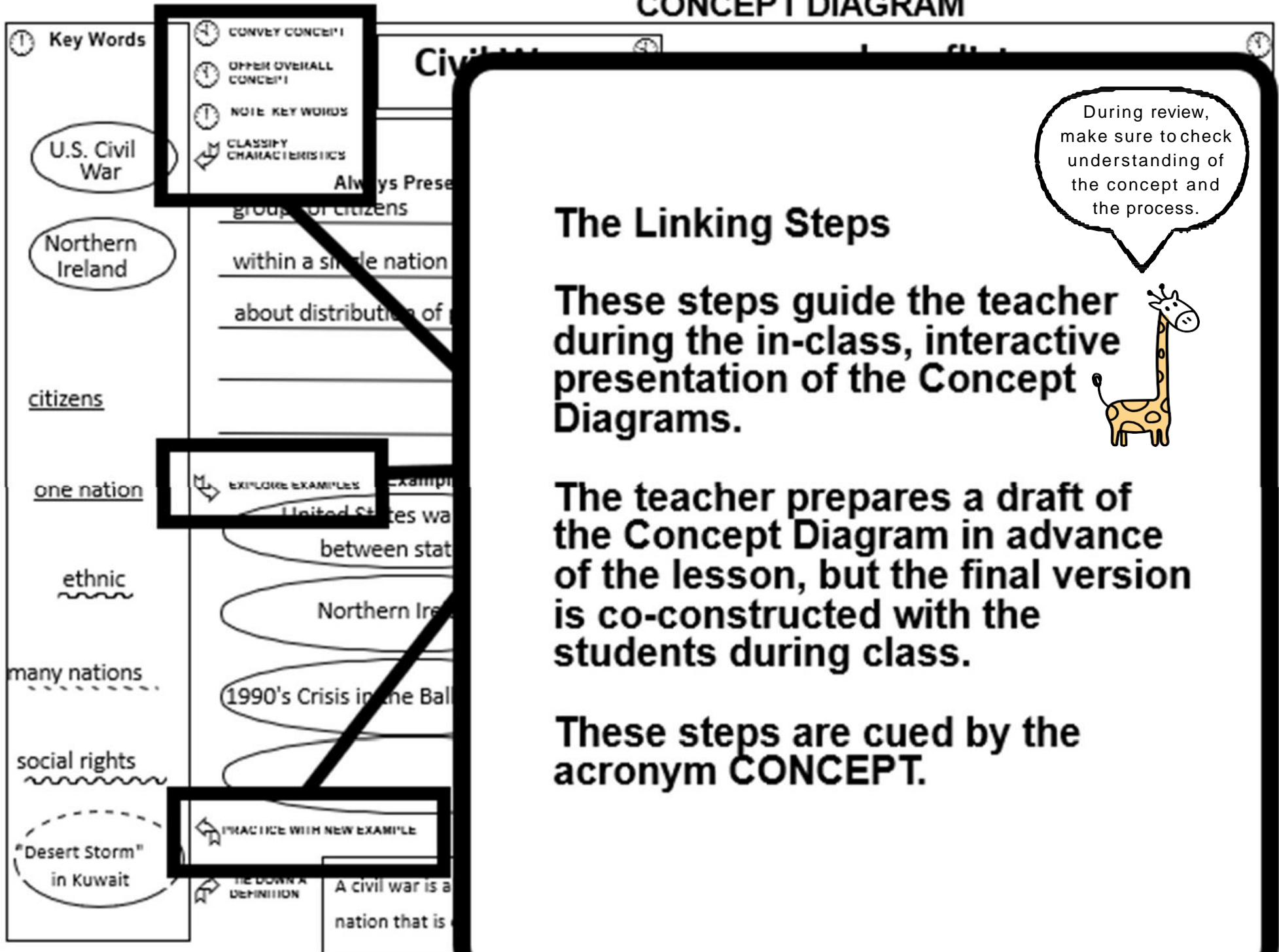
Tie Down a Definition

Remember: Cue-Do-Review is the instructional sequence used to teach all CERs.

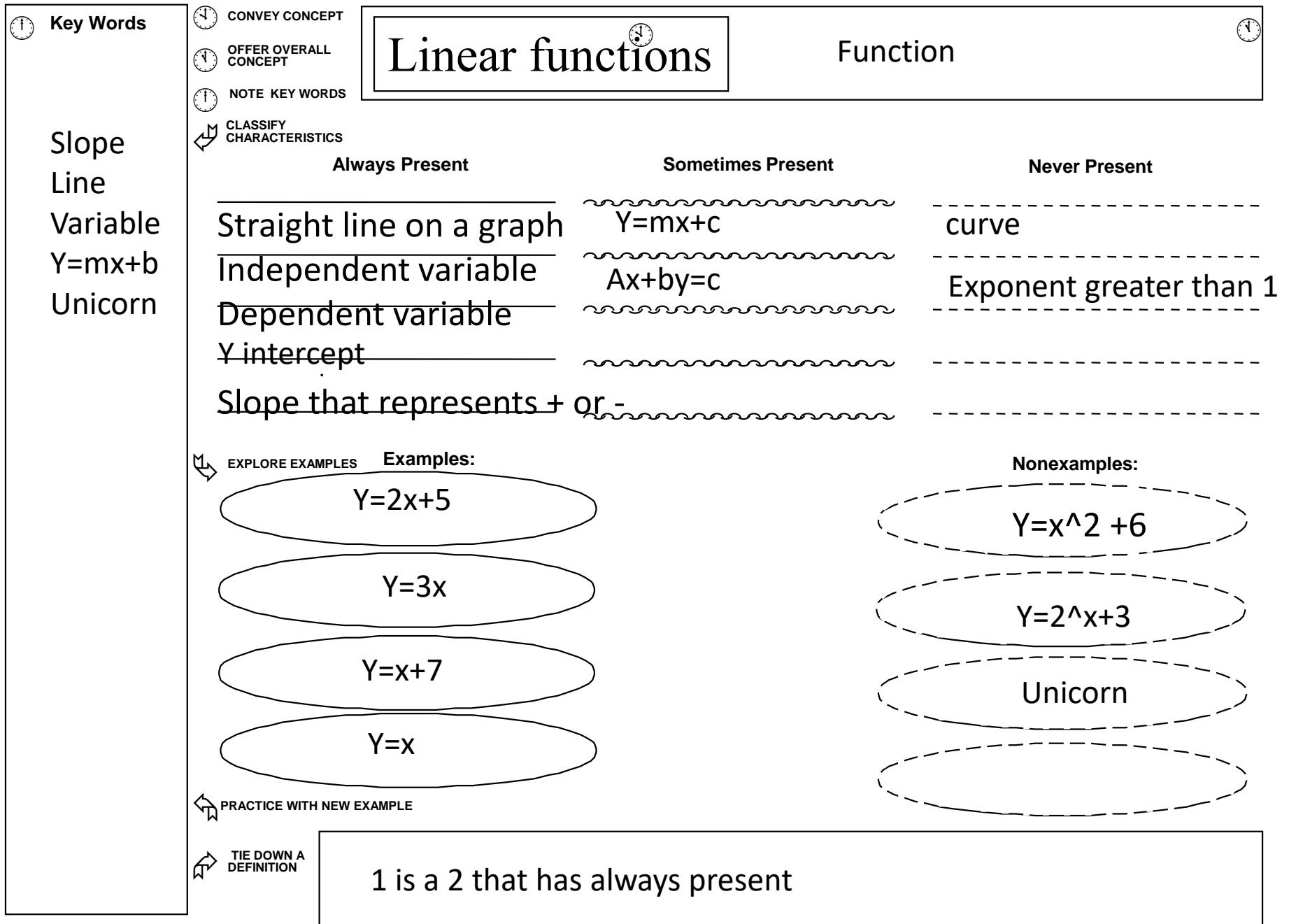




# CONCEPT DIAGRAM



# CONCEPT DIAGRAM



Linear function is a function that always has a straight line on the graph, and independent and dependent variable, with a slope that represents + or – and a y intercept.

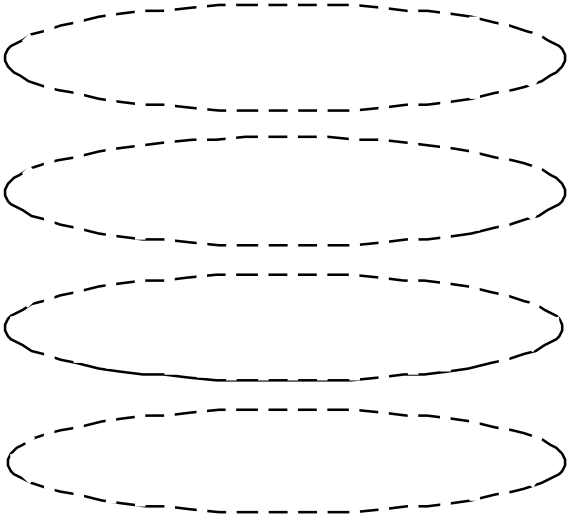
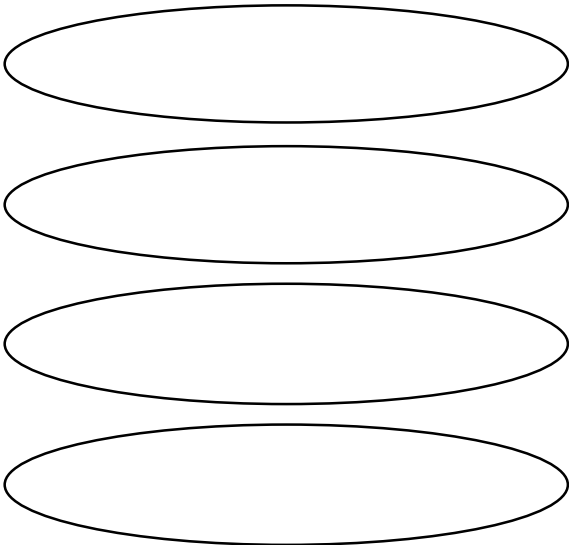
# CONCEPT DIAGRAM

Key Words

EXPLORE EXAMPLES

Examples:

Nonexamples:



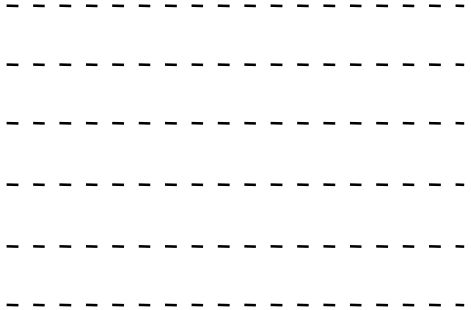
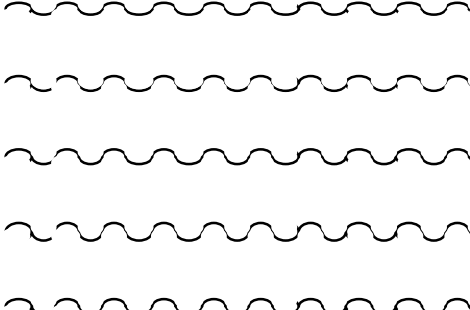
NOTE KEY WORDS

Always Present

Sometimes Present

Never Present

CLASSIFY CHARACTERISTICS

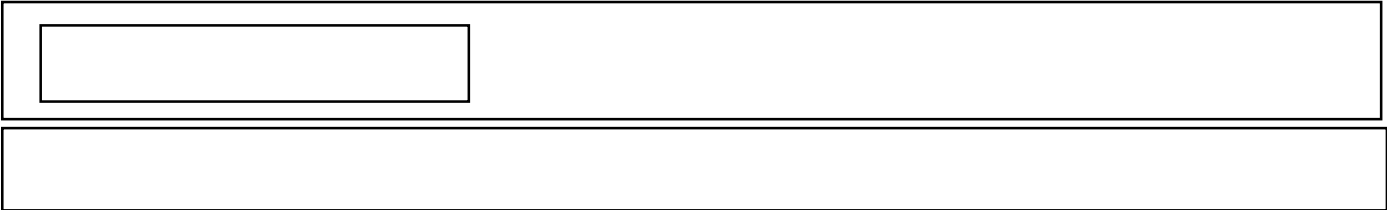


CONVEY CONCEPT

OFFER OVERALL CONCEPT

TIE DOWN A DEFINITION

PRACTICE WITH NEW EXAMPLE



# CONCEPT DIAGRAM

**Key Words**

sports team

lab partners in science

rewards

2 or more people

Shared responsibility

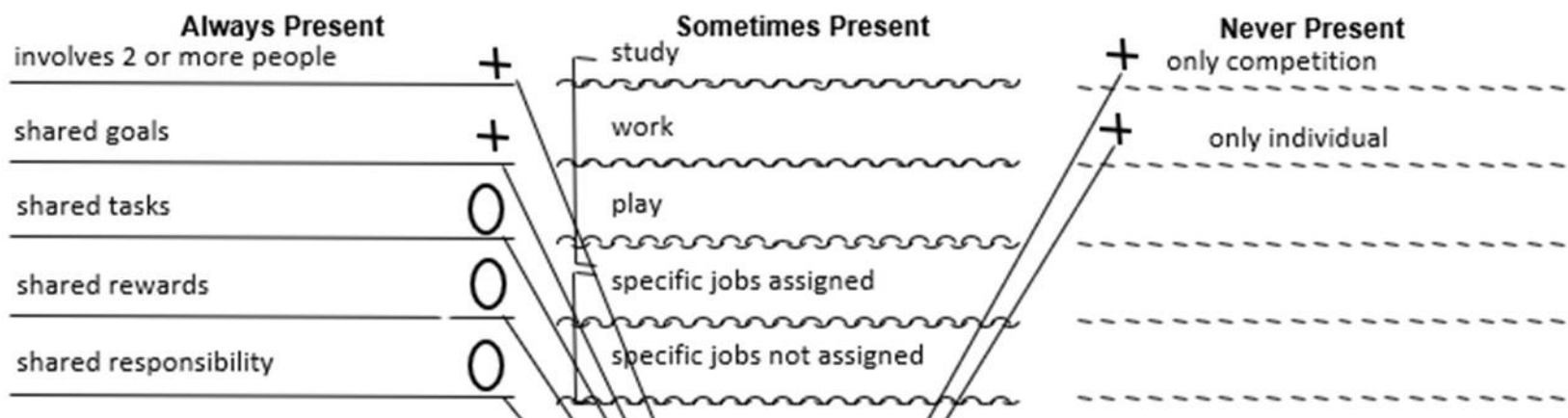
goals

assigned jobs

competition

- CONVEY CONCEPT
- OFFER OVERALL CONCEPT
- NOTE KEY WORDS
- CLASSIFY CHARACTERISTICS

**Cooperation** a way to do tasks



**EXPLORE EXAMPLES** **Examples:**

- sports team
- lab partners in a science class
- construction team
- 

Students in math class

**Nonexamples:**

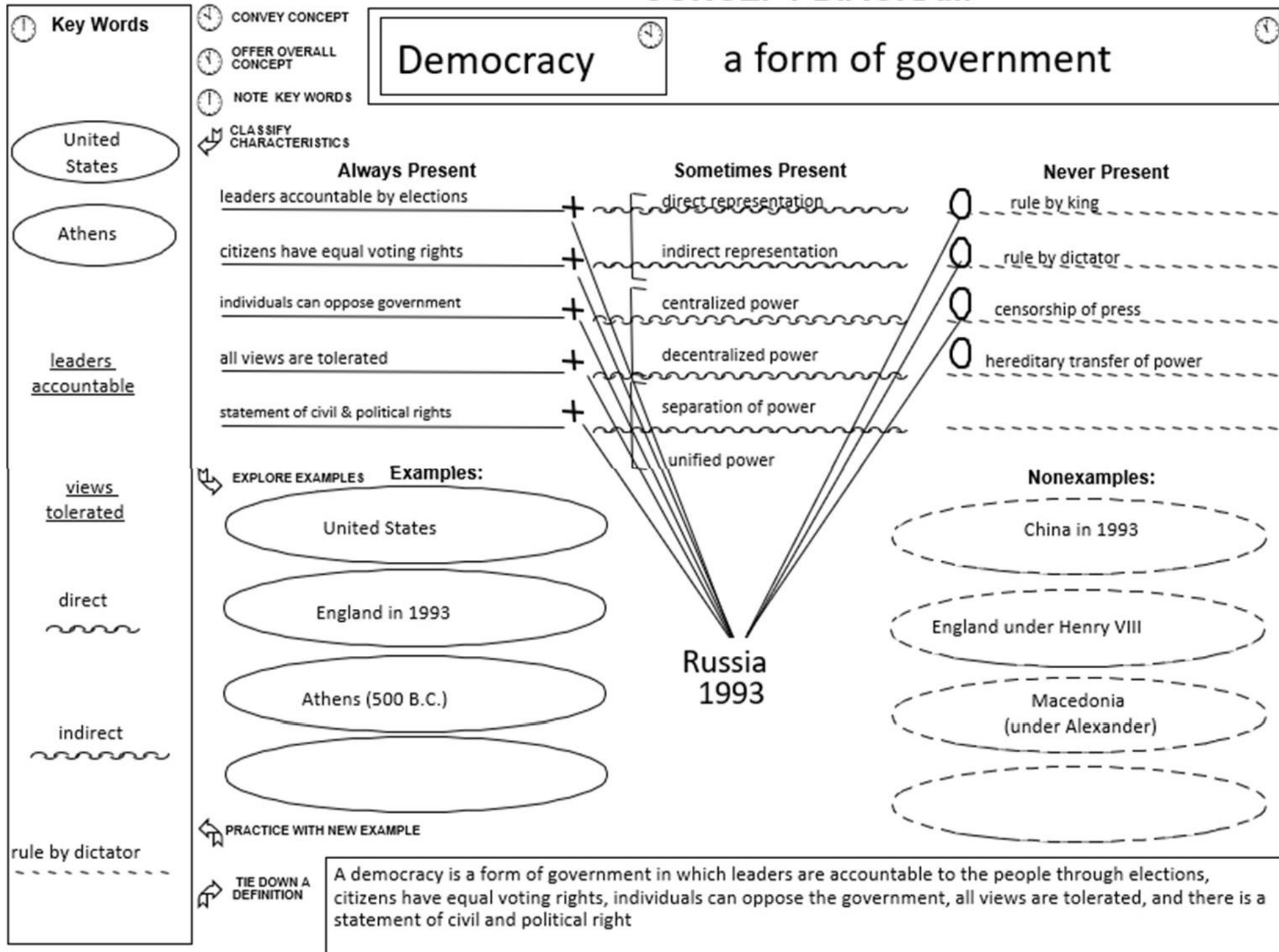
- person playing golf
- individual test-taking
- movie theater audience
- 

**PRACTICE WITH NEW EXAMPLE**

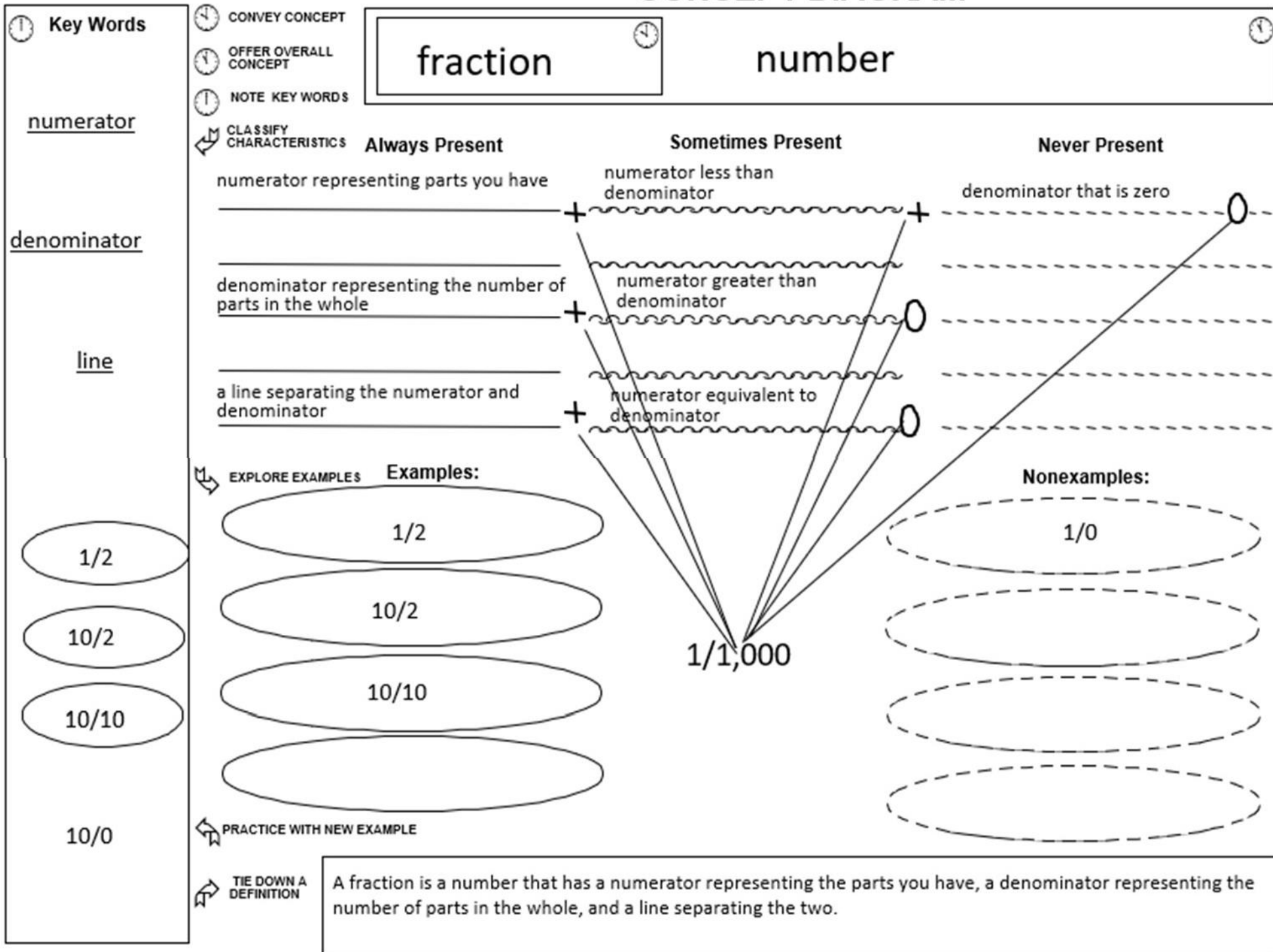
**TIE DOWN A DEFINITION**

Cooperation is a way to do tasks that involves two or more people with shared goals, tasks, rewards, and responsibilities.

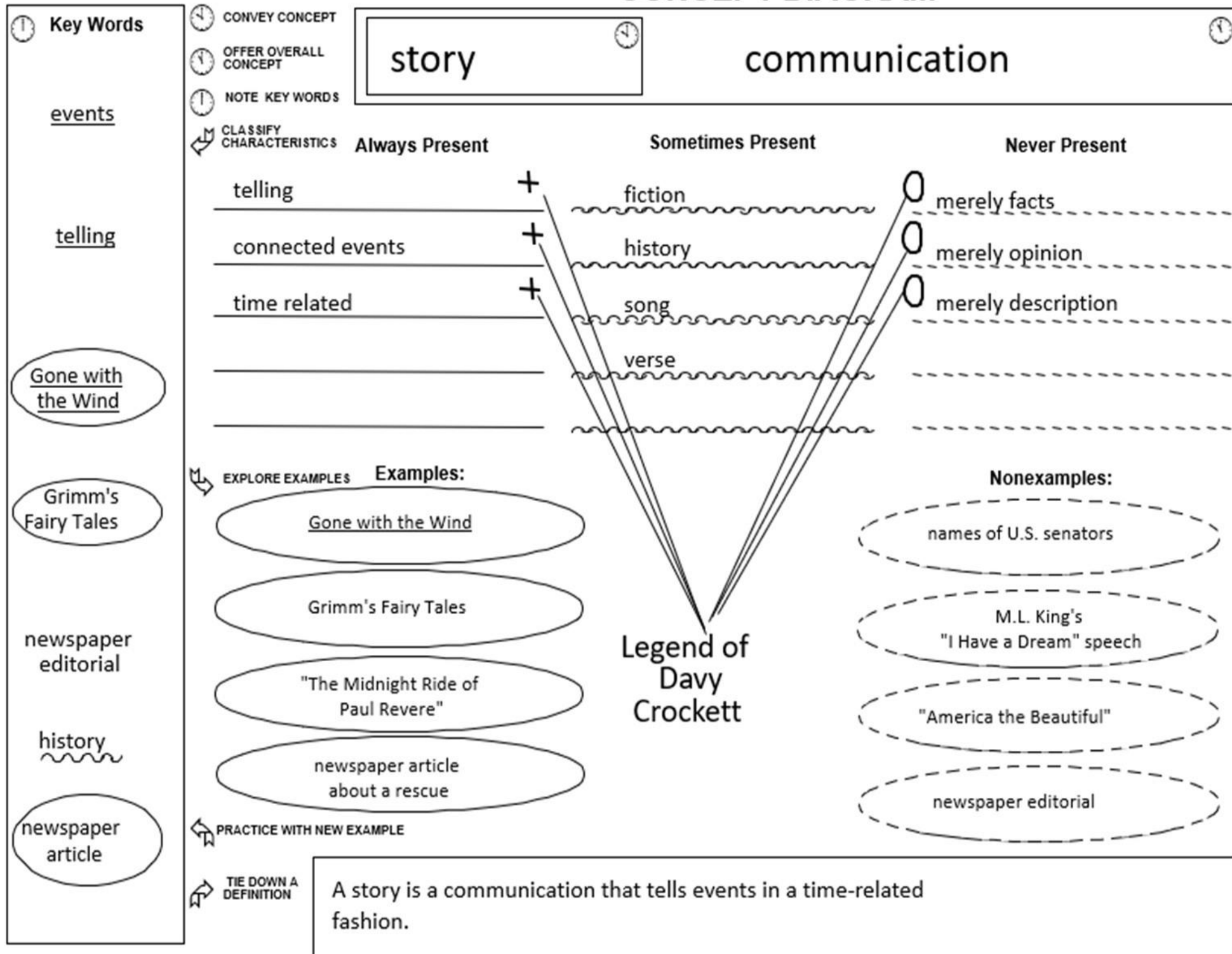
# CONCEPT DIAGRAM



# CONCEPT DIAGRAM



# CONCEPT DIAGRAM



# CONCEPT DIAGRAM

Key Words

EXPLORE EXAMPLES

Examples:

Nonexamples:

mammoth

tigers in La Brea tar pits

your pet cat

Siberian mammoth

elephant in Africa today

fish skeleton

petrified forest in Arizona

tree limbs and leaves in your yard

fish skeleton in limestone layers

trilobites

fish in supermarket

NOTE KEY WORDS

frozen in ice

Always Present

Sometimes Present

Never Present

CLASSIFY CHARACTERISTICS

plants or animals

frozen in ice

still alive

lived thousands of years ago

trapped in tar

still decaying

preserved

crushed by water

in volcanic ash

pet cat

alive

CONVEY CONCEPT

OFFER OVERALL CONCEPT

TIE DOWN A DEFINITION

PRACTICE WITH NEW EXAMPLE

fossils

remains or prints

Fossils are remains or prints of plants or animals who lived thousands of years ago which have been preserved.