

# Larry Federico





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## About the Author

Larry Federico is an energetic, passionate advocate for better education. He has worked at DataWORKS Educational Research as an Educational Consultant since 2005. Larry has worked with teachers in several states and has extensive experience with English Learners, Native Americans, and special needs students. He has worked with Native American tribes in Alaska, Arizona, and New Mexico and Aboriginal students in remote parts of Australia. Larry earned his BA Liberal Arts from Fresno Pacific University. He started his teaching career in California in 1979 as a high school teacher and tennis coach.

After teaching for several years, he joined the Marine Corps as an Aviation Officer. After his military service, he completed his M.A. in Education at California State University, Fresno.

As an adjunct professor, Larry has taught at the University of Colorado, California State University Fresno, Fresno City College, and Kings River Community College. He also held a vice-president position with the New Mexico American Alliance for Health, Physical Education, Recreation, and Dance.

He is working to complete his thesis for his doctorate at Grand Canyon University and is also writing a series of novels in the historical fantasy genre. He and his wife, Melissa, live in Fresno, California, with their rescue pets Maddy and Toulouse.

## Acknowledgements

I owe a big thank you to the many teachers who have invited me into their classrooms, have inspired me with their efforts to help children, and have encouraged me to produce this book. I am also grateful to John Hollingsworth and Dr. Silvia Ybarra, the co-founders of DataWORKS Educational Research, who have given me their expert guidance and training in Explicit Direct Instruction, and supported the publication of this book.

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#### Introduction

I have spent many years as an instructional coach, observing K-12 teachers giving lessons in all content areas, including math, English Language Arts, science, social science, music, and art. I often noticed teachers using wonderful gestures to emphasize certain words, ideas, or concepts. And, although the teachers were using these extremely helpful gestures, the students were not mimicking the teacher. Later during the lesson, students would be asked to recall an idea or a concept that teachers had taught earlier using gestures, but very few students were able to recall the information.

#### **Seeing Gestures in Action**

One particular episode comes to mind with a 4th grade lesson on similes. Although the teacher did an excellent job using her hands to convey that similes "compare two unlike things that have something in common using like or as," most students could not recall the definition when called upon later. It occurred to me that they had not practiced the gestures earlier with the teacher. I then asked the teacher if I could try something. After she gave me permission, I stood in front of the class and had all the students repeat the definition of "simile" while using my hand gestures for unlike, something in common, and like or as.

After we practiced a few times, I then asked the teacher to call on students to see if they could now recall what a simile was. The results were amazing. Not only could students recall the definition, but they were able to do so throughout the remainder of the lesson, and the next day as well during the review! In fact, many students volunteered to show how well they could recall what a simile was. And when reciting the definition, students stood up and showed the hand gestures that went along with it.

#### **Gestures Help All Students**

However, the most astounding observation of all was how well the students with special needs responded. Before using the gestures, they had no responses to describe similes. After using the gestures, they responded with "unlike things, in common, like or as." When asked for complete sentences, a student responded, "A simile compares two unlike things that have something in common."

After this successful episode, it was very evident to both the teacher and me to always provide meaningful gestures for concepts, ideas, or phrases, and have students practice the gestures with the teacher.

#### Humans Use Gestures to Convey Information and to Remember Information

As educators, we often demonstrate our emotions, concepts, and thought processes through the use of our hands, body movements, and facial expressions, as these gestures help to convey ideas. Having observed teachers in the K-12 classroom for well over a decade, I have discovered that it is nearly impossible for teachers to teach or emphasize a thought during a lesson without using their hands to demonstrate meaning or visual effect. In fact, gesturing is used as part of everyday speech and communication with cultures throughout the world. As a K-12 Educational Consultant, I often provide lesson demonstrations for teachers and students to observe. One of the most often-asked questions I get are about the many gestures I use for classroom lesson demonstrations. After many years of being asked if there is a book of gestures available, I have finally decided to illustrate and describe the gestures I most often use in the classroom.

This book of gestures is not meant to be the definitive guide for all disciplines and grades; but rather, it was designed to supplement the teacher's "tool belt" of teaching strategies and resources already used in the classroom.

This book is divided into two main disciplines, Math and English Language Arts (ELA). However, teachers in other subjects may find this book beneficial, as the gestures often focus on Academic words (used across all disciplines) in addition to content-specific words.

The importance of gestures is emphasized by various researchers. McNeill & Levy, 1992- 1993, state that gestures are processed along with speech, not as a complement to it. They call this "communicative dynamism." An article by Miller and O'Neill (Psychology Today, July 28, 2013) concludes that there is "quite a bit of evidence now that gestures can help children think." The authors suggest that it could be by by helping the brain keep track of relevant information or by helping the brain reflect on possibilities contained within a task.

The authors explain how this works in the brain:

When you speak with your hands, you are engaging both hemispheres of your cerebellum, which synchronize with both hemispheres of the cerebrum, thus allowing you to maximize the creative and logical powers of your left and right brain. To create a Superfluid state of thought and performance, it is important to combine cerebral (words) with cerebellar (gestures).

Miller and O'Neill also encourage educators to let children use gestures. "In my opinion," Miller states, "children shouldn't be discouraged from gesturing when they want to gesture during

learning." This book promotes the research that both teacher and students should use hand gestures to supplement and emphasize speech.

#### **Types of Gestures**

Although I don't attempt to label each gesture, there are five categories of gestures. Iconic: gestures that are representational (Symbols) Deictic: gestures that are not representational (Definitions) Emblematic: gestures that attempt to match speech (Sign Language) Metaphoric: gestures that describe abstract things (Ideas) Beats: Gestures that are used to punctuate speech (Expressive Hand Movements)

Now let's look at some gestures. Each gesture will have the concept, its definition, photographs showing the gesture, and an example to use for the classroom.

# Gestures for MAN



Chapter 1: Operations

# **ADDITION:**

#### Put together to find the total.

#### Start with arms outstretched. Then cross to form the plus sign (+).



Addition means



put together to find the total

#### Students, use your arms and repeat with me:

# "Addition means **put together to find the total**."

# SUBTRACTION:

Take away.

Show the left or right arm in a horizontal position like a subtraction sign (-), and then take it away by hiding the hand behind the back.







take away

Students, use your arms and repeat with me: "Subtraction means take away."

# **MULTIPLICATION:**

**Repeated addition.** 

Start with arms outstretched. Put arms together to make a multiplication sign



Multiplication means



repeated addition

Students, use your arms and repeat with me: "Multiplication means repeated addition."

#### To separate.

Make a backward slash sign (/) with your arm and use it to "divide the air."



Division means to



separate

Students, use your arms and repeat with me: "Division means to separate."

#### **Compose means to put together.**

#### Place your fists apart and in front of you and then bring together.



**Compose** means

to put together

# Students, use your arms and repeat with me: "Compose means to **put together**."

## **DECOMPOSE:**

Break apart or break down.

# With both hands making fists, pretend you're breaking a stick while saying "break down."



Decompose means to

break down

Students, use your arms and repeat with me: "Decompose means to break down."

# **FRACTION LINE:**

#### Parts of a fraction.

With the right arm bent in front of the chest, make a horizontal line, then form the letter "n" for numerator by having two fingers point down. Finally, with the other hand, make the sign for the letter "d" for denominator below the fraction line.



A **fraction** has a



```
numerator on top
```



and a denominator on the bottom of a fraction line

Students, use your arms and repeat with me:

"A *fraction* has a **numerator on top** and a **denominator on the bottom** of a **fraction line**."

One number is equal to another.

With both arms in the parallel horizontal position in front of the chest, make an equals sign by separating the upper arm from the lower arm.



**Equals sign** 

Students, use your arms and repeat with me:

"Equals means the number on one side is equal to the number on the other side."

# **INEQUALITY:**

#### Not equal.

While saying the word "Not", make an X with both your hands. Then immediately make a slashing movement with your hands as if slicing something in half. After slashing, make the equals sign with your arms while saying the word "equal."



**Inequality** means







Students, use your arms and repeat with me: "Inequality means **not equal**."

# **GREATER THAN SYMBOL:**

Greater than symbol means larger than.

With both arms extended, make a ">" so that the arms open up like a mouth away from the body.



Greater than means



larger than

Students, use your arms and repeat with me:

"The greater than symbol means a number is **larger than** another number."

# **LESS THAN SYMBOL:**

Less than symbol means smaller than.

With both arms extended, bring the hands together to make a point away from the body.



Less than means



smaller than

Students, use your arms and repeat with me:

"The *less than symbol* means that a number is **smaller than** another number."

# **INVERSE OPERATION:**

An operation that reverses another mathematical operation.

Addition and subtraction are inverse operations. Multiplication and division are inverse operations. To show inverse operations, place your hands in front of you, extend the index fingers of both hands, and make small backwards circles.



An inverse operation



reverses or undoes



another operation

Students, use your arms and repeat with me:

"An *inverse operation* **reverses** or **undoes** another operation."



With one hand pointing straight into the air, move hand up and down to signify that the Y axis is the vertical axis. You can also say that "Y points to the sky."



The Y axis is the vertical axis

Students, use your arms and repeat with me:

"The Y axis is the **vertical axis**. To remember this, everyone say, 'Y points to the sky"." With one arm straight and extended parallel to the ground, move the hand and make a straight line while pointing to the door. While doing this, say "X points to the Exit,"



The **X** axis goes horizontal or side to side

Students, use your arms and repeat with me:

"The *X axis* goes **horizontal** or side to side. To remember this, everyone say, 'X points to the exit'."

#### 90 degrees.

Make a vertical "L" shape with one arm.



A right angle is 90 degrees

Students, use your arms and repeat with me: "A right angle is always **90 degrees**."

## LINE:

#### A line is straight in any direction.

Take one arm and slowly extend horizontally to form a straight line. Then move the straight line in different directions: up, down, and sloped.



A line



is **straight** 



in **any** 



direction

# Students, use your arms and repeat with me: "A line is **straight** in **any direction**."

Two lines that are always the same distance apart and never touch.

With both arms extended from the body, show both vertical and horizontal parallel lines that are equidistant from the shoulders to the hands. Remind students that the lines look like railroad tracks.



**Parallel lines** are **equidistant**, the same distance apart

Students, use your arms and repeat with me:

"*Parallel lines* are **equidistant**, the same distance apart, just like railroad tracks."

# **PERPENDICULAR LINES:**

Lines which meet at a right angle (90 degrees).

With one arm in the horizontal position, take the other arm and make an "L" to form a 90-degree angle. These are perpendicular lines.



Perpendicular lines meet at a right angle

Students, use your arms and repeat with me: *"Perpendicular lines meet at a right angle."* 

# **INTERSECTING LINES:**

#### Lines that cross each other.

With one arm make a straight vertical line, and with the other arm make a horizontal line. Take one arm and slowly cross the other so that it forms a "+" or an "x." Make sure it crosses the other line.







cross each other

Students, use your arms and repeat with me: *"Intersecting lines* are **lines** that **cross** each other."

#### **CIRCUMFERENCE:**

#### Distance around a circle.

Using both arms, make a circle around your head. Then, starting at top with your arms, make a circular '360 degree' circle with your fingers ending at the bottom.



Circumference



is the **distance** 



around

a circle

Students, use your arms and repeat with me: "Circumference is the **distance around a** circle."
## **RECTANGLE:**

#### Parallel sides and 4 right angles.

Hold your arms parallel vertically. Then hold your arms parallel horizontally . Then with your index fingers, show the four right angles, two on top and two on the bottom.



A **rectangle** has



parallel sides



and **four** 

right angles

Students, use your arms and repeat with me:

"A rectangle has **parallel sides** and **four right angles**."

## **AREA:**

#### The inside of a flat, closed shape.

With flattened hands, paint the inside of the imaginary shape. Then outline a flat shape (circle, triangle, rectangle, square, etc.). While performing this gesture say, "Area is the inside of a flat, closed shape."



Area is the inside of a



flat



closed shape

Students, use your arms and repeat with me:

"Area is the inside of a flat, closed shape."

## **HEIGHT AND WIDTH:**

Vertical and horizontal measurements.

To express height, put one hand on top of the other and separate the two hands vertically, one going up and the other down. To express width, put your hands together in front of you, and horizontally separate your hands; one going left, the other, right.





Height is the vertical measurement

Width is the horizontal measurement

Students, use your arms and repeat with me:

# *"Height* is the **vertical measurement**. Width is the **horizontal measurement.**"

The measurement of how long an object is.

Place one flat hand in front of the other, about 12 inches from the body. Separate the two hands; one going forward, the other towards you.







long an object is

Students, use your arms and repeat with me:

"Length is the measurement of how **long** an object is."

Chapter 3: Number System

#### What something is worth.

#### Rub the thumb back and forth along the fingers as if holding money.



Value



#### is what something is worth

## Students, use your arms and repeat with me: "Value is what something is worth."

## **PLACE VALUE:**

Place value shows the ones place, the tens place, and the hundreds place.

With the left arm in front of you, move your right hand up your arm to the left to show the ones place, the tens place, and then the hundreds place.



Place value includes the ones place.



the tens place



and the hundreds place

Students, use your arms and repeat with me:

"Place value includes the **ones place**, the **tens place**, and the **hundreds place**.

Cup your hands like a small bowl to represent a small amount. Then, with your hands still cupped, move your hands wider apart (as if holding a large plate), to represent a greater quantity.



Quantity means



how many

Students, use your arms and repeat with me: "Quantity means **how many**."

#### To get larger

To show increase, place your hands together in front of your body, slowly separate them upwards over your head as if making a large "V."



Increase means to get





Students, use your arms and repeat with me: "Increase means to get larger." To show decrease, place your hands over your head as if making a large "V." Then move them down and together.



Decrease means to get



smaller

Students, use your arms and repeat with me: "Decrease means to get smaller."

## ONE:

The number one (or step one or one unit).

Simply display the number one with your index finger.



This is number one (step one, one unit)

Students, use your arms and repeat with me:

"This is **number** one."

"This is **step** one."

"A unit fraction always has a numerator of one."

#### **MULTIPLE:**

#### Two or more.

Open your hand to show two fingers. Then close your hand for "or." Finally, open your hand to show all fingers. While demonstrating this say, "Multiple means two or more."



Multiple means two







more

Students, use your arms and repeat with me: "Multiple means **two or more**."

# Gestures for





#### VERB:

#### Shows doing, having, or being.

A verb is a word (place your fingers over your mouth and make the W), that shows doing (mimic running), having (cup your hands and bring them toward you), or being (stand still and point to body).



A verb is a word



that shows doing







Students, use your arms and repeat with me:

"A *verb* is a word that shows **doing**, **having**, or **being**." Examples: Anna runs. Anna has a pencil. Anna is happy.

#### **NOUN:**

#### A word that names a person, place, or thing.

A noun is a word (make a W with your fingers) that names (touch your fingers to your mouth) a person (point to your body),...



A noun is a word



that names



a person



## **NOUN:** (continued)

A word that names a person, place, or thing.

...a place (swing your arms out around you), or a thing (put your hands together).



a **place** 



or a **thing** 

Students, use your arms and repeat with me:

"A noun is a **word** that **names** a **person**, a **place**, or a **thing**.

## **FUTURE TENSE:**

An action that has yet to happen.

Begin your gesture with your hands in motion (as if running) for action. Next, move both your hands in front of you and say, "Future tense is an action that will happen in the future."



Future tense is an action



that will happen in the future

Students, use your arms and repeat with me:

*"Future tense* is an action that will **happen in the future**." An action that is happening now.

Begin your gesture with your hands in motion (as if running) for action. Next, move your hands alongside your ears, and say, "Present tense is an action that is happening now."



Present tense is an action



that is happening **now** 

Students, use your arms and repeat with me: "Present tense is an **action** that is happening **now**"

#### **PAST TENSE**

An action that has already happened.

Begin your gesture with your hands in motion (as if running) for action. Then, move your hands behind your ears, and say, "Past tense is an action that has already happened."



Past tense is an action



that has **already happened** 

Students, use your arms and repeat with me:

"Past tense is an **action** that has **already happened**."

## **HOMOGRAPHS:**

Words that are spelled the same but have different meanings.

With hands together and fingers splayed out, touch each finger one at a time while spelling r-i-g-h-t; five letters, one for each finger, for words that are spelled the same. Then slide the fingers past each other (one hand forward and the other backward) for different meaning.



Homographs are words with the



same spelling



that have different meanings

Students, use your arms and repeat with me:

"Homographs are **words** with the **same spelling** that have **different meanings**."

## **HOMOPHONES:**

#### Words that sound the same but have different meanings.

Start with making a "W" with your fingers. Then tap your ear with your index finger for sound. Next, put your hands together, palms up, for same. Finally, take one hand and turn it upside down for different meaning.



Homophones are words



that **sound** 



the same



but have different meanings

Students, use your arms and repeat with me:

"Homophones are words that sound the same but have different meanings."

Chapter 5: Figurative Language

## **FIGURATIVE:**

Language that goes beyond its literal meaning.

Make an "L" with your fingers near your mouth. Then touch your lips with your fingers for the words "that goes." Finally, extend and stretch your hands far beyond your mouth.



**Figurative language** 



is language that goes



beyond its literal meaning

Students, use your arms and repeat with me:

*"Figurative language* is **language** that **goes beyond** its **literal** meaning."

Compares two unlike things that have something in common using like or as.

Begin with your upright, opened hands slightly apart for the word compare. With hands apart, change one hand different from the other for two unlike things. Then, put both flat hands together for something in common.



A simile **compares** 



two unlike things



that have something in common

## **SIMILE** (continued)

Compares two unlike things that have something in common using like or as.

#### Finally, make the sign for "L" and an "A" with your hand saying "like or as."



using **like** 



or as

Students, use your arms and repeat with me:

"A simile **compares two unlike things** using **like** or **as**."

## **METAPHOR:**

#### Compares two unlike things that have something in common.

Start with your upright, opened hands apart for the word compare. With hands apart, change one hand different from the other for two unlike things. Finally, put both flat hands (one on top of the other) for something in common.



**Metaphors** compare



two unlike things



that have something in common

Students, use your arms and repeat with me:

"A metaphor compares two unlike things that have something in common."

## **HYPERBOLE:**

Language that exaggerates, or stretches, the truth.

Start with an L for language. Then, with your hands slightly apart, separate your hands as if going from small to bigger. This is also known as "stretching the truth."



Hyperbole is **language** 



that **stretches** 



the truth

Students, use your arms and repeat with me:

"Hyperbole is **language** that **stretches** the **truth**."

## **PERSONIFICATION:**

Things (non-human) with the characteristics of people.

With your hands make the sign for thing, open both palms in front of the body while making small circles. Then take your fingers and point to yourself, "the person", and while doing all of this say, "Personification, means things with the characteristics of people."





Personification means things

with the **characteristics of people** 

Students, use your arms and repeat with me:

"Personification means things with the characteristics of people."

Chapter 5: **Text Structure** 

What we read

Place both hands together as if holding a book. Make sure that the hands are straight rather than cupped.



A story or book is what we read

Students, use your arms and repeat with me: A story or book is what we **read**. The start of a story.

With both hands, slightly above your head and centered, say that this represents the beginning, then put your hands together to make the gesture for a book.



The **beginning** is the



start of a story

Students, use your arms and repeat with me: "The *beginning* is the **start** of a **story**."
#### The middle of a story.

With both hands directly centered in front of you and a few inches apart, say the word middle. Then make the gesture for a book.



The **middle** 



of a **story** 

Students, use your arms and repeat with me: "This is the *middle* of a **story**." The end of a story.

With both hands connected below your stomach, tell your students that this represents the end of a story. Use the gesture for book.



The end



of a story

Students, use your arms and repeat with me: "This is the *end* of a **story**"

## **BEGINNING, MIDDLE, & END:**

#### **Every story has a Beginning, Middle, and End.**

In the classroom, it might look like this: "Every story has a beginning, middle, and end.



Every story



has a **beginning** 



middle



and **end** 

Students, use your arms and repeat with me: "Every **story** has a *beginning*, *middle*, and *end*."

## **CHARACTERIZATION:**

Character traits are revealed by what they think, what they say, and what they do.

Character traits are revealed by what they think (point to head), what they say (point to mouth), and what they do (act like running).



**Character traits** are revealed by what they **think** 



what they say



and what they **do** 

Students, use your arms and repeat with me:

*"Character traits* are revealed by what they **think**, what they **say**, and what they **do**."

#### Where a story takes place.

Put your hands together as if reading. Then open your hands to make the "place" gesture, saying, "*Setting* is where the **story takes place**."



The *setting* is where the *story* 



takes place

Students, use your arms and repeat with me: "The setting is where the story takes place.

#### THEME:

#### Message about life or human nature.

With both palms together facing outward in front of your face, move hands apart while at the same time saying theme. Then cup one hand near the mouth for the word message, followed by the hands gesturing up and outward with small circular motions for the word life. Finally, take both your index fingers and point towards yourself for the word human nature.



Theme



is a message



about life

or human nature

Students, use your arms and repeat with me:

"Theme is a message about life and human nature."

## **INFORMATION:**

Knowledge that we have.

With both hands outstretched in front of you as if gathering information, bring both hands together towards your head showing we have it.



Information



is knowledge that we have

Students, use your arms and repeat with me: *"Information* is **knowledge that we have.**" Any written words.

Make the gesture for book or story, and say, "Text is..." Then with your hands, make one hand resemble paper and the other hand holding a pencil, say "any written words."



Text is any



written words

Students, use your arms and repeat with me:

"Text is any written words."

## **TOPIC:**

What the whole story or text is about.

The topic (place both hands over your head) is what the whole (place both hands far apart) story or text (place hands together like reading a book) is about.



The **topic** is what the



whole



text or story is about

Students, use your arms and repeat with me:

"The *topic* is **what** the **whole text** or **story** is **about**."

## **MAIN IDEA:**

The idea that is most important in a text.

The main idea (point at your head) is the most important idea (start with your hands near your head then move out to show big or important) in a text (put hands together like reading a book).



The main idea is the



most important idea



in a **text** 

Students, use your arms and repeat with me:

"The *main idea* is the **most important idea** in a **text**."

## **KEY DETAILS:**

#### Important information that supports the main idea.

With one hand, pretend you are unlocking a door with an invisible key, followed by both of your hands with fingers apart (like playing a piano) to show the word for details. Then lift your hands like you are supporting the ceiling. Finally, place your hands wide around your head to show the main idea.



Key



details



support

the main idea

Students, use your arms and repeat with me: *"Key details* **support** the **main idea.**"

## **CONCLUSION:**

To review your thoughts and make a summary or final statement.

Put your hands to your head to review thoughts. Then, take one hand and open flat as if making a wall. Then with the other hand, drive it into the wall like a car stopping at a dead end for final statement.



**Conclusion: Review your thoughts** 



and make a summary



or final statement

Students, use your arms and repeat with me:

"Conclusion means to review your thoughts and make a summary or final statement."

Chapter 7:

# Academic Vocabulary

#### To inspect or examine closely.

Hold an imaginary magnifying glass in one hand and closely inspect your other hand, saying, "Analyze means to inspect or examine very closely."



Analyze means to inspect or examine very closely

Students, use your arms and repeat with me:

Analyze means to **inspect** or **examine** very **closely**.

#### **COMPARE:**

How things are the same.

Start with arms apart, palms flat and facing up. Place hands together and show they are the same.



Compare means how things



are the **same** 

Students, use your arms and repeat with me:

"Compare means how things are the same."

#### Example:

"Students, when we compare characters, we tell how they are the same."

How things are connected.

With both hands slightly apart, bring together and interlock the fingers while saying, "Relationship means how things are **connected**."







are **connected** 

Students, use your arms and repeat with me:

"*Relationship* means how **things** are **connected**."

### **CONTEXT:**

Words that surround other words.

Make the sign for story or words with your hands. Then, make the parentheses symbol with your hands to show surround. Then, again make the sign for story or words.



Context means words



that surround



other words

Students, use your arms and repeat with me:

"Context means words that surround other words."

## **CONTRAST:**

How things are different.

Put hands together for the word things. Then separate hands with one palm up and the other palm down, and tell students that this means different.



Contrast means how things



are **different** 

Students, use your arms and repeat with me:

"Contrast means how things are different."

Example:

"Students, when we **contrast** plots, we tell how stories are different.

#### Figure out.

With an index finger on your temple, say the word figure. Then move your hand away and say out.



Determine means to figure



out

Students, use your arms and repeat with me: "Determine means to **figure out**."

## **DISTINGUISH:**

#### To tell apart or tell the difference between things.

With one hand, touch your mouth, and then extend outward for to tell. Then, place hands slightly apart for things, and then, separate hands, palms up, for the word apart.



Distinguish means to



tell



things

apart

## Students, use your arms and repeat with me: "Distinguish means to tell things apart."

#### To tell.

Put two fingers from one hand next to your lips and say "to", followed by moving your hand away from your mouth while saying, "tell."



Explain means to



tell

Students, use your arms and repeat with me: "*Explain* means **to tell**."

#### To find.

With one hand over your eyes as if searching for something, say "Identify means to find."



Identify means to find

Students, use your arms and repeat with me: *"Identify* means **to find**"

## **INFORMATION:**

Knowledge that we have.

With both hands outstretched in front of you as if gathering information, bring both hands together towards your head showing we have.



Information



is knowledge that we have

Students, use your arms and repeat with me: *"Information* is **knowledge that we have.**"

#### **INTERPRET:**

#### To explain the meaning.

Begin with shrugging your shoulders and hands out in the open position (interpret means), followed by two fingers near the mouth (to explain). Move hand away from mouth to show words coming out for "the meaning."



**Interpret** means



to **explain** 



the meaning

Students, use your arms and repeat with me: *"Interpret* means to **explain** the **meaning**.

## **PRIOR KNOWLEDGE:**

Knowledge you already have.

Put your fingers with both hands next to your temples and then wave them backwards saying, "Prior knowledge is knowledge you already have from the past."



**Prior knowledge** is **knowledge you already have** 



from the **past** 

Students, use your arms and repeat with me:

"Prior knowledge is **knowledge** you **already have** from your past."



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