This Training is being Recorded.

Please feel free to ask questions as they come up, but we will have several Chat Box Check-Ins throughout the training.

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Teachers are…

Caring Understanding FUNNY Sharing
Compassionate determined Passionate
OCD Patient Reliable Family Hard
Working AMAZING Flexible
AVAILABLE RESILIENT patient
DYNAMIC CHAMPION dedicated
Role Models WONDERFUL Possess Purpose
problem solvers Resilient Flexible
Oriented MOTIVATED
Busy Remarkable INNOVATIVE Brave

Teachers are ALSO …

Open minded KIND FUNNY

Collaborative Selfless Tired

Out of the Box Thinkers

GROWTH ARTISTS GOOD LISTENERS

Fantastic

Resourceful Innovative

Adaptable

Creative on the fly *Forward Thinkers*

Busy Remarkable INNOVATIVE *Brave*




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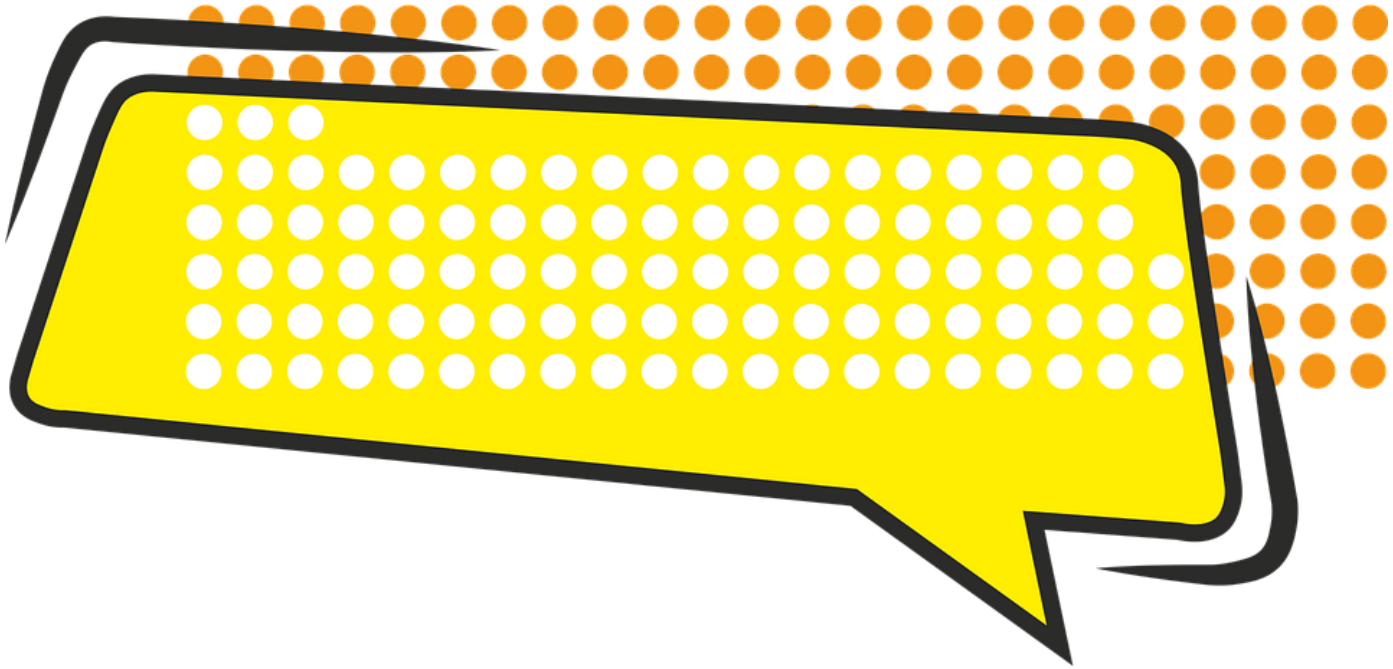
Links to Procedural Manual, MUSER and the PowerPoint are in the Chat Box



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Data Collection: Where To Begin

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Special Services

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5/11/2022

Remaining Office Hours

Data Series: Where to Begin and ABC Data System Wednesday, 5/11/22
Data Series: Duration/Frequency Data Systems Wednesday, 5/25/22
Data Series: Latency Data System Wednesday, 6/8/22
Data Series: Interval Data System Wednesday, 6/22/22

Open Q&A:

5/27/22 – 11:30-12:00

6/24/22 – 11:30-12:00

https://www.maine.gov/doe/calendar

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Think About

- What does data mean to you?
- What do you want to learn about data?
- Why do you take data?

Think About

- How do you use data?
- How do you know what kind of data to collect and analyze?
- How does it shape your behavior?

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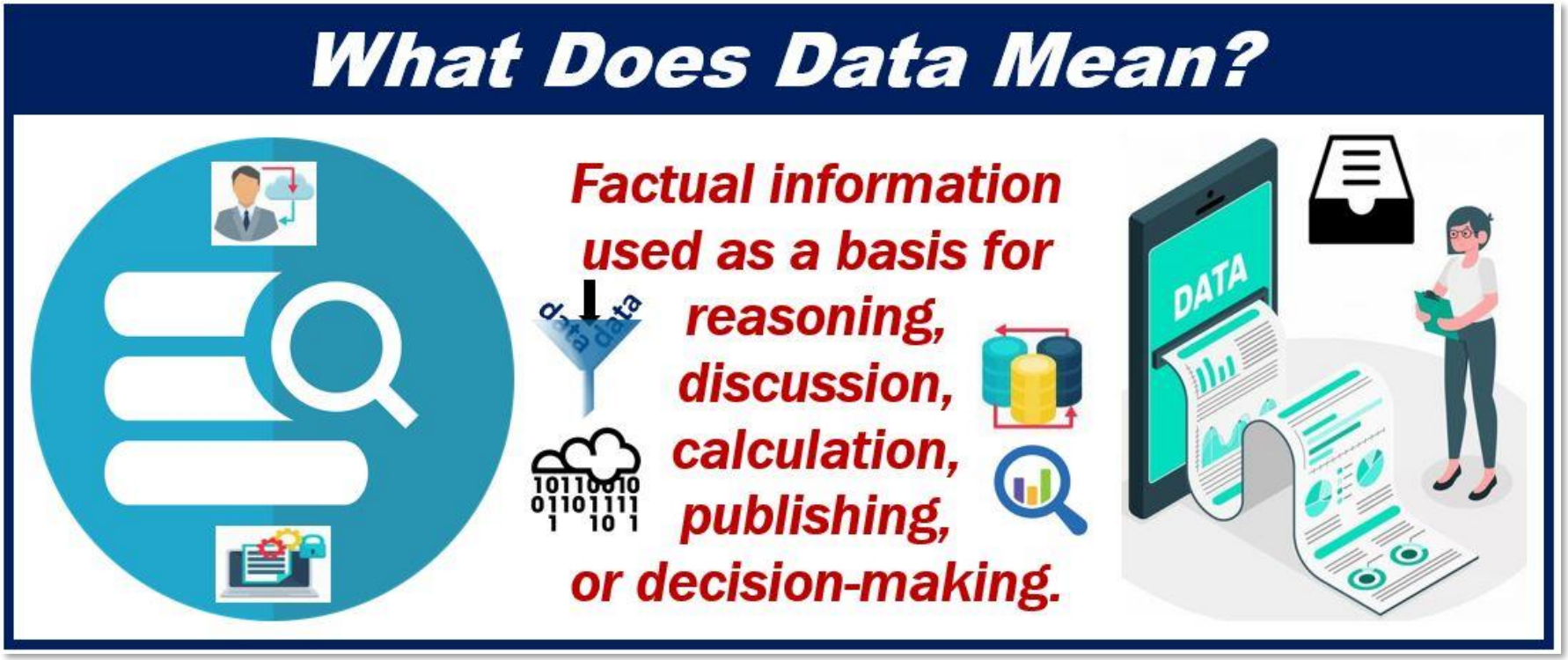
Are there words in this statement that stand out to You?



https://marketbusinessnews.com/financial-glossary/data-definitio/

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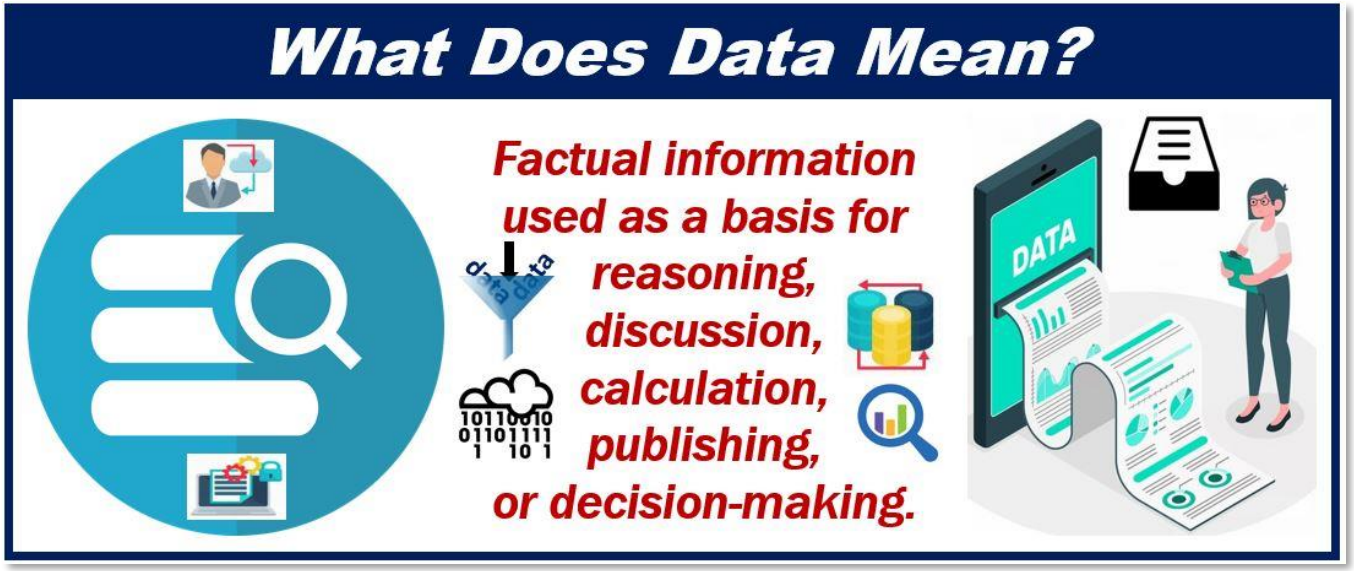
Are there words in this statement that stand out to You?



https://marketbusinessnews.com/financial-glossary/data-definitio/

Factual Decision Making

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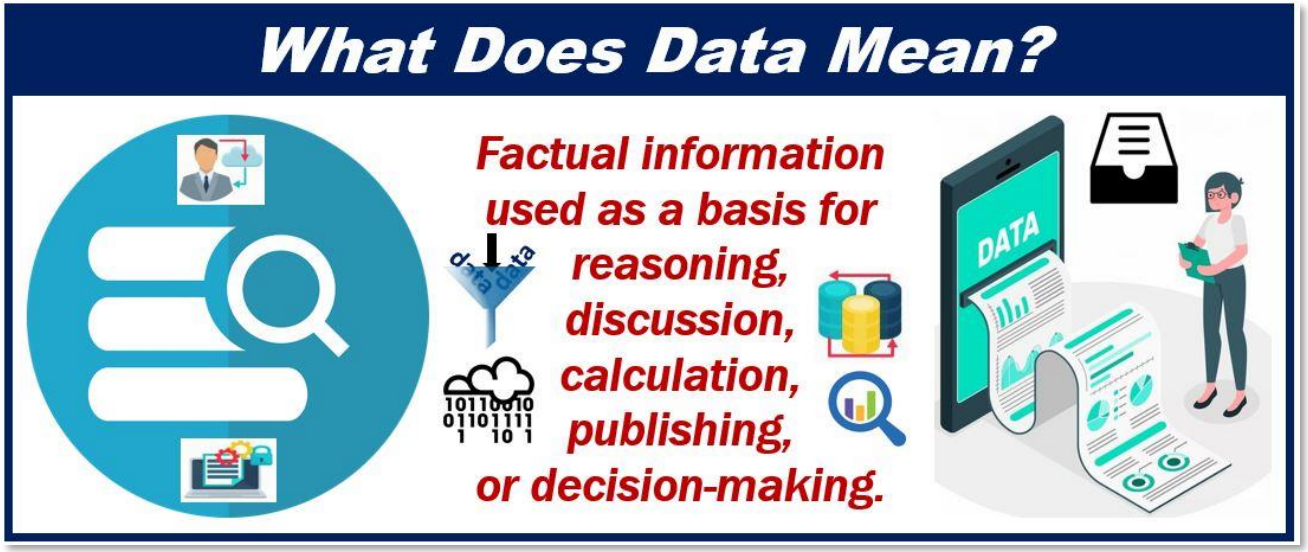

https://marketbusinessnews.com/financial-glossary/data-definitio/

Factual = Data

Decision Making = Analysis

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Tell us in the Chat Box

What are some common forms of data collection/analysis you use in your day-to-day life?

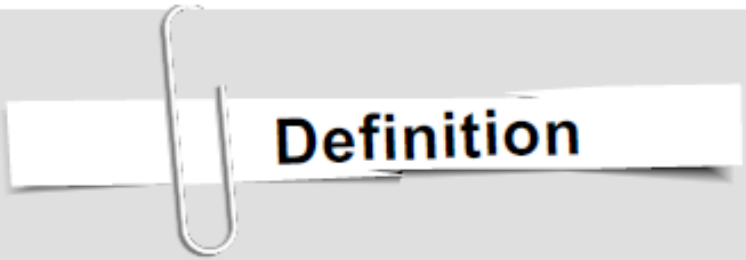
Common Data Sources

- Measuring cups, spoons for cooking
- Scale
- Odometer
- Spreadsheet to manage mortgage payments
- Spreadsheet to track chemicals in the pool
- Checkbook register
- Likes/Followers on Social Media
- Battery life on your device
- Dashboard indicators in your car

Why Analyze the Data?

- Measuring cups, spoons for cooking
- Scale
- Odometer
- Spreadsheet to manage mortgage payments
- Spreadsheet to track chemicals in the pool
- Checkbook register
- Likes/Followers on Social Media
- Battery life on your device
- Dashboard indicators in your car

Data Collection



Data collection is collecting specific information about a student's academic or behavioral performance. Collecting data helps an instructor determine a program's effectiveness. By collecting and analyzing data on a systematic basis, an instructor knows when to make changes in both academic and behavior programs.

Data collection has two critical components: information gathering and decision making. Information gathering may involve curriculum-based assessment, observing classroom behavior, grading papers, or parent interviews. The more structured and systematic the process, the more valid the information. Once the data is collected, the instructor must then make decisions based on that information. Decisions might be made regarding changes in curriculum or the management of specific classroom behaviors.

- used to track academic and/or behavior performance
- determines the effectiveness of programming
- needs to be systematic and intentional
- MUST include information gathering and decision making
- MUST be considered when making programming decisions

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http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Things to Do –

- ✓ Select the Academic Skill and/or Behavior
- ✓ Define the Skill or Target Behavior(s)
- ✓ Choose a data collection system
- ✓ Determine when to collect data
- ✓ Implement the data collection system
- ✓ Summarize and graph data
- ✓ Utilize data to make decisions about program effectiveness

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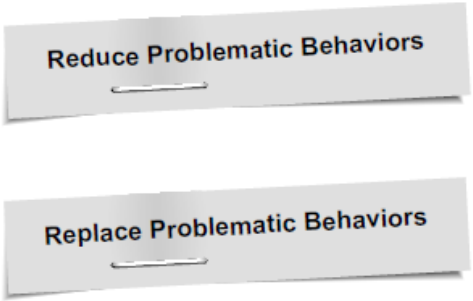
http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Select the Skill and/or Behavior

- Define the skill and/or behavior in **descriptive** words so that *anyone* can clearly identify the target.
- If looking to **reduce** a behavior, identify and teach the **replacement** behavior.



Example:

Don't tell a student, "Hands Down."

Teach them what you DO want them to do.

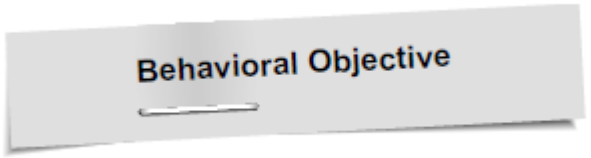
Instead of defining what a person should *not* do, identify and teach what they *should* be doing.

http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Define the Target Behavior(s)

The definition identifies the target in ways that:

- Easily observed
- Countable
- Have a clear beginning
- Have a clear ending
- Pinpoint **when** and under **what** conditions the behavior occurs



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http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Operational Definition

What is it?

"An operational definition, when applied to data collection, is a clear, concise detailed definition of a measure. The need for operational definitions is fundamental when collecting all types of data. It is particularly important when a decision is being made about whether something is correct or incorrect, or when a visual check is being made where there is room for confusion."

https://www.pqsystems.com/qualityadvisor/DataCollectionTools/operational_definition.php

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A strong <u>Operational Definition</u> helps ensure that you measure what you are intending to measure.

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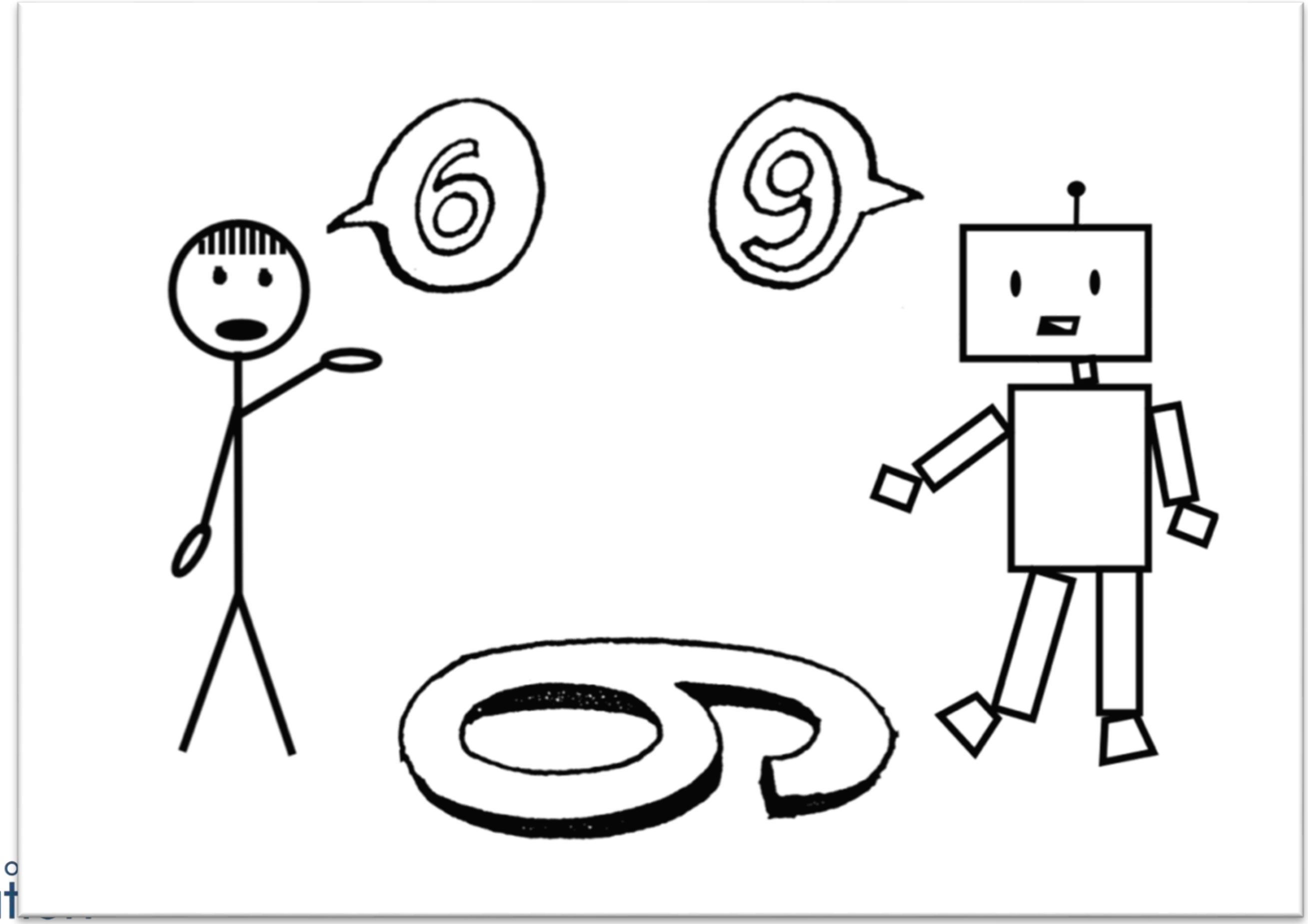
Which is it?
<u>Operationally Define</u>
what you're looking for.



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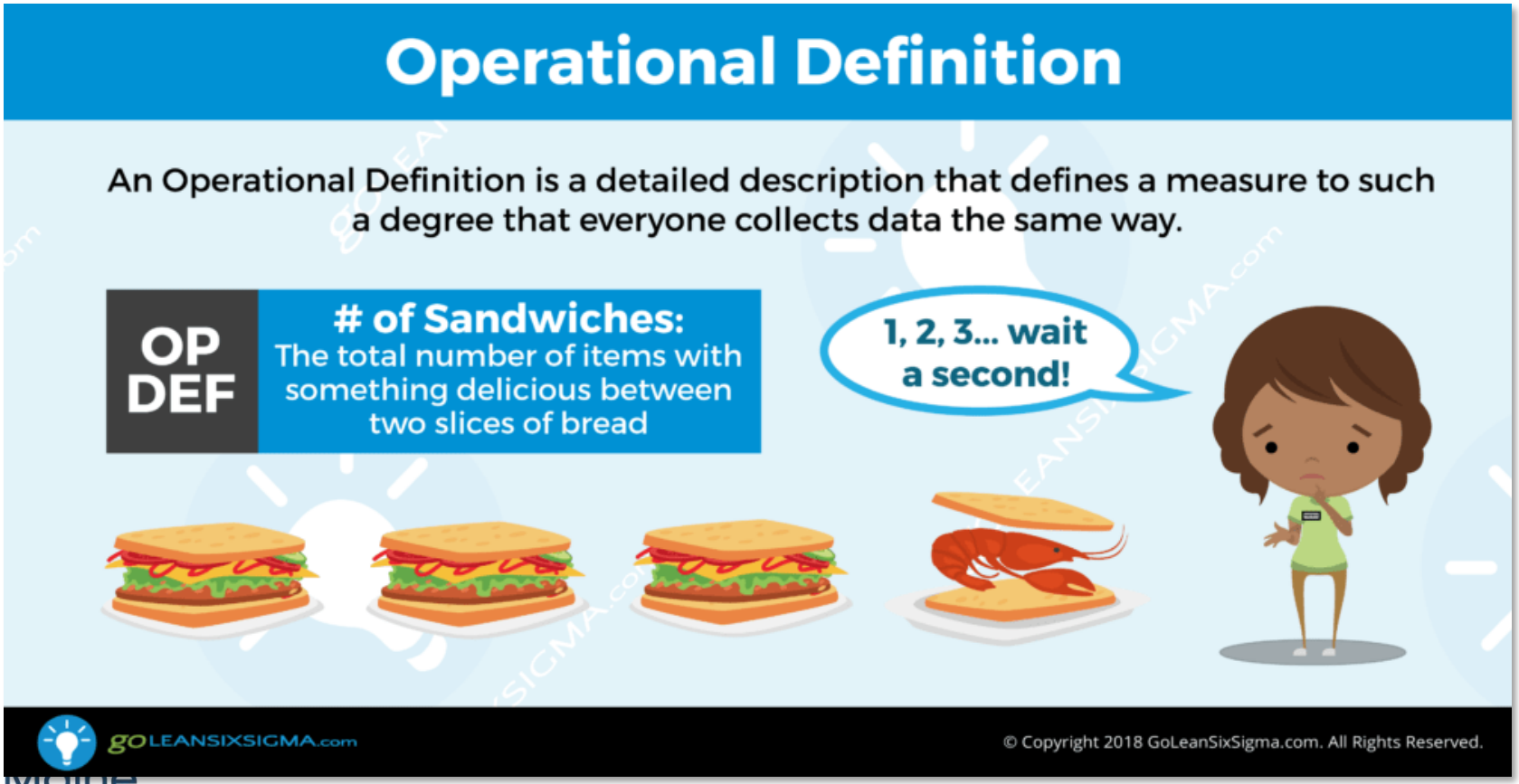
Which is it?
Operationally Define
what you're looking for.



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https://goleansixsigma.com/operational-definition/

What do you notice about this Operational Definition?

Aggression: Defined as anytime a student touches another student.

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What do you notice about this <u>Operational Definition</u>?

<u>Aggression</u>: Defined as anytime a student touches another student.

What if a student taps another on the shoulder to get their attention?
What if a student accidentally bumps into another student?

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Aggression: Defined as any instance when a student comes in deliberate contact with another person, with the intention of causing harm.

Examples: Hitting, slapping, kicking, biting.

Non-Examples: Giving a High Five, playing Tag

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What do you notice about this <u>Operational Definition</u>?

<u>Crying</u>: Defined as tears coming from student's eyes.

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What do you notice about this <u>Operational Definition</u>?

<u>Crying</u>: Defined as tears coming from student's eyes.

What if there are no tears?
What if the student is silent?
What if they are hurt?

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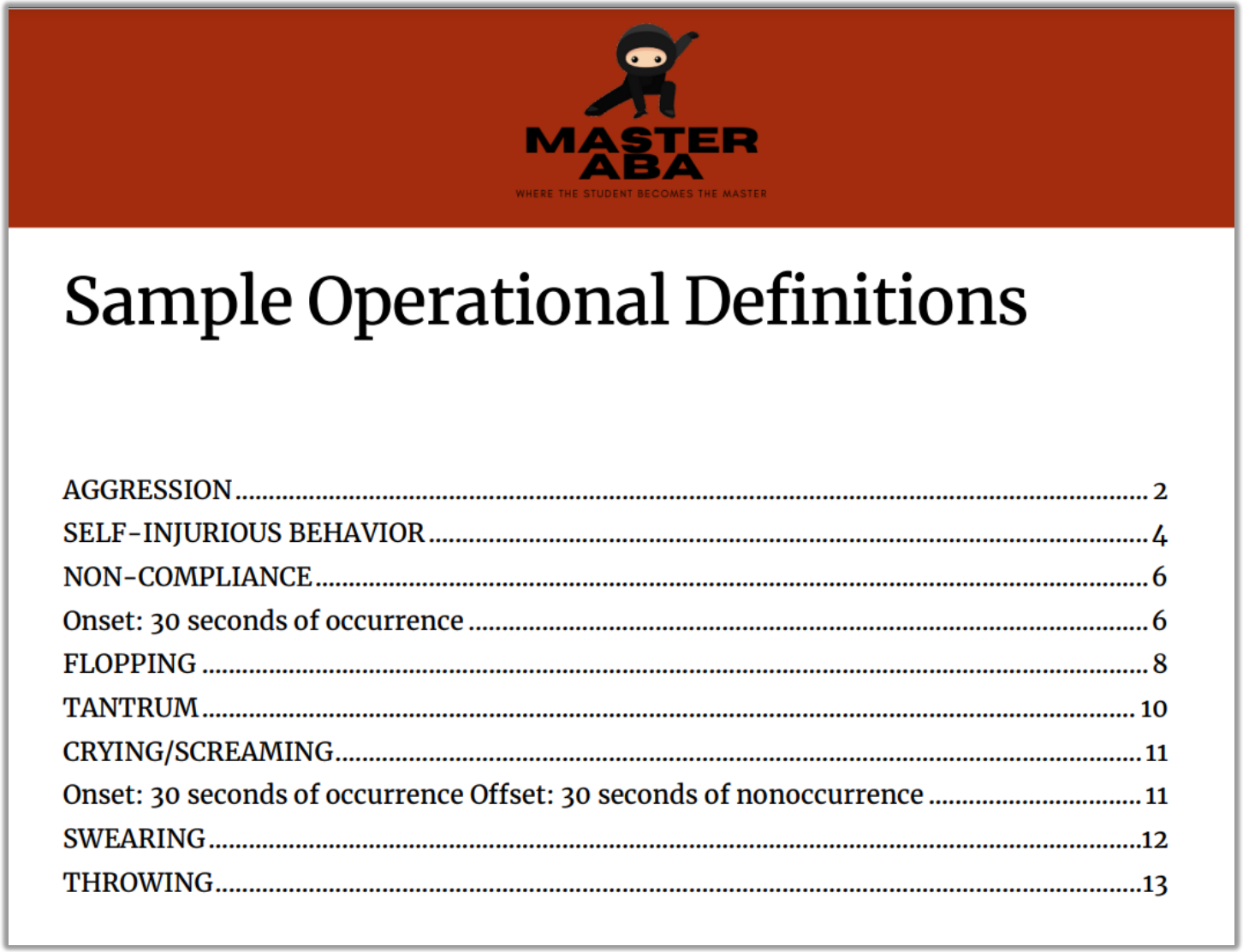
What do you notice about this <u>Operational Definition</u>?

<u>Crying</u>: Defined as the occurrence of vocalization (sounds or words) accompanied by facial contractions with or without tears for longer than 10 seconds, not related to being injured.



https://masteraba.com/wp-content/uploads/2020/08/Sample-Operational-Definitions.pdf

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Operational Definitions of Commonly Occurring Behaviors

Note: These definitions may not be suitable for every case. It is the responsibility of the assessor to determine appropriate 0perational definitions.

https://www.eckce.com/cms/wp-content/uploads/Operational-Definitions-of-Commonly-Occurring-Behaviors.pdf

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EXAMPLE Operational Definitions of Target Behaviors

Target Behavior	Operational Definition	Possible Examples	Possible Non-Examples
Physical Aggression	Successful and/or unsuccessful attempts of any physical act directed toward others that has the potential to cause harm.	Hitting, kicking, pushing, pinching, punching, biting, scratching, pulling hair, head-butting, hitting with an object, throwing an object at someone	Banging fists on desk, stomping feet, glaring, clenching teeth, making fists with hands
Physical Contact	Unwanted touching by any part of the body that does not result in injury.	Pushing, shoving, poking	pinching, hitting, kicking, biting
Verbal Aggression	Interactions with another individual in a manner that is threatening or intimidating.	Swearing (at someone), threats, derogatory statements/name calling, yelling at someone, teasing, bullying	Interrupting, talking back, vulgar jokes (unless derogatory)

https://docs.google.com/document/d/1ZRrp3qPscJKyGdoOi5hbXyMHg8hd9aGNMPRVWyuM8jQ/mobilebasic

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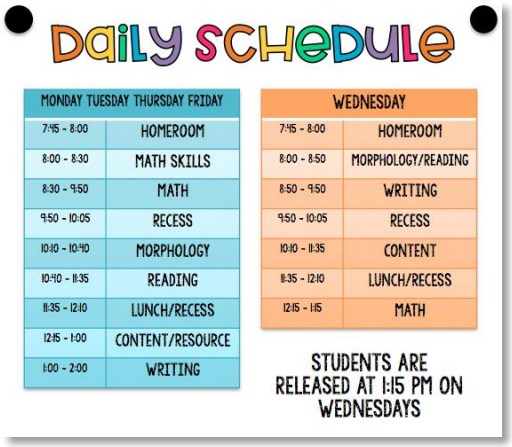
Determine When to Collect Data

Determine the **when** based on the following:

- Target Behaviors
- Frequency
- Available Resources



For Example –

A teacher interested in collecting data on Math performance may collect information during and after a math session, while behaviors might be better assessed during less structured times, like recess or lunch.

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http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Choose a Data Collection System

We use a variety of data collection techniques.

Your Data Collection System is dependent on what you are intending to measure.

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Implement the Data Collection System

- Once the data schedule has been established, stick to it.
- Consistent data collection tells the best story.
- Data can be analyzed effectively, and program changes can be made only if data is consistent.
- Interobserver reliability is good practice.
  - Have 2 observers…
    - Record the SAME behavior…
      - Of the SAME student…
        - At the SAME time!

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http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Summarize and Graph Data

- Raw data, like tallies, are hard to interpret.
- All info gathered through data must be easily readable.
- Graphing provides an easy, systematic way of showing the information about the skill or target behavior.
- Raw data must be converted to a usable form, such as percentages, number correct or rate.

http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

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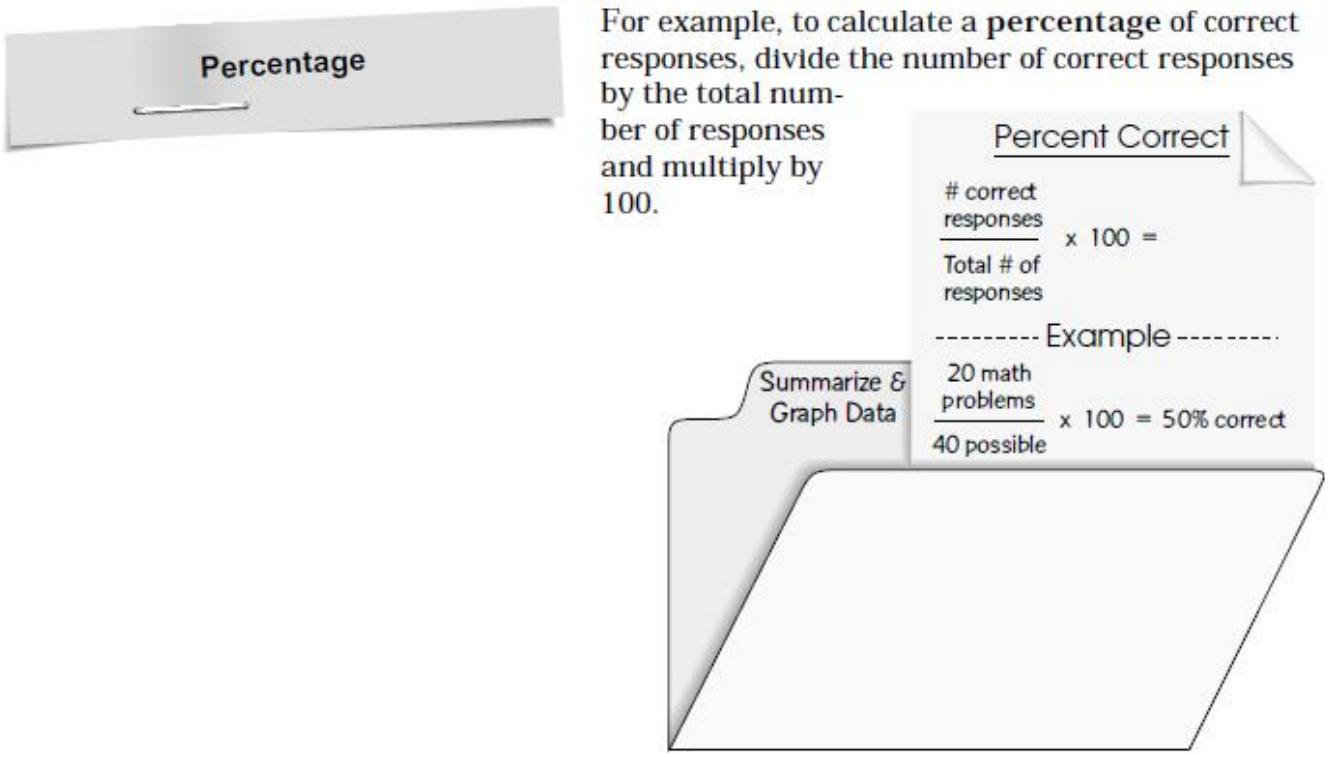
Summarize and Graph Data



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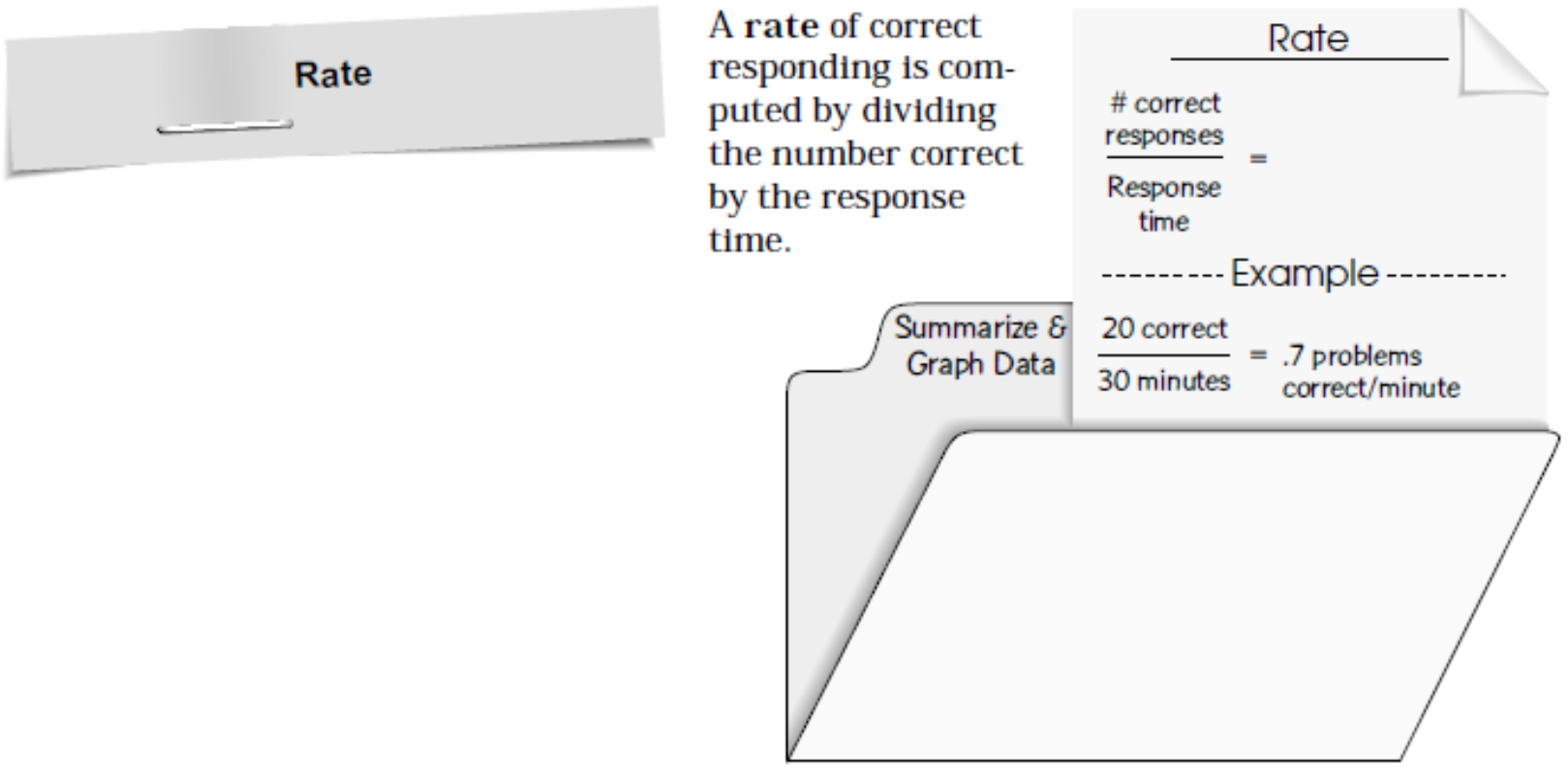
Summarize and Graph Data



http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

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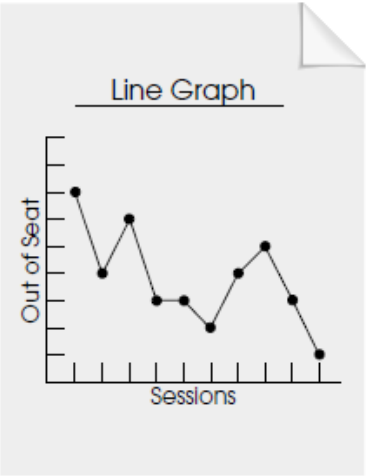
Summarize and Graph Data

Graphs

There are several types of graphs that can be used. These include:

- Basic line graph
- Cumulative graph
- Ratio graph
- Bar graph

The most frequently used tool for displaying data is the basic line graph. The line graph includes two axes, the horizontal or *x*-axis and the vertical or *y*-axis. The axes are labeled with the time dimension (e.g., session, day, hour) placed on the *x*-axis and the description of behavior (e.g., talk-outs, contributions, praise statements) placed on the *y*-axis. Each data point is placed at the intersection of the session in which it occurred and the level of behavior.



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http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Utilize Data to Make Decisions About Program Effectiveness

- Data should be a continuous, ongoing process.
- Data helps determine trends.
- Data highlights **increases** or **decreases** in performance.
- Look for trends of 3 or more data points in the same direction.
- Data trends should be used to assist in program effectiveness or determining the need for change.

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http://iseesam.com/content/teachall/text/behavior/LRBIpdfs/Data.pdf

Thoughts?
Questions?

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Quantitative Data

versus

Qualitative Data

Qualitative Data

is descriptive rather than numeric.

Quantitative Data

is in the form of numbers, quantities and values.

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Quantitative Data versus Qualitative Data

Quantitative Research is based on numbers and mathematical calculations. (aka **Quantitative Data**)

Qualitative Research is based on written or spoken narratives. (aka **Qualitative Data**)

https://www.diffen.com/difference/Qualitative_vs_Quantitative

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Analysis of Data

Qualitative Data: *can be difficult to analyze, especially at scale, as it cannot be reduced to numbers or used in calculations. Responses may be sorted into themes and require an expert to analyze. Different researchers may draw different conclusions from the same qualitative material.*

Quantitative Data: *can be ranked or put into graphs and tables to make it easier.*

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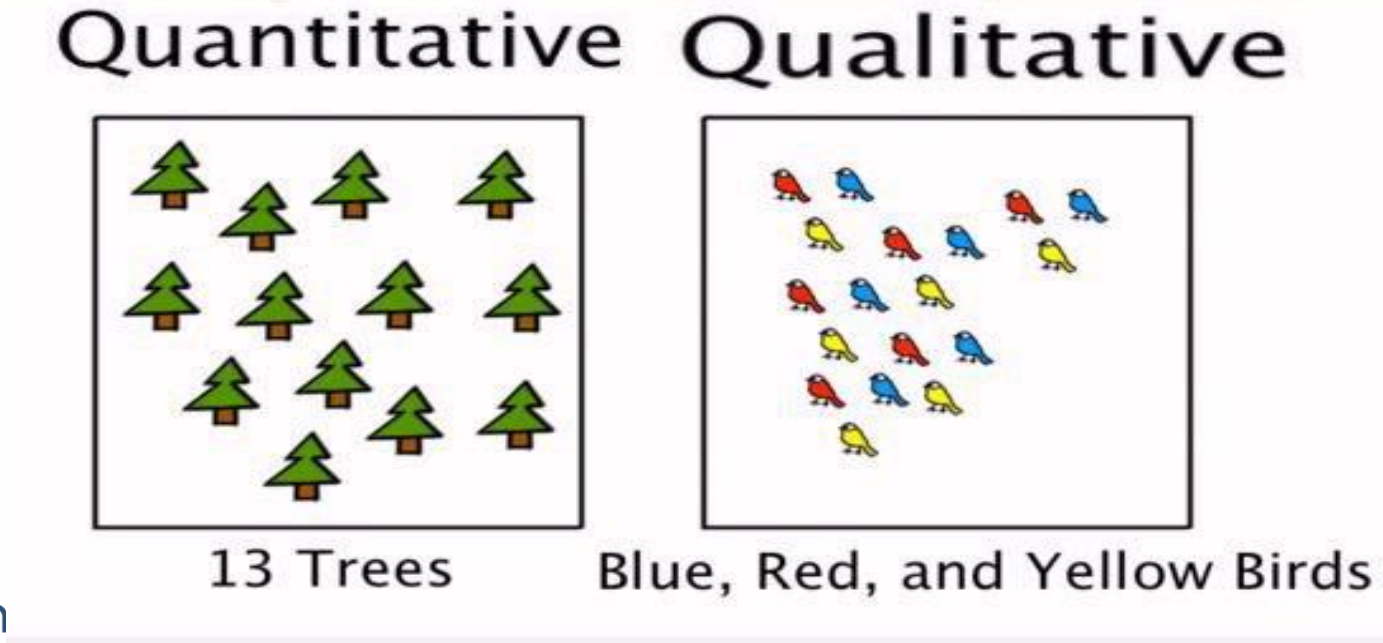
https://www.diffen.com/difference/Qualitative_vs_Quantitative

Example of Qualitative Data versus Quantitative Data

Example:
There are 13 trees in the 6 acre area.
The birds in the 6 acre area are blue, red, and yellow.

Qualitative and Quantitative Observations From Sophia.org



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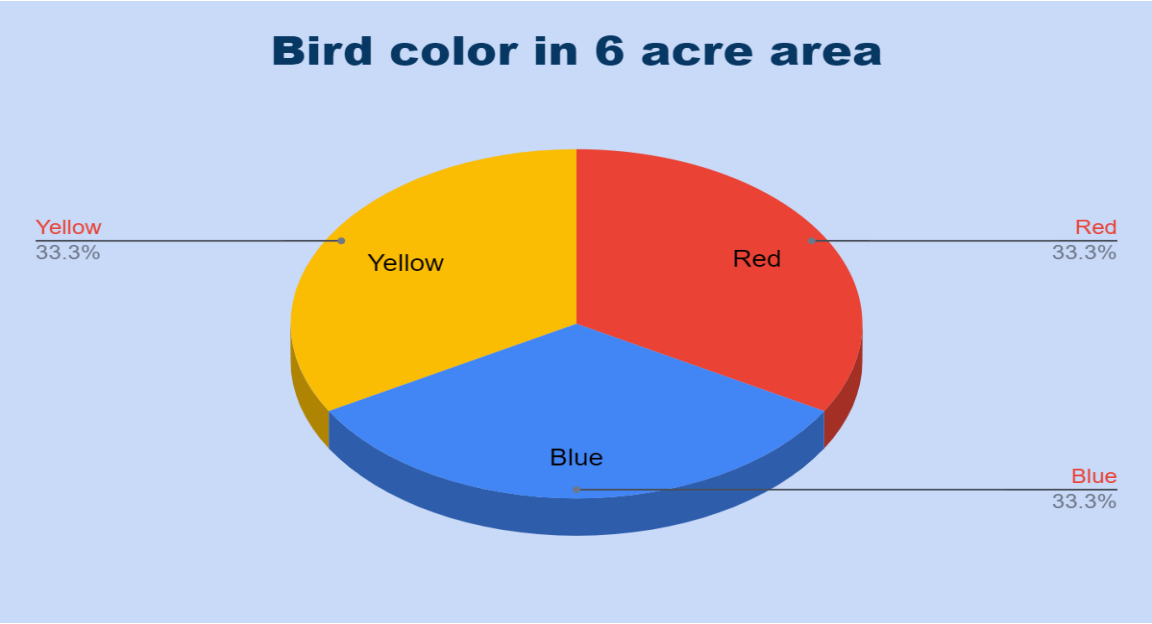
Converting Qualitative Data into Quantitative Data

- How many **red birds** are in the 6-acre area?
- How many **blue birds** are in the 6-acre area?
- How many **yellow birds** are in the 6-acre area?



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Why is Quantitative Data important?

<u>Data needs to support movement or progress through the IEP</u>.

- A child's IEP goal development should not be based upon qualitative (subjective) data.
- For proper progress monitoring IEP Goals, the measures must be data-driven.

What do we know about Sammy the Cat?

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https://marketbusinessnews.com/financial-glossary/data-definitio/

In the Chat Box, please share some <u>Qualitative Data</u> about Sammy the Cat.

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Qualitative Data

- He is black all over except for his paws, chest, chin, and part of his tummy, which are white.
- His hair is short-to-medium in length.
- He spends most of the day asleep and tends to go out at night.
- He is sitting on a brown rug.

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https://marketbusinessnews.com/financial-glossary/data-definitio/

In the Chat Box, please share some <u>Quantitative Data</u> about Sammy the Cat.

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Quantitative Data

- His tail is 30cm (18″) long.
- He weighs 5kg (11.2lbs).
- Sammy has one sister and one brother.
- He is 40cm (15.7″) long (excluding tail).

https://marketbusinessnews.com/financial-glossary/data-definitio/

Chat Box Check In

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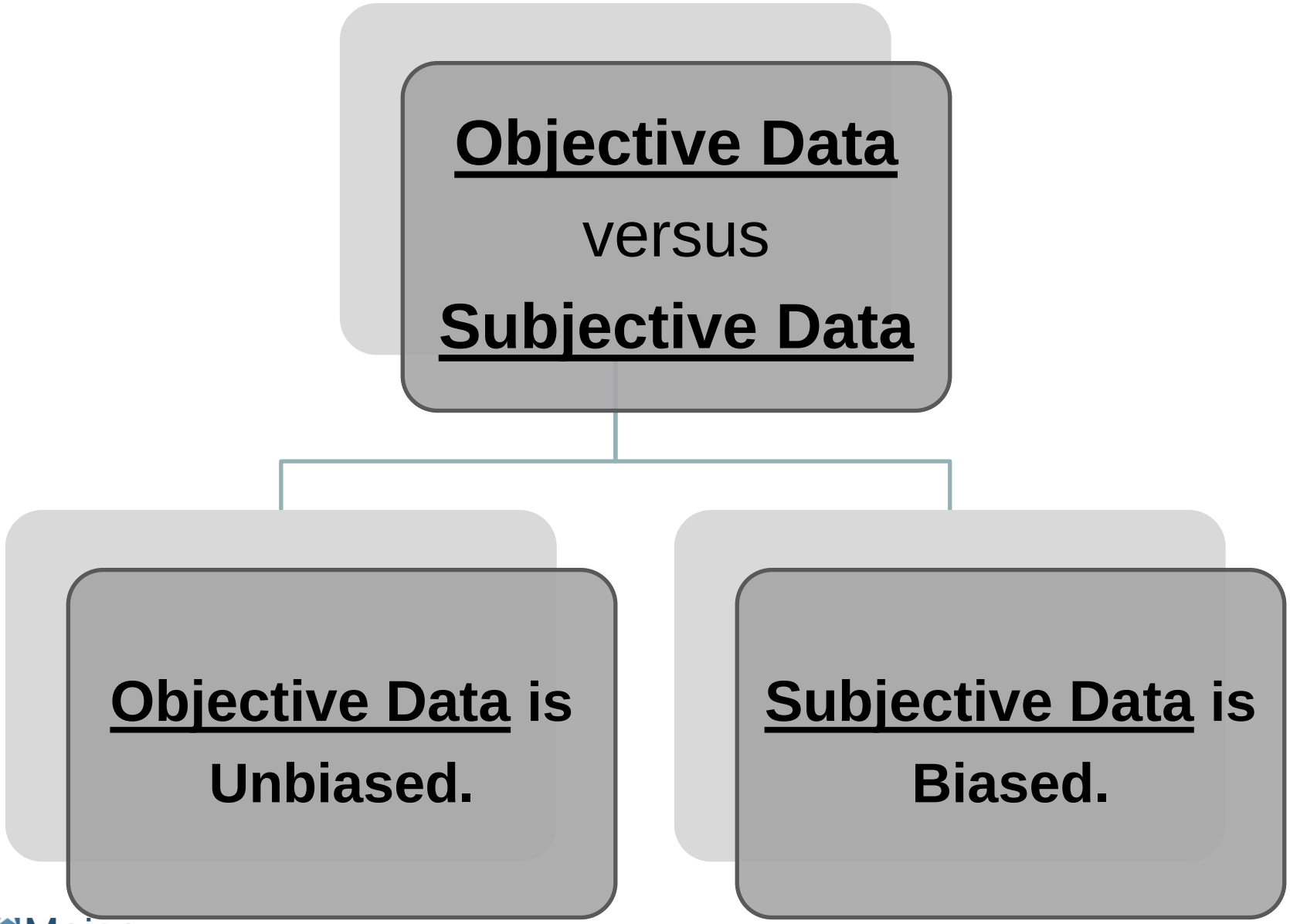

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Objective Data versus Subjective Data

Objective Data	Subjective Data
not colored by personal feelings or beliefs	colored by personal feelings or beliefs
equivalent to facts	equivalent to opinions
factual and verifiable	non-factual and non-verifiable

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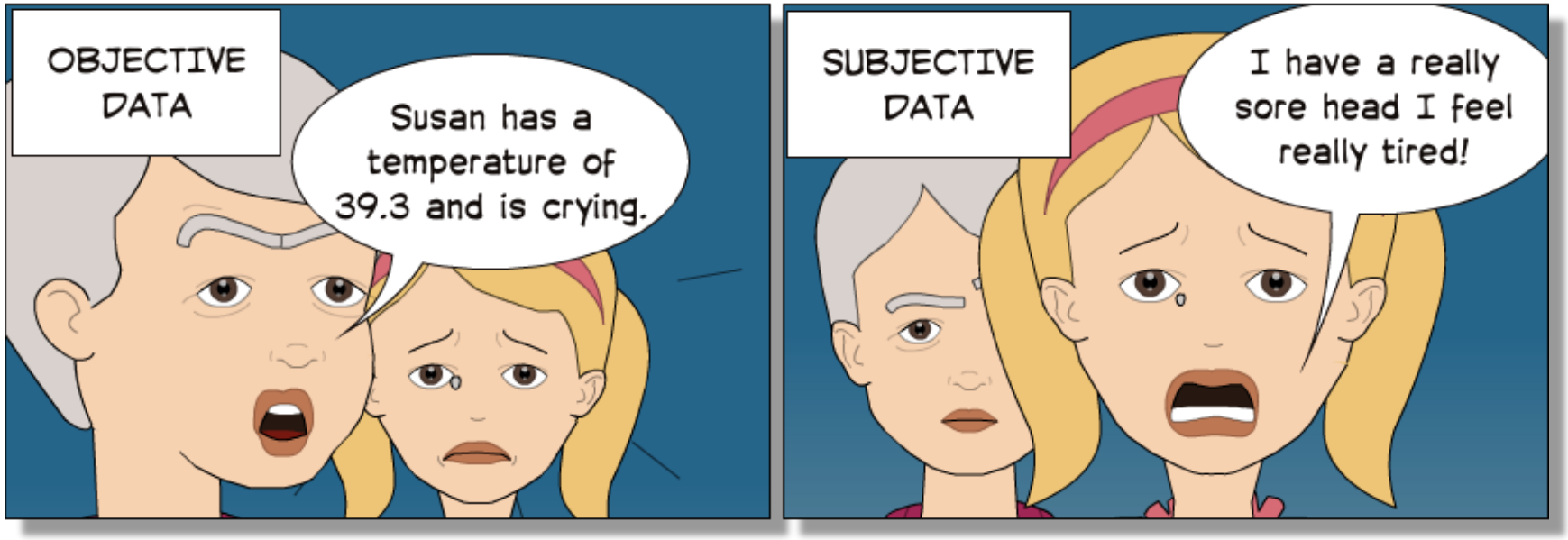
Objective Data versus Subjective Data



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Objective Data versus Subjective Data

- Sandra screamed because she wanted to play also.
- Lori stayed quiet and didn't talk to anyone.
- John likes it when the music is on.
- Emanuel hates doing his math.

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Objective Data OR Subjective Data

Sandra screamed because she wanted to play also.

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Objective Data OR Subjective Data

Sandra screamed because she wanted to play also.

Subjective –

Do we know why Sandra was screaming?

INSTEAD:

Sandra screamed when her classmates started playing ball.

Objective Data versus Subjective Data

Lori stayed quiet and didn't talk to anyone.

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Objective Data OR Subjective Data

Lori stayed quiet and didn't talk to anyone.

Objective –

There is no opinion about why Lori was quiet.

It is clear and observable.

It is factual and verifiable.

Objective Data versus Subjective Data

Emanuel hates doing his math.

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Objective Data OR Subjective Data

Emanuel hates doing his math.

Subjective –

Do we know that Emanuel hates math?

How can we check that internal state?

INSTEAD:

Emanuel begins to cry when asked to get out his math book.

Objective Data versus Subjective Data

John likes it when the music is on.

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Objective Data OR Subjective Data

John likes it when the music is on.

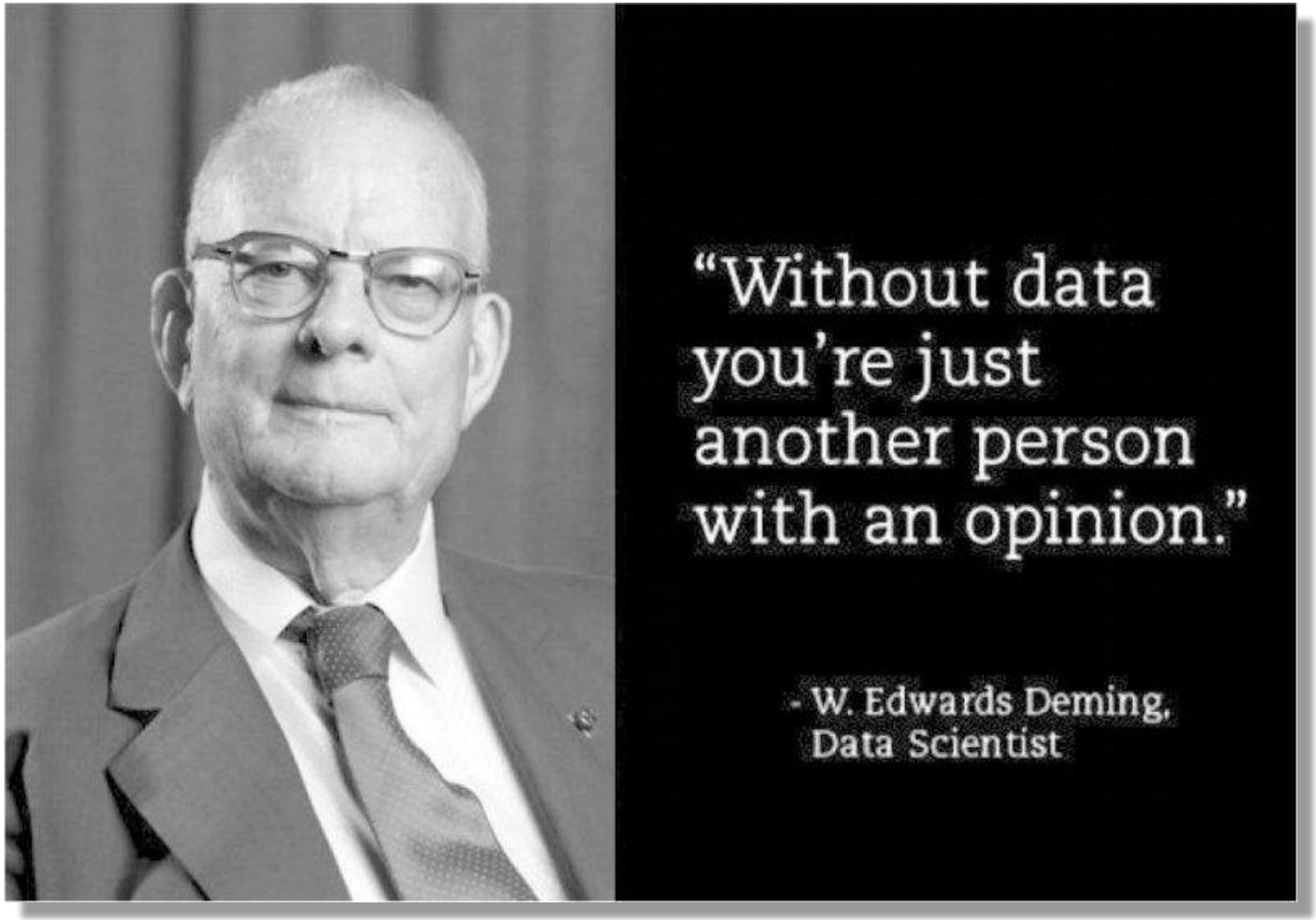
Subjective –

Do we know that John likes the music?

How can we check that internal state?

INSTEAD:

John smiles and begins to laugh when the music is on.



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Poll

For well-written, clear goals, which of these ways are Objective measures of progress?

A. Data collection and analysis.
B. Teacher observation.
C. Standardized testing.
D. A percentage of improvement.

https://learningabledkids.com/iep_training/iep_measures_of_progress_idea_specs.htm

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Remember –

Data – information, experience and knowledge which helps make decisions ***AND*** drives programming.

So, although not everyone **collects** data, everyone should be **looking** at it and **considering** it when **developing programming.**

Use of Data

Data should be used to:

- ✓ assist in program effectiveness
- ✓ determining the need for change

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IEP meetings are more meaningful and useful when there is –

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Endrew F. vs. Douglas County School District

https://www.youtube.com/watch?v=CF7RmLJo32c

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UNITED STATES DEPARTMENT OF EDUCATION

WASHINGTON, DC 20202

December 7, 2017

Questions and Answers (Q&A) on

U. S. Supreme Court Case Decision

Endrew F. v. Douglas County School District Re-1

https://sites.ed.gov/idea/files/qa-endrewcase-12-07-2017.pdf

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Disclaimer:

The links and websites shared in this PowerPoint are for information and reference only and are not endorsed in any way by the Maine Department of Education.

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Resources

Professional Development Calendar –

https://www.maine.gov/doe/calendar

Link for Recordings and Power Points –

https://www.maine.gov/doe/learning/specialed/covid19/Administrators/Virtual%20Meeting%20Archives

Special Education Resources –

https://www.maine.gov/doe/learning/specialed/resources

Special Education Laws and Regulations –

https://www.maine.gov/doe/learning/specialed/laws

Special Education Forms and Reporting –

https://www.maine.gov/doe/learning/specialed/data

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Please let us know...

What questions do you have?

Education

Contact Hour

Contact hour(s) certificate will be sent to you.

If you are watching this as a recording, please email:
Jennifer.Gleason@maine.gov
for your certificate.

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Please know how much we at Maine DOE appreciate each one of you and the incredible work you continue to do on behalf of your students.

This team is so proud to stand with you!

Maine Department of Education

Colette Sullivan – Federal Programs Coordinator
colette.sullivan@maine.gov

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