Teaching to Diversity: The Dirty D Word… DATA!
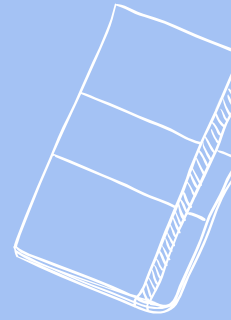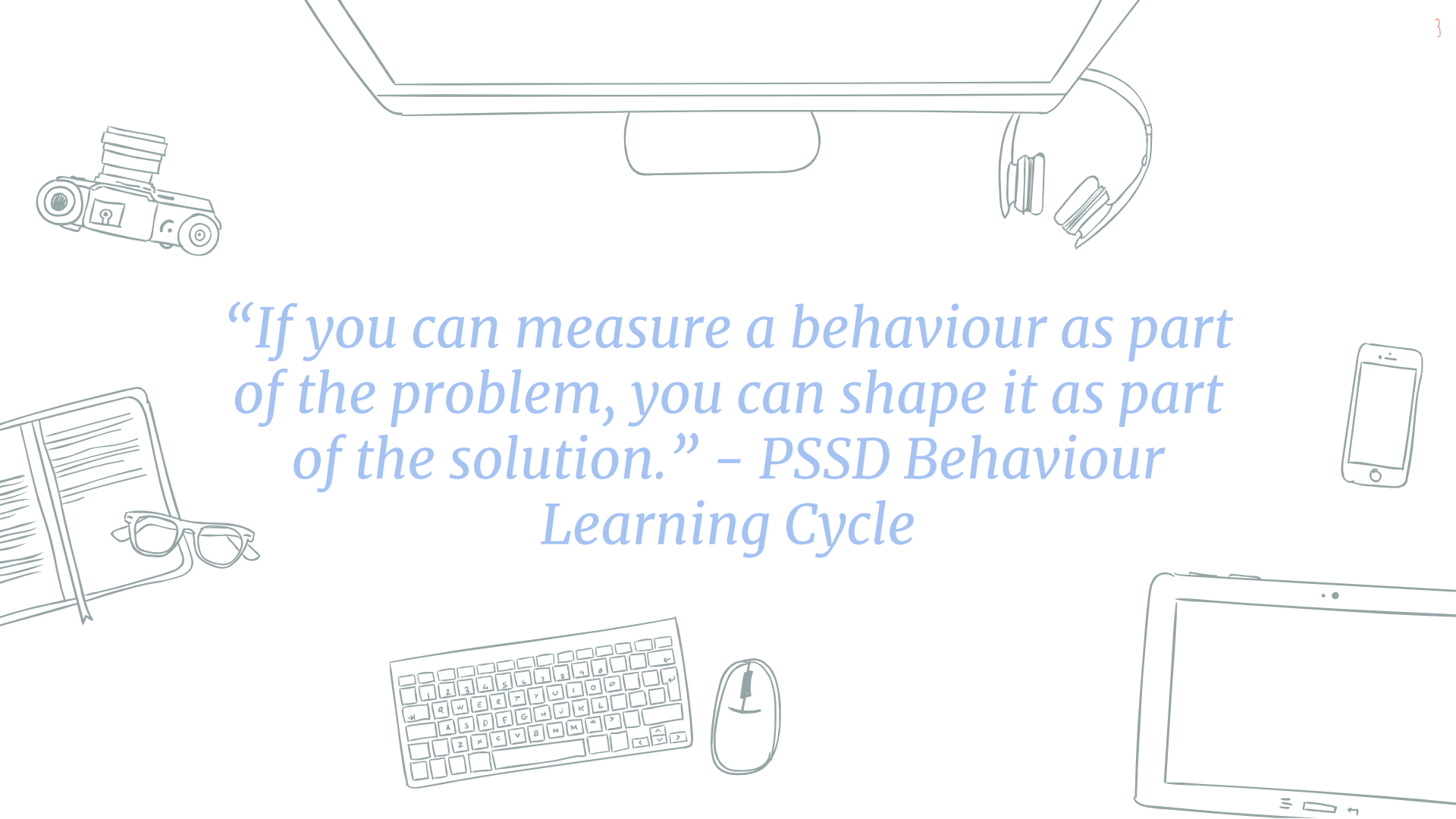
PSSD Student Support Consultants & Advocacy and Behaviour Consultants

Prairie South Schools 210

Learning together.

Why Take Data?

"If you can measure a behaviour as part of the problem, you can shape it as part of the solution." – PSSD Behaviour Learning Cycle
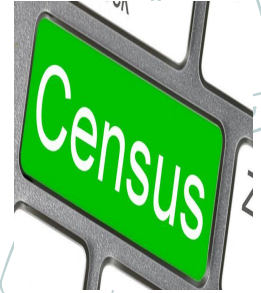
Why Take Data?

- Pinpoint the function of the behaviour.
- Pinpoint missing skills.
- Determine intervention progress and make changes as needed.
- Improve our own strategies and responses.
- Ensure consistency among team members.
- Track and celebrate student growth.
- Objective and factual reporting for team/caregiver meetings.

Ultimately, data allows us to support children in ways we may not have otherwise.
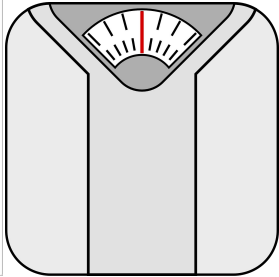
Data Is All Around Us

MY FIVE SENSES

SEE   HEAR

TOUCH

TASTE   SMELL

POOR FAIR GOOD GREAT

°C

Bus Timetable

Census

How To Take Data
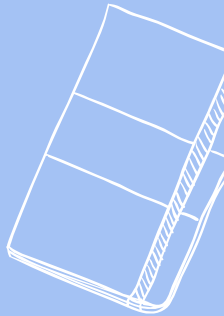
Where to Start: ABC Data

Date/Time	Setting	Antecedent	Behaviour	Consequence	Effect
When did the interfering behaviour occur?	Where did the interfering behaviour occur?	What happened immediately prior (i.e., triggered) to the interfering behaviour?	Describe the interfering behaviour.	What did you do or what happened after the interfering behaviour occurred?	What effect did the consequence have on the interfering behaviour?

OBjective: When you __OB__serve and record what is visible and measurable.
Think: Could I have the caregiver read this information?

Where to Start: ABC Data
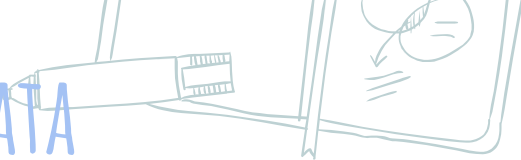
I told him we couldn't keep it as a pet

Next Steps: Operational Definition

Operational Definition: the visible, measurable, objective description of a behaviour's features including all its expressions, how severe it gets, and when it's started and stopped.

Operational Definition	Topography (What it Looks and Sounds Like)	Severity Scale
Fleeing: Has occurred when the student leaves the room without consent or when a student attempts to hide in or out of the room.	Running Leaving desk Hiding in locker Hiding in bathroom Leaving building/room	1 – Getting out of desk and wandering around classroom 2 – Hiding in classroom 3 – Leaving the classroom without permission 4 – Leaving the building without permission

Next Steps: Categorizing Behaviours

Behaviour can be categorized in three ways:
1) **Episodic** – a prolonged event (ie. meltdown);
2) **High Rate or Discrete** – behaviours occurring often (ie. blurting) or briefly (ie. spitting) in the moment;
3) **By Opportunity** – behaviours occurring after a request (ie. "grab your notebook") or an occasion (ie. attending school).

→ If the behaviour is **episodic,** stick with the **ABC form** to determine **frequency, severity,** and **duration!**

Date/Time	Setting	Antecedent	Behaviour	Consequence	Effect
When did the interfering behaviour occur?	**Where** did the interfering behaviour occur?	What happened immediately **prior** (i.e., triggered) to the interfering behaviour?	Describe the interfering **behaviour.**	What did you do or what happened **after** the interfering behaviour occurred?	What **effect** did the consequence have on the interfering behaviour?

→ If the behaviour is **high rate or discrete,** use an **interval/tally data form** to determine **frequency** and **latency!**

Student:

Behaviour Definition:

Procedure: 60-second whole interval procedure. A + is scored in each 60-second interval if on-task behavior occurred for the entire interval.

Interval #	Time (60 seconds)	+ (yes) OR x (no)	Comments
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Formula for occurrence = $\dfrac{\text{number of + intervals}}{\text{total # of intervals}} \times 100$

Summary: a/b x 100 = _____ is on-task _____ of the intervals observed

→ If the behaviour is **by opportunity,** use a **by opportunity data form** to determine **frequency, severity,** and **latency/ratio.**

Remember – the behaviour must be operationally defined!

- **Who** will take the data?
- **What** data form/method will be used?
- **Where** will the data be taken (ie. which settings)?
- **When** will the data be taken (ie. time frame and for how many days)?
- **Why** are we using this form/method (ie. are we looking for frequency, severity, duration, and/or latency data)?

Next Steps: analyze the data to determine the function of the behaviour and next steps for intervention.

Purpose of Data and Calculation Steps

Purpose of Data

Taking data on these behaviours will allow us to determine:
1. **Frequency** – how often the behaviour occurs.
2. **Severity** – the intensity of the behaviour.
3. **Duration** – how long the behaviour lasts.
4. **Latency** – the time between the request/event and the behaviour.

GOAL

Frequency Data

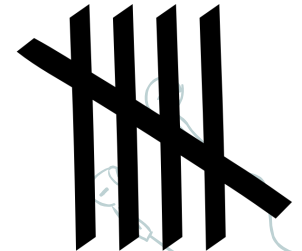**Frequency** – how often the behaviour occur; requires distinct start/end time so we can tally the behaviour.

Applicable for: episodic, high rate/discrete, and by opportunity behaviours.

Steps:
1. Set time frame (ie. 15 minutes, 1 hour, etc.).
2. Tally each behaviour that occurs within the predetermined time frame.
3. Divide the number of tallies (behaviours) by the total amount of time to get the frequency.

Brad's ABC Form *Last Updated: May 3, 2021

Staff: _____   If applicable, filling in for student who was targeted: _____

Definition: **Physical Aggression-** has occurred when the student makes forceful, physical contact with another person.
Verbal Aggression- has occurred when the student uses abusive/threatening language or profanity towards another person with a volume louder than conversational norm, includes giving the middle finger.
Property Destruction- behaviour involves actions that render objects in need of repair or replacement or has the potential to damage objects, includes throwing objects not meant to be thrown.

Date/Time	Setting	Antecedent	Behavior	Consequence	Effect
When did the aggression occur?	**Where** did the aggression occur?	What happened immediately **prior** (i.e., triggered) to the **aggression**?	Describe the **aggression**?	What did you do or what happened **after** the **aggression** occurred?	What effect did the **consequence** have on Brad?
Please Record Date:_____ Period 1 Time:_____ Period 2 Time:_____ Period 3 Time:_____ Lunch Time:_____ Period 4 Time: _____ Period 5 Time:_____	**Please Check** -classroom____ -hallway____ -sensory____ -library____ -gym____ -outdoors____ -city bus____ -pool____ -other: _____	**Please Check Any That Apply** -active activity____ -computer____ -desk work____ -transitioning____ -staff gave a verbal request/prompt one time____ -staff gave a verbal request/prompt 2+ times____ -staff said no____ -staff said break is over____ -staff said go to class____ -staff said put phone away____ -staff said no that's private____ -other: _____ **Brad's Precursors:** -appears frustrated____ -not following directions____ -making a fist____ -growling____ -raising voice____ -other: _____	**Please Check Any That Apply-Mark an "A" if it was an attempt.** **Physical Aggression:** -grabbing person____ -hitting person____ -kicking person____ -pushing person____ -throwing an object at a person____ -other: _____ **Verbal Aggression:** -abusive/threatening language____ -profanity____ -giving the middle finger____ -other: _____ **Property Destruction:** -hitting/kicking objects____ -throwing objects____ -other: _____ **Please Check Severity:** -Person not injured____ -Person physically injured____ *Definition of physically injured: caused pain and/or left a mark. If physically injured record injury:	**Please Check Any That Apply** -moved away from Brad____ -said ____ is not okay, you need a break/walk____ -said ____ is not okay, and redirected to task____ -switched staff____ -staff other verbal____ *what did you say?_____ _____ _____ -other: _____	**Please Check Any That Apply** -continued with same task____ -redirection to task effective____ -redirection to task ineffective____ -went with switched staff____ -stayed with targeted staff__ -went to sensory____ *for how long?_____ *what did he do in sensory?_ _____ -went for a walk____ *for how long?_____ _____ *what did he say?_____ _____ _____ precursor _____ _____ Total ___ escalated:_____

Event/ Frequency Recording Sheet

(Used to record all instances of a specific, discrete behavior during a time period)

Instructions: Tally each occurrence of the behaviour in the boxes.

Student: KG   Date: Jan 09/22 Time (Start): 8am Time (End): 9am

Behaviour: blurting (level 1 random comments, level 2 yell, level 3 swear)

Context/Activity (e.g., math class or free play): math

☑ Baseline   ☐ Intervention

HHH HHH HHH IIII

(114 per day)

Total: 19   Rate: 19 per hour

Severity Data

Severity – the intensity of the behaviour.

Applicable for: episodic and by opportunity behaviours.

Steps:
1. Set time frame (ie. 15 minutes, 1 hour, etc.).
2. Circle 1, 2, or 3 severity for each behaviour that occurs (as per severity scale).
3. Divide the number of level 1 behaviours by the total amount of occurrences to get the severity.
4. Repeat step 3 for level 2 and then level 3 behaviours.

Severity Data Example

Activity: Science

Student % of Opportunity Data

Time	Blurting Tally and Severity (1, 2, or 3)	Type of Request				+ = on-task o = off-task		Off-Task Severity		
1 pm	1 "atom"	(A)	T	PA	O	(+)	o	1	2	3
1:11 pm	111 "proton"	(A)	T	PA	O	(+)	o	1	2	3
1:13 pm	2 "imposter"	(A)	T	PA	O	+	(o)	(1)	2	3
1:15 pm		(A)	T	PA	O	(+)	o	1	2	3
1:18 pm	1- "atom"	(A)	T	PA	O	(+)	o	1	2	3
1:24 pm	3 "f word"	A	(T)	PA	O	+	(o)	1	(2)	3
1:27 pm		(A)	T	PA	O	(+)	o	1	2	3
1:35 pm		(A)	T	PA	O	(+)	o	1	2	3
1:36 pm	111 - "charge"	(A)	T	PA	O	(+)	o	1	2	3
1:42 pm		(A)	T	PA	O	(+)	o	1	2	3
1:48 pm	2 - "yells 'no'"	(A)	T	PA	O	+	(o)	1	(2)	3
1:53 pm	1 - "proton"	(A)	T	PA	O	(+)	o	1	2	3
2 pm		(A)	T	PA	O	(+)	o	1	2	3

Severity of Task Avoidance: 10/13 x100 = 77% on-task in 1 hr. off-task @ level 1 80% level 2 15%.

Frequency of Blurting: 12x in 1 hr. 75% @ level 1, 17% @ level 2, + 8% @ level 3.

Operational Definitions: Interruptions – verbally speaking over someone else who is talking; random comments (level 1), yelling (level 2), and swearing (level 3) during times of quiet reflection or work

Task Avoidance – not completing class work or engaging in class discussions; sitting there without task engagement (level 1), saying "no" and sitting there without task engagement (level 2), and yelling/leaving room (level 3).

Request Key
Varies from student to student

A	Academic
T	Transition
PA	Physical Activity
O	Other

Severity Scale
# of levels and descriptions vary from student to student

Level 1	**Task Avoidance** - random comments/sitting there w/o engagement **Interruptions** - blurting on-task
Level 2	**Task Avoidance** - yelling or saying "no" and sitting there w/o task engagement **Interruptions** - blurting off-task/random
Level 3	**Task Avoidance** - yelling/leaving the room **Interruptions** = swearing/inappropriate comments

Severity Data (Advanced)

Severity – the intensity of the behaviour.

Applicable for: episodic and by opportunity behaviours.

Steps:
1. Level 1 – frequency of behaviours at level 1 multiplied by 1.
2. Level 2 – frequency of behaviours at level 2 multiplied by 2.
3. Level 3 – frequency of behaviours at level 3 multiplied by 3.
4. Add up frequency of behaviours for all levels 1–3.
5. Add up multiplication answers from steps 1–3.
6. Divide number from step 5 (multiplication answer) by step 4 (frequency of behaviours) to determine average severity level.

Example 1 (Blurting):
Level 1 – 9 x 1 = 9
Level 2 – 2x2 = 4
Level 3 – 1x3 = 3
Frequency of behaviours for all levels 1-3 – 9+2+1 = 12
Multiplication answers – 9+4+3 = 16
16 divided by 12 = **1.33 average severity level.**

Example 2 (Off-Task):
Level 1 – 1x1 = 1
Level 2 – 2x2 = 4
Level 3 – 0x3 = 0
Frequency of behaviours for all levels 1-3 – 1+2+0 = 3
Multiplication answers – 1+4+0 = 5
5 divided by 3 = **1.67 average severity level.**

Duration Data

Duration – how long the behaviour lasts.

Applicable for: episodic behaviours.

Steps:
1. Once the behaviour starts, note the start time.
2. Once the behaviour stops, note the end time.
3. Calculate the total time from the start/stop times.

Duration Data Example
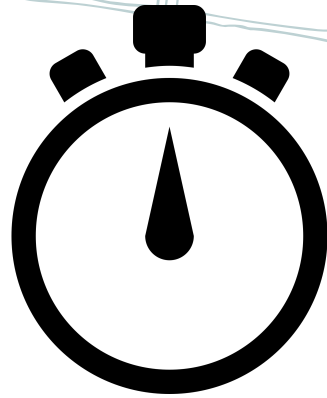
DURATION DATA SHEET

Student: KG   Week: From Mar 1-5th, 2022
Observer: JM   To: _____
Behavior: meltdown (lays on floor & cries, pounds fists)

Monday Date: 1st	Tuesday Date: 2nd	Wednesday Date: 3rd	Thursday Date: 4th	Friday Date: 5th
Start: / End: N/A — Duration:	Start: 4am / End: 8:15am — Duration: 15 min	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:
Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:
Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:
Start: / End: N/A — Duration:	Start: 11:30 / End: 12:35 — Duration: 65 min	Start: / End: N/A — Duration:	Start: 11:30 / End: 11:53 — Duration: 23 min	Start: / End: N/A — Duration:
Start: 1:15 / End: 1:36 — Duration: 21 min	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:

Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: 1:14 / End: 2:14 — Duration: 60 min	Start: 1:03 / End: 2:10 — Duration: 67 min
Start: 2:10 / End: 3:02 — Duration: 52 min	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:
Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:	Start: / End: N/A — Duration:

**Avg Duration:** 21 + 52 + 15 + 65 + 23 + 60 + 67 = 303 / 7 episodes = 43 min. ave.
Average Duration: Sum the total durations from each episode and divide by the total number of episodes.

% of Observation With Behavior: _____ 303 ÷ 1800 hrs × 100 = 16%
% of Observation with Behavior (# of Minutes of Behavior divided by total # of minutes of observation, then multiply by 100)

Latency Data

**Latency** – the time between the request/event and the behaviour.
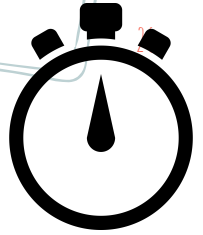
Applicable for: high rate/discrete and by opportunity behaviours.

Steps:
1. Determine the appropriate amount of wait time for follow through (ie. 2 minutes, 5 minutes, etc.).
2. Record the time of the event or request.
3. Record the time that the behaviour occurred OR make an X if behaviour did not occur within the predetermined time frame.
4. Determine the time in between the requests and the behaviour occurrence (add all and divide by total number to get the average).
5. Determine the percentage of non-follow throughs by dividing the Xs by the total number of requests and repeat the process for the percentage of follow throughs.

Latency Data: Interval Data

Latency – the time between the request/event and the behaviour.
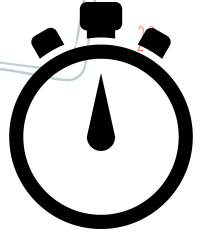
Applicable for: high rate/discrete and by opportunity behaviours.

Steps:
1. You can take interval date by setting a predetermined time interval. It is crucial to make intervals less than a minute each as shorter intervals allow for the most accurate data.
2. **Whole Interval:** Mark a checkmark if the behaviour occurs within that entire time interval OR an X if it does not.
3. **Partial Interval:** Mark a checkmark if the behaviour occurs during any point within the time interval OR an X if it does not.
4. Divide the number of checks by the amount of intervals to get the percentage of follow throughs. Repeat the process for the X's to determine the percentage of non-follow throughs.

Interval Data Tool for Student: KG

Behaviour Definition: On-Task (in seat, oriented to front of room or at desk on appropriate materials – excludes blurting/sounds).

Procedure: 10-second whole interval procedure. A + is scored in each 10-second interval if **on-task** behavior occurred for the **entire interval**.

Interval #	Time	+ (yes) OR x (no)	Comments
1.	10 sec.	X	turned to peer
2.	20 sec.	+	
3.	30 sec.	X	Out of seat
4.	40 sec.	X	↓
5.	50 sec.	+	
6.	60 sec.	+	
7.	70 sec.	+	
8.	80 sec.	+	
9.	90 sec.	X	turned to peer
10.			

1 min (beside interval 6)
1.5 min (beside interval 9)

Formula for occurrence = $\frac{\text{number of + intervals } 5}{\text{total # of intervals } 9} \times 100$

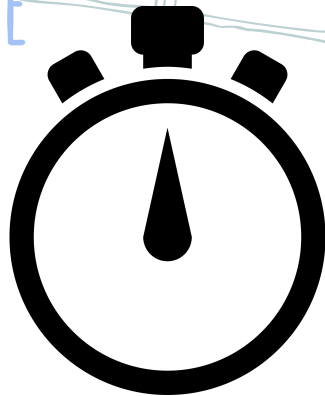Summary: a/b x 100 = $5/9 \times 100$ is **on-task** 56% of the intervals observed

Frequency Tally for:
CT Redirected/Prompted - |||
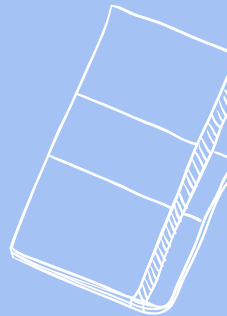Blurting – |||| ||||
Longest On-Task Run – 40 sec.

56% on-task
44% off-task
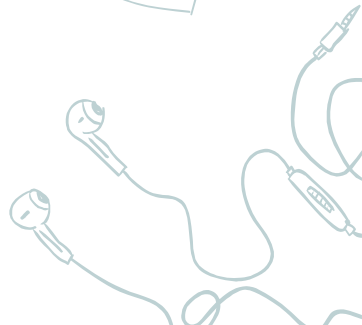
Data Taking Methods

Paper-Pencil Data

Connect → Learning → Behaviour Learning Cycle → select "Direct" in BLC Activities → and/or select "Episodic," "High Rate/Discrete," or "% Opportunity" in Data Tools.

Class Dojo Data

1. Go to Class Dojo and either sign up or log in.
2. Create a 'New Class,' adding a title and grade.
3. You can invite other teachers via email or by name if they have a Class Dojo account.
4. Add students by initials (no further identifying information).
5. You can send caregiver invites *(Note: I skip this step when using Class Dojo for data purposes).*
6. Go to 'Options → Edit Class' (top right corner) to edit the behaviours to be tracked. *Note: This program is great for frequency data. Ensure each +1 or wanted behaviour has a corresponding –1 or unwanted behaviour and track both!* You can name the behaviour, set points for it, and select a visual. Behaviours can then be imported into other classrooms that you may have.
7. Add data for the students.
8. View the reports from 'Options → View Reports.' Data can be transported to an Excel spreadsheet but I liked to select 'CTRL + PRT SC' on my keyboard to edit the visual in a Word Document or in Paint to share with caregivers.

Google Forms Data

1. Go to Google Drive and select '+ NEW → Google Form.'
2. Add a title with the student's initials (but no further identifying information).
3. Enter the date as Question 1 (select 'DATE' from question options on the top right).
4. Question 2 can be the name of the person taking the data.
5. Question 3 can include the start/end time (select 'TIME' from question options on the top right).
6. Determine the best format for the rest of the questions (ie. short answer, multiple choice, etc.).
7. Write the questions/options and select if the questions will be required (bottom left).
8. When finished, press 'SEND' on the top right bar. Forms can be sent to Prairie South emails.
9. Go back and check the data (can be exported to an Excel spreadsheet).

Conclusion

*"Some is not a **number**. Soon is not a time. Hope is not a **plan**."* – Dep. Minister Dan Florizone

Reflection

Has the behaviour been operationalized (defined with severity levels and features)?

Is the behaviour episodic, high rate/discrete, or by opportunity?

What is your purpose/goal (ie. frequency, duration, severity, or latency data)?
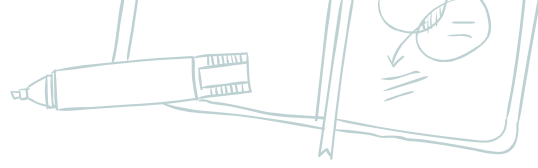
Which data taking method will work best for the team?

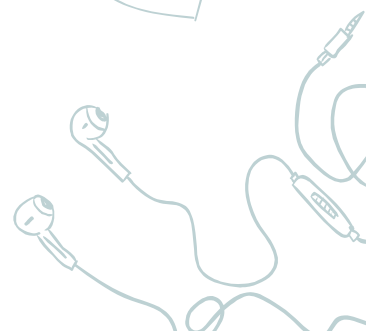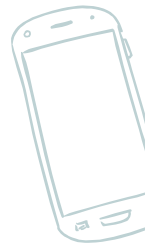When will team members take data (ie. setting, time frame, and for how long)?

Analyze: What is the data telling you about the function of the behaviour and next steps?

Credits

★ For more information, please see the Diversity Series and the Behaviour Learning Cycle on Connect.

Thanks!

Any questions?

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