



The Pursuit of Permanency:

Neurodevelopmentally-Informed Decision
Making for the First 90 Days

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Permanency Paradigm Shift

- Requires a shift from surviving to *thriving*...
- Building better brains
- Brains aren't just born, they're built through experiences
- Stay tuned...two practical tools




Experience Build Brains

Three Core Concepts in Early Development

1 Experiences Build Brain Architecture

NATIONAL SCIENTIFIC COUNCIL ON THE DEVELOPING CHILD

Center on the Developing Child  HARVARD UNIVERSITY



Building Better Brains

- Unparalleled growth in the first three years of life
- Early experiences affect the way infants' brains are wired
- Neurological connections that are not used are naturally pruned
- Relationships matter!
- Lack of attuned relationships and stimulating environments have a lasting impact

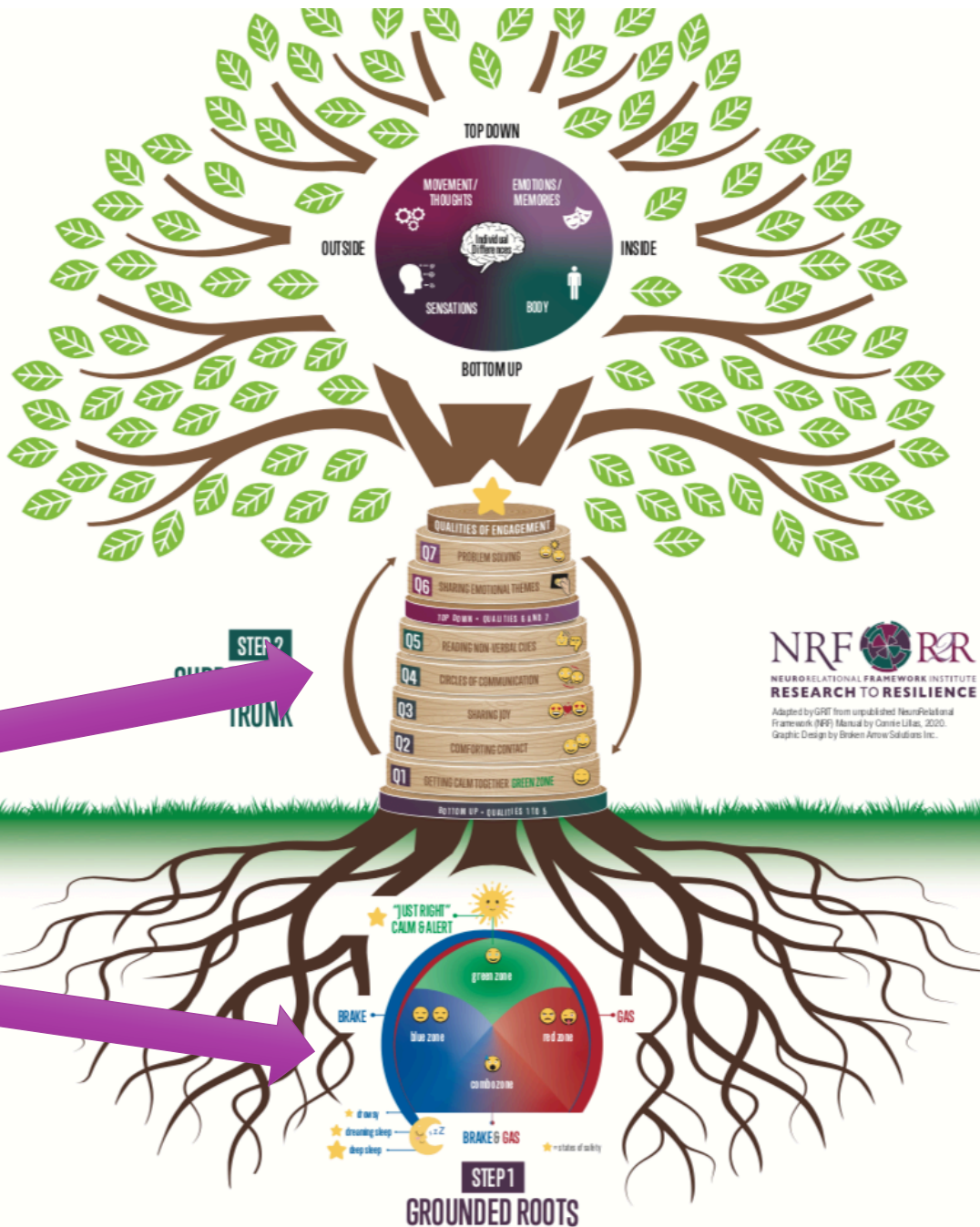


Not just survive but *thrive*...

- In addition to basic survival needs developing brains require:
 - Green zone
 - Deep Sleep
 - Engaged relationships

The THRIVING 3

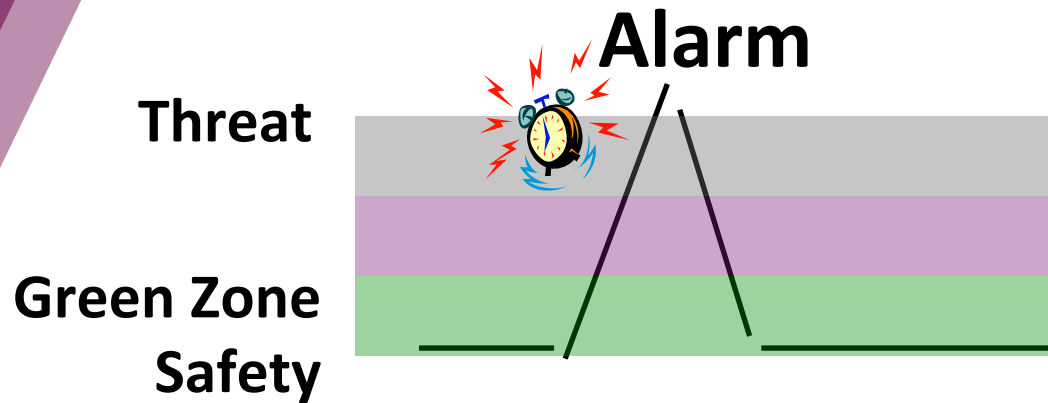




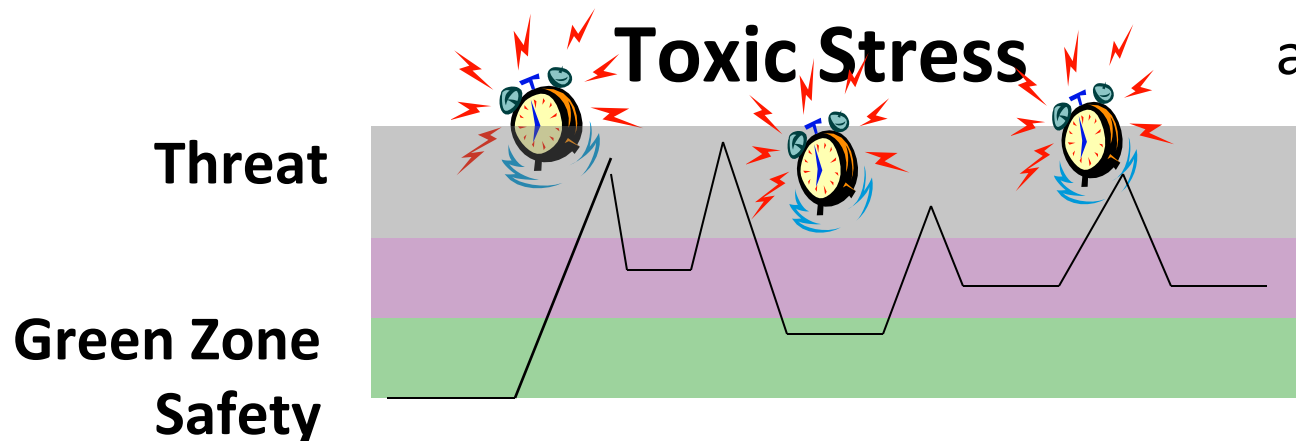
NRF **RRI**
 NEURORELATIONAL FRAMEWORK INSTITUTE
 RESEARCH TO RESILIENCE
 Adapted by GFRF from unpublished NeuroRelational Framework (NRF) Manual by Carrie L. Kas, 2020.
 Graphic Design by Broken Arrow Solutions Inc.

The THRIVING 3

Green Zone & Stress Responses



- When we are **challenged** or under **threat**, there are three **Autonomic Nervous System** stress responses



- **Red zone** with gas
- **Blue zone** with brake
- **Combo zone** with gas and brake





The THRIVING 3

#1
Calm and Alert

Green Zone = Safety,
Alert processing state
for learning and
relationships

Blue Zone =
Brake Pedal

Red Zone =
Gas Pedal



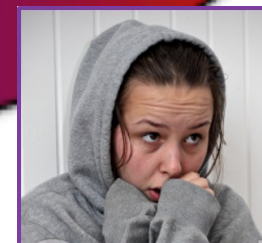
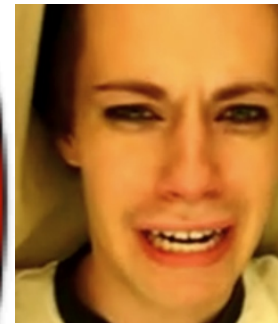
Combo Zone= Gas
and Brake Pedal

Adapted by Jessica Richards and Connie Lillas
based on Lillas & Turnbull, 2009
Revised May2020

Green Zone = Safety,
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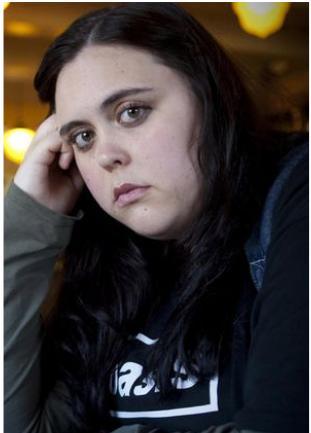
Red Zone =
Gas Pedal

Blue Zone =
Brake Pedal



Combo Zone= Gas
and Brake Pedal

ed by Jessica Richards and Connie Lillas
based on Lillas & Turnbull, 2009
Revised May2020



<p>RED ZONE Too Fast/Gas Pedal</p>	<p><u>EYES</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Open, squinted or closed eyes <input type="checkbox"/> May have direct, intense eye contact <input type="checkbox"/> May avoid eye contact <input type="checkbox"/> Eyes roll upward <input type="checkbox"/> Eyes look quickly around the room <p><u>FACE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Wide, open mouth <input type="checkbox"/> Anger, disgust <input type="checkbox"/> Frown, grimace <input type="checkbox"/> Fake/forced smile <input type="checkbox"/> Clenched jaw or teeth <p><u>VOICE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> High-pitched crying, yelling or screaming <input type="checkbox"/> Loud <input type="checkbox"/> Hostile or grumpy 	<ul style="list-style-type: none"> <input type="checkbox"/> Sarcastic <input type="checkbox"/> Out of control laughing <p><u>BODY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Fingers spread out; body sprawled <input type="checkbox"/> Arched back; tense body position <input type="checkbox"/> Constant motion <input type="checkbox"/> Demands space by pushing, shoving, and getting into others' space <input type="checkbox"/> Biting, hitting, kicking, jumping, throwing <input type="checkbox"/> Bumps into things, falls <input type="checkbox"/> Threatening gestures (shakes finger or fist) <p><u>RHYTHM/RATE OF MOVEMENT</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Fast movements <input type="checkbox"/> Impulsive and/or jerky movements
<p>BLUE ZONE Too Slow/Brake</p>	<p><u>EYES</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Glazed-glassy eyes (looks through rather than at) <input type="checkbox"/> Looks away for a long time, looks down <input type="checkbox"/> Seems drowsy/tired <input type="checkbox"/> Does not look around the room for interesting items <input type="checkbox"/> Looks at things more than people <p><u>FACE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Flat/blank <input type="checkbox"/> Mouth turned down, sad <input type="checkbox"/> No smiles or hints of smiles <input type="checkbox"/> Few emotions shown <input type="checkbox"/> Low tone in the cheeks 	<p><u>VOICE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Flat <input type="checkbox"/> Makes few to no sounds <input type="checkbox"/> Sounds cold, soft, sad, too quiet <p><u>BODY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Slumped/slouching <input type="checkbox"/> Low muscle tone, floppy <input type="checkbox"/> Little or no exploring play or curiosity <input type="checkbox"/> Wanders <input type="checkbox"/> Frozen or slow-moving <p><u>RHYTHM/RATE OF MOVEMENT</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Slow movements <input type="checkbox"/> Slow to start moving
<p>COMBO ZONE Fast & Jerky/Gas & Brake</p>	<p><u>EYES</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Wide open eyes <input type="checkbox"/> Looks around as if worried or scared <input type="checkbox"/> Stares at things <input type="checkbox"/> Rolling of the eyes <p><u>FACE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Raised eyebrows <input type="checkbox"/> Furrowed brow <input type="checkbox"/> Trembling lips or mouth <input type="checkbox"/> Seems in pain <input type="checkbox"/> Mouth wide open <input type="checkbox"/> Startled expression <input type="checkbox"/> Nasal flaring <p><u>VOICE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> High-pitched, nasal, sing-song voice 	<ul style="list-style-type: none"> <input type="checkbox"/> Whimpers <input type="checkbox"/> Wobbly/quivering voice or fast changes in tone <p><u>BODY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Tense or rigid posture <input type="checkbox"/> Cowers, cringes, or hides <input type="checkbox"/> Fast, repetitive movements (wrings hands, shakes foot) <input type="checkbox"/> Trembling hands <input type="checkbox"/> Clings/or grabs others <input type="checkbox"/> Flails around <p><u>RHYTHM/RATE OF MOVEMENT</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Fast movements <input type="checkbox"/> Jerky movements
<p>GREEN ZONE Just Right/Alert</p>	<p><u>EYES</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Bright, shiny eyes <input type="checkbox"/> Looks directly at people, objects <input type="checkbox"/> Looks away for breaks, then returns to eye contact <input type="checkbox"/> Seems alert, takes in information <p><u>FACE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Smiles, shows joy <input type="checkbox"/> Neutral <input type="checkbox"/> Can express all emotions <p><u>VOICE</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Laughing <input type="checkbox"/> Changes in tone 	<p><u>BODY</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Relaxed with good muscle tone <input type="checkbox"/> Stable, balanced and coordinated movements <input type="checkbox"/> Moves arms and legs toward centre of the body <input type="checkbox"/> Molds body into a caring adult when held <input type="checkbox"/> Moves faster or slower depending on environment <p><u>RHYTHM/RATE OF MOVEMENT</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Changes smoothly to respond to the environment <input type="checkbox"/> Movements not too fast or too slow



How do we identify toxic stress patterns?

Recognize stress responses that are *too frequent, too quick /intense, too long*

4 Toxic Stress Patterns

1. Stress responses that occur too frequently and too quickly

- Any color, five or more times per day (under 3 y.o.) OR three or more times a day (over 3 y.o.); intensity level 7 to 10 (0-10)

2. Prolonged stress responses that take too long to recover

- Any color, takes 20 minutes or more to recover

3. Cannot adapt to “normal” challenges and transitions

- Any color, caregiver spends 30% or more of day with stress zones due to transitions or stress zones lasting more than four weeks after a new routine is in place

4. Cannot recover from stress response back to baseline health

- Less than 20% green zone, often with disrupted sleep cycle as well
 - McEwen (2002); Lillas (2016)



How do we identify toxic stress patterns?



**Too frequently /
Too quickly**



**Too long to
recover**



**Tricky
transitions**



**No recovery
to baseline.
Stuck.**



Catch the Balloons



Deep Sleep

The THRIVING 3
#2

- Necessary for healthy brain development
- Restorative on a cellular level
- Supports the immune system, memory, language learning and green zone

Recommended Amount of Sleep for Pediatric Populations*

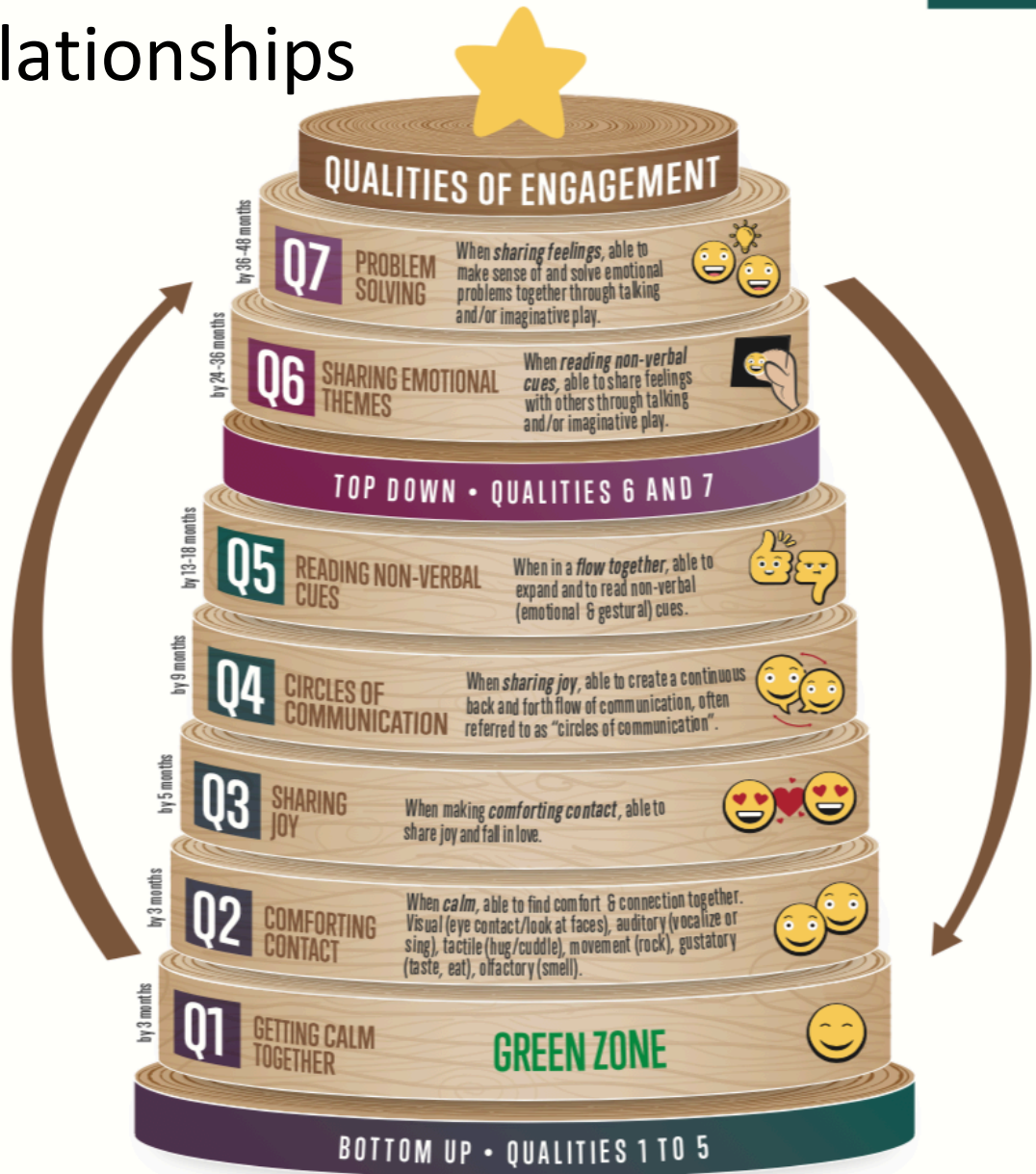
Age	Recommended Sleep Hours per 24 Hour Period
Infants: 4 to 12 months	12 to 16 hours (including naps)
Toddlers: 1 to 2 years	11 to 14 hours (including naps)
Preschoolers: 3 to 5 years	10 to 13 hours (including naps)
Gradeschoolers: 6 to 12 years	9 to 12 hours
Teens: 13 to 18 years	8 to 10 hours

*The American Academy of Pediatrics (AAP) has issued a Statement of Endorsement supporting these guidelines from the American Academy of Sleep Medicine (AASM).

Source: Paruthi S, Brooks LJ, D'Ambrosio C, Hall W, Kotagal S, Lloyd RM, Malow B, Maski K, Nichols C, Quan SF, Rosen CL, Troester MM, Wise MS. Recommended Amount of Sleep for Pediatric Populations: A Statement of the American Academy of Sleep Medicine. J Clin Sleep Med. 2016 May 25. pii: jc-00158-16. PubMed PMID: 27250809.

Engaging Relationships

The THRIVING 3
#3



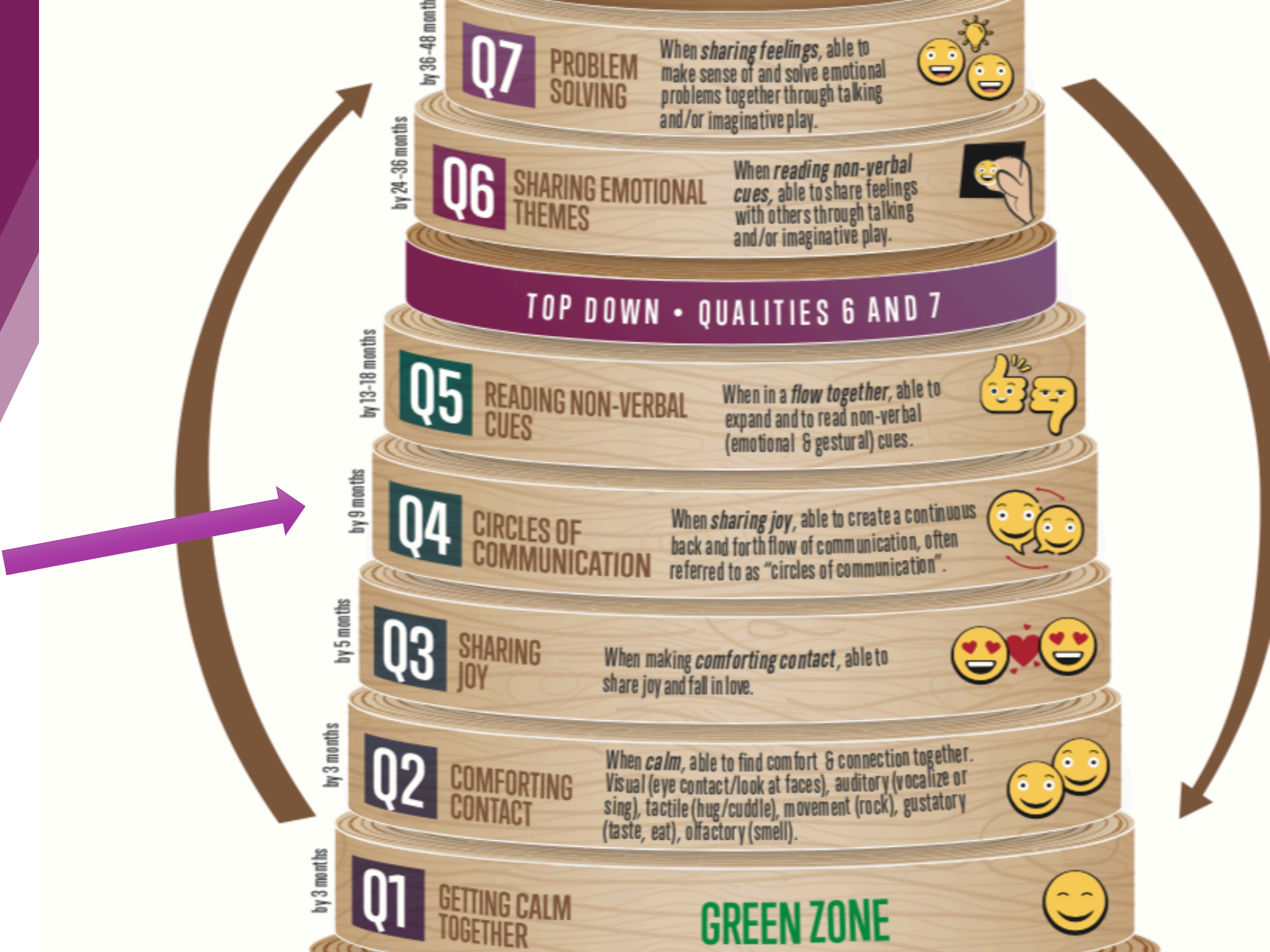
Adapted SE Milestones by C Lillias / Interdisciplinary Training Institute, 2014 Rev. 10/24/2016

From Greenspan, 1985; Greenspan & Wieder, 1988; Axis V from the Diagnostic Classification P-0-3



<https://youtu.be/f-LBuDsblDQ>







Catch the Balloons



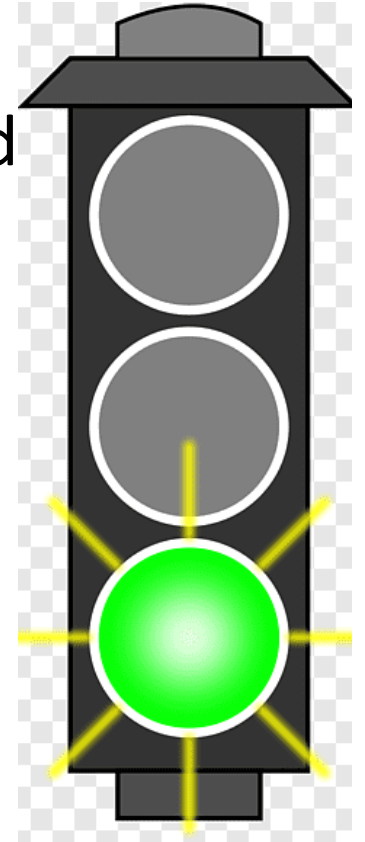
Promoting Permanency

- Prioritize and *stabilize green zone, deep sleep and engagement*
 - Assess or request assessment of stress responses and qualities of engagement
 - Mental health therapist or trained CSW, investigator can provide feedback
- Use info gathered with tools (PIE, checklist and tree trunk) for Neurodevelopmentally informed and ICWA compliant legal decision making



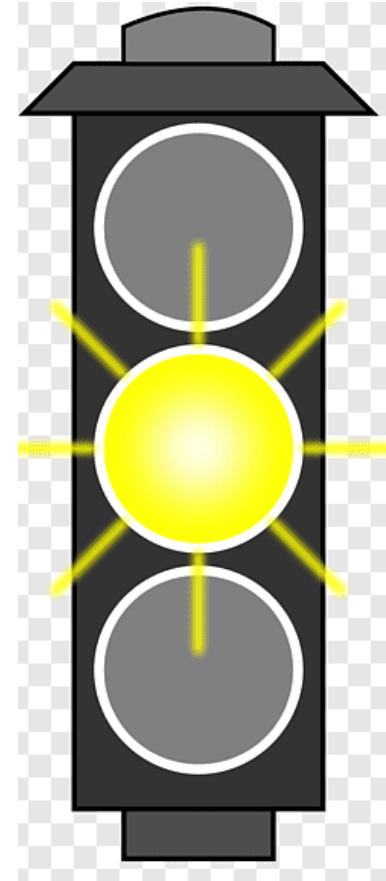
Reading the Signals

- Green light – better green zone, better sleep, better engagement tribally approved
- Keep monitoring but proceed as indicated by case plan



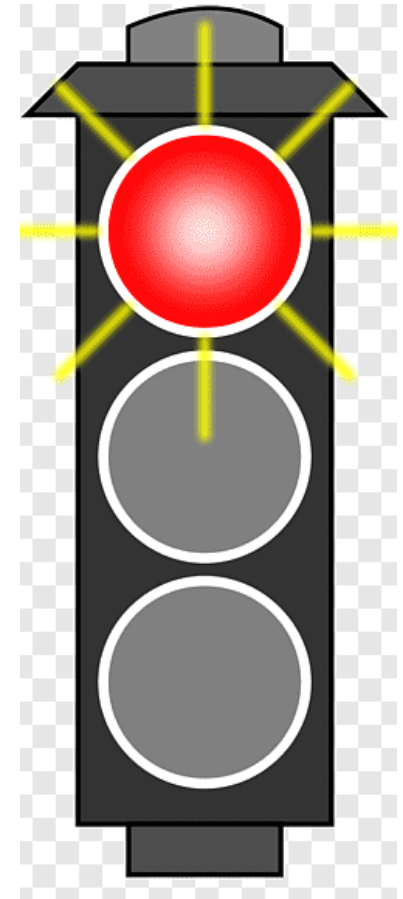
Reading the Signals

- Yellow light- comparable or mixed bag (some better of the thriving 3, some worse)
 - Slow transition, ample overlap, consider mental health support throughout transition, maintain routines, promote communication
 - Maintain both relationships – use “video visits” or in person visits frequently



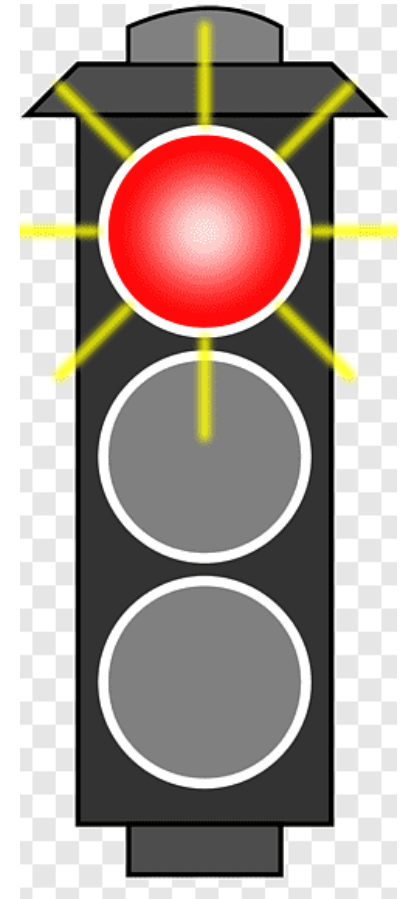
Reading the Signals

- Red light- green zone, sleep and engagement worse
 - Engage dyadic mental health support prior to any increase in visitation – must boost relationship and decrease stress prior to moving forward
 - Request re assessment of stress responses, sleep and engagement
 - Proceed slowly with transition as indicated by progress
 - Use “video visits” frequently to increase exposure prior to increasing in person visitation frequency



Reading the Signals

- Once adequate progress is made and there's a yellow light continue mental health support throughout transition and maintain both relationships
- A caregiver unwilling to support robust relationships for a child is a red flag



Catch the Balloons



Growing the Green

- Avoid other changes – providers, CSW, school
- Maintain established routines around sleep, feeding, comfort, caregiving and play
- Include familiar environmental comfort cues
- Promote shared parenting



my day

m + w th f

i did

i was...

Happy Sleepy Chatty Busy
Curious Grumpy Quiet

i ate...

All Some None

i need

Diapers
 Clothes

Other: _____

i went...

wet dirty when: _____
 wet dirty when: _____
 wet dirty when: _____
 wet dirty when: _____

i slept...

when: _____ how long: _____
when: _____ how long: _____

my day

m + w th f

i did

i was...

Happy Sleepy Chatty Busy
Curious Grumpy Quiet

i ate...

All Some None

i need

Diapers
 Clothes

Other: _____

i went

wet dirty when: _____
 wet dirty when: _____
 wet dirty when: _____
 wet dirty when: _____

i slept...



Maintaining Routines

What is the routine around waking up? What time?

When does the baby/child take nap(s) during the day?

What is the rhythm and timing of feeding/eating for the baby/child?

For infants under one year, what foods does the baby eat and enjoy? Does the baby drink from a bottle? If so, what type/brand of bottle? What does the baby drink in the bottle and how much each feeding? Any intolerance or allergies or excessive spitting up/reflux?

For toddlers and young children, what foods does the child eat and enjoy? How often does the child eat? Any food intolerance or allergies?

What are the baby/child's favorite playtime activities and toys?



Resources and Works Cited

- A Review of the Effects of Sleep During the First Year of Life on Cognitive, Psychomotor, and Temperament Development
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2768951/>
- [The Neurorelational Framework www.NRFR2R.com](http://www.NRFR2R.com)
- Harvard Center for the Developing Child
<https://developingchild.harvard.edu>
- McEwen <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1197275/>
- Lillas, C. & Turnbull, J. (2009). *Infant/Child Mental Health, Early Intervention, and Relationship-Based Therapies: A Neurorelational Framework for interdisciplinary Practice*. New York: Norton.
- Zerotothree.org
- Acestoohigh.com
- <https://www.healthychildren.org/English/ages-stages/baby/sleep/Pages/default.aspx>



Thank you!

