

## Why Trauma Matters

Most U.S. schools remain closed in an attempt to limit the spread of COVID-19,<sup>1</sup> causing districts to ask how the pandemic will affect students socially, emotionally, and academically. The literature on childhood trauma can offer useful insights to districts, because, as a public health crisis, COVID-19 itself represents a distressing incident.<sup>2</sup> Such research also holds relevance, however, because how students react to COVID-19 will depend on whether they previously have experienced—or currently are experiencing—other types of trauma, in the form of either short-term acute traumatic events or long-term chronic traumatic situations.<sup>3</sup> In fact, with evidence suggesting that as many as two-thirds of children have suffered at least one traumatic event by age 16<sup>4</sup> and more than half of families have lived through a disaster,<sup>5</sup> examining the potential effects of COVID-19 through the lens of childhood trauma seems essential.

### Types of Childhood Trauma

ACUTE TRAUMATIC EVENTS	CHRONIC TRAUMATIC SITUATIONS
DEFINITION	DEFINITION
Short-lived trauma that occurs at a particular time and place	Trauma that occurs repeatedly and/or over long periods of time
EXAMPLES	EXAMPLES
Community violence, natural disasters, painful medical procedures, physical assaults, school shootings, serious accidents, sexual assaults, sudden losses of loved ones, and terrorist attacks	Abandonment, bullying, domestic violence, emotional abuse, financial insecurity, homelessness, neglect, physical abuse, serious illness, sexual abuse, and war or other forms of political violence

Sources: Multiple<sup>6</sup>

Importantly, the literature provides findings pertaining to the effects of trauma more generally and does not address COVID-19 specifically—a logical caveat given the unprecedented and ongoing nature of the pandemic. Efforts to understand COVID-19's impact remain further complicated by continued uncertainty regarding the pandemic's severity and duration, with the crisis resembling an acute traumatic event initially and perhaps evolving into a chronic traumatic situation (especially for families who encounter financial insecurity and/or homelessness due to unemployment).

## How Trauma Impacts Students

### Confounding Factors

Research notes the social-emotional and academic effects most commonly associated with childhood trauma. Yet, individual students may experience trauma differently. The same distressing event may impact two students in seemingly disparate ways based on a set of confounding factors that protect some individuals when confronted by trauma while placing others at greater risk of harm.<sup>7</sup> Such confounding factors include a complex combination of individual, familial, community, and cultural variables. At the individual level, the age at which students face trauma influences their response, as does their temperament (e.g., coping skills, resilience), prior history of trauma, and any preexisting intellectual or developmental disabilities. The National Child Traumatic Stress Network, for example, offers resources to assist educators in understanding how trauma impacts elementary, middle, and high school students. With respect to other variables, familial factors, such as financial (in)security, housing (in)security, (un)healthy relationships, and exposure to domestic violence and other forms of abuse, as well as access to community supports and services also shape students' responses to trauma.<sup>8</sup>

### Social-Emotional Effects

Trauma adversely affects students' capacity to regulate emotions and control behaviors and inhibits relationships with both teachers and peers.<sup>9</sup> Students may become hypervigilant, perceiving any

event that reminds them of a traumatic incident as threatening and then opting for an excessive response.<sup>10</sup> For example, students may misinterpret others' comments and actions as hostile and then react in a verbally- and/or physically-aggressive manner. Students also may not comply with teachers, either engaging in actively-defiant behavior to gain control or "passively and perhaps less consciously 'freezing.'"<sup>11</sup> Students may withdraw more generally, mentally dissociating from the classroom as a coping mechanism. Yet, trauma may cause some students to seek control over situations by developing perfectionist tendencies and setting unreasonable expectations for both themselves and their work.<sup>12</sup> Regarding relationships, trauma may make students more reluctant to engage with others. Students who feel unsafe at school, for example, may become distrustful of—and even confrontational toward—teachers.<sup>13</sup> Students also may become less inclined to initiate and then struggle to cultivate friendships with peers.<sup>14</sup> As to how these students fare in terms of behavioral outcomes at school, trauma tends to correlate with increased likelihood of absenteeism, behavioral problems, suspensions, and expulsions.<sup>15</sup>

## Academic Effects

Trauma typically contributes to poor academic outcomes as well. In addition to achieving at lower levels, affected students become more likely to encounter learning difficulties, need added supports and interventions (including special education placements), experience grade retention, and drop out.<sup>16</sup> The precise mechanism(s) through which trauma influences academic outcomes remains unclear. Some research suggests that trauma impacts brain development, with the specific regions and skills affected dependent on the age(s) at which a distressing event or situation occurs.<sup>17</sup> Other research indicates that trauma erodes academic outcomes by inhibiting students' capacity to regulate their emotions and behavior as outlined above.<sup>18</sup> However, such explanations do not prove mutually exclusive, given the relationship between neurodevelopment and emotional functioning (e.g., the amygdala supports processing of social and emotional cues).

### Social-Emotional Effects of Childhood Trauma

Reactivity and Impulsivity	Aggression
Defiance	Withdrawal
Perfectionism	Strained Relationships

Source: Cole et al.

### Academic Effects of Childhood Trauma

<b>Language Skills</b> If hypervigilant, students may become unable to pay attention to and process new information. Further, students may develop a distorted sense of the purpose of communication, perceiving language as means of accomplishing tasks instead of a mechanism for sharing thoughts and feelings. Students also may lack exposure to more complex use of language.	<b>Organizational Skills</b> If subjected to an uncertain, unpredictable environment, students may find organizing material difficult, especially when attempting to order content sequentially.	<b>Causal Reasoning Skills</b> Students' limited exploration of the world (due to their own fear and/or others' restrictions) may hinder their understanding of cause-effect relationships and their ability to empathize with others.
<b>Attention Skills</b> Students' anxiety and preoccupation with safety may cause them to focus on others' attitudes and behavior, thus compromising their ability to concentrate on learning. Memory skills also appear compromised.	<b>Emotional Skills</b> Students may lack the capacity to understand and express the range of emotions they feel, leading them to dissociate or overreact. Both forms of response disrupt their learning.	<b>Executive Skills</b> Students may develop low self-esteem and patterns of negative thinking that impede efforts to set goals, develop plans, and implement action steps.

Sources: Multiple<sup>19</sup>

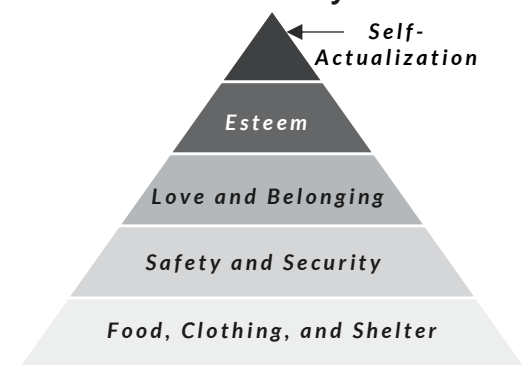
## Spotlight: Lessons from Disasters

Research on disasters, the types of traumatic events most likely to result in school closures, may shed light on COVID-19's potential social, emotional, and academic effects on students. In a 2015 literature review, Pfefferbaum, Jacobs, Houston, and Griffin examined how familial and community factors influenced children's reactions to disasters, such as hurricanes, tsunamis, earthquakes, and terrorist incidents.<sup>20</sup> The authors found that low socioeconomic status, high parental stress levels, poor parental coping skills, intense media exposure, and secondary adversities—including "property damage," "dislocation and relocation," "disruption of services" (e.g., food, shelter, transportation), and "economic loss"—correlated with greater emotional distress among children.<sup>21</sup> In contrast, social supports, provided by families, peers, schools, and/or other community resources, seemed to offer some protection.<sup>22</sup> Research on the impact of Hurricane Katrina, in particular, consistently finds evidence of harmful social-emotional effects on children, including greater susceptibility to serious emotional disturbances and diagnoses of depression, anxiety, or behavioral disorders. Studies of the academic effects, however, draw differing conclusions.<sup>23</sup> On the other hand, findings from a 2019 study by Gibbs et al. of elementary school students who experienced a 2009 Australian bushfire imply that a disaster may erode academic achievement across multiple years. The study analyzed students' test scores from Grade 1 (the year of the bushfire), Grade 3, and Grade 5. When comparing results for Grades 3 and 5, the authors determined that students attending the most affected schools recorded significantly less improvement in reading and numeracy.<sup>24</sup> Thus, the bushfire continued to impact students academically four years later.

## How Districts Mitigate the Effects of Trauma

As districts consider how to support students in the midst of a traumatic event such as COVID-19, Maslow's hierarchy of needs may provide a useful starting point.<sup>25</sup> According to Maslow, individuals prioritize meeting basic needs—such as obtaining food, clothing, and shelter and ensuring safety and security—first. Notably, Maslow's conceptualization of security extends beyond *physical* protection to encompass aspects of social, emotional, and financial stability as well. Having met fundamental needs, individuals then seek emotional and psychological fulfillment by forming relationships, earning others' respect, and building self-esteem. Individuals who reach the pinnacle of personal growth, self-actualization, realize their full potential and live with purpose and meaning.<sup>26</sup>

### Maslow's Hierarchy of Needs



Source: Block

### Guiding Principles of Trauma-Informed Practices



Create predictable routines.



Build strong & supportive relationships.



Empower students' agency.



Support the development of self-regulation skills.



Provide opportunities to explore individual & community identities.

Source: Transforming Education

Given that traumatic events often erode students' sense of well-being in multiple key respects, frameworks intended to guide trauma-informed practices in districts understandably build upon Maslow's hierarchy.<sup>27</sup> Predictable routines, for example, create stability, helping students feel safe. Strong, supportive relationships not only offer concerned students an added layer of protection, but also tend to their emotional and psychological needs. Successful implementation of a trauma-informed approach requires a comprehensive set of strategies and the involvement of stakeholders across the school community. Trauma-informed schools typically realize "the widespread impact of trauma and pathways to recovery," recognize the signs and symptoms of trauma, respond "by integrating knowledge [of] trauma into all facets

of the system,” and resist “re-traumatization” by minimizing “unnecessary triggers.”<sup>28</sup> The following figure outlines the areas that trauma-informed schools typically prioritize. However, please refer to the frameworks developed by the [National Child Traumatic Stress Network](#) and the [Wisconsin Department of Public Instruction](#) for more detailed descriptions of individual features. Because such approaches generally evolved to support students in the school setting, however, districts may need to adapt certain strategies and/or incorporate new techniques to suit the distance learning necessitated by COVID-19.

## Strategies for Trauma-Informed Schools

<b>Raising Awareness</b>	Foster an understanding of childhood trauma, including the causes, symptoms, and potential effects on social-emotional and academic outcomes.
<b>Identifying Needs</b>	Create mechanisms for identifying students currently experiencing, or at risk of experiencing, trauma. Learn, if possible, the histories of any past traumas students and families suffered. Determine appropriate supports.
<b>Ensuring Safety</b>	Ensure all students feel physically, socially, and emotionally safe. Create calming, welcoming learning environments. Avoid stimuli (e.g., lights, colors, sounds) that trigger students. Provide reassurances. Use de-escalation techniques.
<b>Creating Consistency</b>	Establish a sense of constancy and predictability by creating schedules and routines and communicating clear sets of rules and expectations.
<b>Building Relationships</b>	Foster positive, healthy relationships among students, as well as between students and teachers. Create connections and establish trust. Check in regularly.
<b>Teaching Self-Regulation</b>	Cultivate skills that enable students to avoid becoming hypervigilant in stressful situations (i.e., preventing a fight, flight, or freeze response). Build resilience.
<b>Engaging Families</b>	Help families assist students at home with effective stress management strategies. Encourage families to seek additional supports as needed, understanding that parents also may exhibit signs of trauma. Respect cultural differences.
<b>Forming Partnerships</b>	Collaborate with community-based organizations and providers to connect students and families with necessary services and supports.

Sources: Multiple<sup>29</sup>

In recent weeks, key organizations focused on children’s mental health and social-emotional well-being created various resources to support students during COVID-19-related school closures. The content reflects best practices learned while addressing the effects of other forms of childhood trauma. For example, during the crisis, the [National Child Traumatic Stress Network](#) advises adults to:<sup>30</sup>

- Limit children’s media exposure
- Correct inaccurate information
- Start a conversation with children
- Encourage children to ask questions, then answer directly
- Provide reassurance
- Re-establish a routine
- Validate children’s emotions
- Understand common responses to stress
- Help children self-regulate
- Help children stay connected
- Acknowledge missed milestones (e.g., graduation)
- Be a positive role model
- Practice self-care
- Seek extra supports and services

## Additional Resources

Child Mind Institute: [Supporting Kids During the Coronavirus Crisis](#)  
Child Mind Institute: [Supporting Teenagers and Young Adults During the Coronavirus Crisis](#)  
Child Trends: [Resources for Supporting Children's Emotional Well-being During the COVID-19 Pandemic](#)  
NASP: [Helping Children Cope with Changes Resulting From COVID-19](#)  
Teaching Tolerance: [A Trauma-Informed Approach to Teaching Through Coronavirus](#)  
Turnaround for Children: [Coronavirus \(COVID-19\) Pandemic Resources](#)

## Discussion Guide for District Leaders

- How can your district most effectively identify signs of trauma among students and families while schools remain closed?
- How can your district learn from students and families which supports and services they need?
- How can your district collaborate with community partners to support students and families?
- How might your district need to adapt trauma-informed practices to accommodate virtual learning and social distancing?
- Which forms of additional training and resources might your staff need to support students and families? Which resources might families need to support their children?
- Thinking ahead to when schools reopen, which steps can your district take to further mitigate the social-emotional and academic effects of COVID-19?

## Endnotes

- <sup>1</sup> "Map: Coronavirus and School Closures." *Education Week*. <https://www.edweek.org/ew/section/multimedia/map-coronavirus-and-school-closures.html>
- <sup>2</sup> "Disasters." The National Child Traumatic Stress Network. <https://www.nctsn.org/what-is-child-trauma/trauma-types/disasters>
- <sup>3</sup> "About Child Trauma." The National Child Traumatic Stress Network. <https://www.nctsn.org/what-is-child-trauma/about-child-trauma>
- <sup>4</sup> Copeland, W.E., G. Keeler, A. Angold, and E.J. Costello. "Traumatic Events and Posttraumatic Stress in Childhood." *Archives of General Psychiatry*, 64:5, 2007. [https://www.researchgate.net/publication/6345030\\_Traumatic\\_Events\\_and\\_Posttraumatic\\_Stress\\_in\\_Childhood](https://www.researchgate.net/publication/6345030_Traumatic_Events_and_Posttraumatic_Stress_in_Childhood)
- <sup>5</sup> "What Are You Waiting For? 2014 National Report Card on Protecting Children in Disasters." Save the Children, 2014. <https://www.savethechildren.org/content/dam/usa/reports/emergency-prep/disaster-report-2014.pdf>
- <sup>6</sup> [1] "SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach." Substance Abuse and Mental Health Services Administration, July 2014. <https://store.samhsa.gov/product/SAMHSA-s-Concept-of-Trauma-and-Guidance-for-a-Trauma-Informed-Approach/SMA14-4884> [2] Gerrity, E. and C. Folcarelli. "Child Traumatic Stress: What Every Policymaker Should Know." The National Child Traumatic Stress Network, September 2008. [https://www.nctsn.org/sites/default/files/resources//child\\_traumatic\\_stress\\_what\\_policymakers\\_should\\_know.pdf](https://www.nctsn.org/sites/default/files/resources//child_traumatic_stress_what_policymakers_should_know.pdf) [3] "Trauma Types." The National Child Traumatic Stress Network. <https://www.nctsn.org/what-is-child-trauma/trauma-types> [4] Krasnoff, B. "A Practitioner's Guide to Educating Traumatized Children." Education Northwest. <https://educationnorthwest.org/sites/default/files/resources/educating-traumatized-children.pdf> [5] Rodenbush, K. "The Effects of Trauma on Behavior in the Classroom." Monterey County Office of Education, 2015. <https://docplayer.net/25954072-The-effects-of-trauma-on-behavior-in-the-classroom-presented-by-kacey-rodenbush-lmft-behavioral-health-unit-supervisor.html>
- <sup>7</sup> [1] "About Child Trauma," Op. cit. [2] "SAMHSA's Concept of Trauma and Guidance for a Trauma-Informed Approach," Op. cit. [3] "The 12 Core Concepts: Concepts for Understanding Traumatic Stress Responses in Children and Families." The National Child Traumatic Stress Network, 2012. [https://www.nctsn.org/sites/default/files/resources//the\\_12\\_core\\_concepts\\_for\\_understanding\\_traumatic\\_stress\\_responses\\_in\\_children\\_and\\_families.pdf](https://www.nctsn.org/sites/default/files/resources//the_12_core_concepts_for_understanding_traumatic_stress_responses_in_children_and_families.pdf) [4] "Child Trauma Toolkit for Educators." The National Child Traumatic Stress Network, 2008. [https://www.nctsn.org/sites/default/files/resources//child\\_trauma\\_toolkit\\_educators.pdf](https://www.nctsn.org/sites/default/files/resources//child_trauma_toolkit_educators.pdf)
- <sup>8</sup> Ibid.
- <sup>9</sup> [1] Cole, S.F. et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1." Massachusetts Advocates for Children, Harvard Law School, and Task Force on Children Affected by Domestic Violence. 2005. <https://traumasensitiveschools.org/tlpi-publications/download-a-free-copy-of-helping-traumatized-children-learn/> [2] Miller, C. "How Trauma Affects Kids in School." Child Mind Institute. <https://childmind.org/article/how-trauma-affects-kids-school/> [3] Brunzell, T., L. Waters, and H. Stokes. "Teaching With Strengths in Trauma-Affected Students: A New Approach to Healing and Growth in the Classroom." *American Journal of Orthopsychiatry*, 85:1, 2015. <https://pdfs.semanticscholar.org/a641/39bc07d810055ddd9ee796aad112df260386.pdf> [4] "The 12 Core Concepts: Concepts for Understanding Traumatic Stress Responses in Children and Families," Op. cit. [5] "Child Trauma Toolkit for Educators," Op. cit. [6] Rodenbush, Op. cit. [7] Krasnoff, Op. cit. [8] Downey, L. "Calmer Classrooms: A Guide to Working with Traumatized Children." Child Safety Commissioner, State of Victoria, June 2007. [http://makiningsenseoftrauma.com/wp-content/uploads/2016/02/calmer\\_classrooms.pdf](http://makiningsenseoftrauma.com/wp-content/uploads/2016/02/calmer_classrooms.pdf) [9] Tobin, M. "Childhood Trauma: Developmental Pathways and Implications for the Classroom." *Changing Minds: Discussions in Neuroscience, Psychology and Education*, 3, July 2016. [https://research.acer.edu.au/cgi/viewcontent.cgi?article=1019&context=learning\\_processes](https://research.acer.edu.au/cgi/viewcontent.cgi?article=1019&context=learning_processes)
- <sup>10</sup> [1] Miller, Op. cit. [2] "Child Trauma Toolkit for Educators," Op. cit. [3] Rodenbush, Op. cit. [4] McInerney, M. and A. McKlindon. "Unlocking the Door to Learning: Trauma-Informed Classrooms and Transformational Schools." Education Law Center, December 2014. <https://www.elc-pa.org/wp-content/uploads/2015/06/Trauma-Informed-in-Schools-Classrooms-FINAL-December2014-2.pdf> [5] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [6] Downey, Op. cit.
- <sup>11</sup> [1] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [2] Downey, Op. cit.
- <sup>12</sup> [1] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [2] Downey, Op. cit.
- <sup>13</sup> [1] Miller, Op. cit. [2] McInerney and McKlindon, Op. cit. [3] Rodenbush, Op. cit. [4] Krasnoff, Op. cit. [5] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit.
- <sup>14</sup> [1] Rodenbush, Op. cit. [2] Krasnoff, Op. cit. [3] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [4] Downey, Op. cit.



- <sup>15</sup> [1] Rodenbush, Op. cit. [2] Krasnoff, Op. cit. [3] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [4] Burke, N.J., J.L. Hellman, B.G. Scott, C.F. Weems, and V.G. Carrion. "The Impact of Adverse Childhood Experiences on an Urban Pediatric Population." *Child Abuse & Neglect*, 35:6, June 2011. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3119733/pdf/nihms292567.pdf>
- <sup>16</sup> [1] "Child Trauma Toolkit for Educators," Op. cit. [2] Rodenbush, Op. cit. [3] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [4] Krasnoff, Op. cit. [5] Tobin, Op. cit. [6] McNerney and McKlindon, Op. cit. [7] Brunzell, Waters, and Stokes, Op. cit. [8] Burke, Hellman, Scott, Weems, and Carrion, Op. cit. [9] Goodman, R., M. Miller, and C. West-Olatunji. "Traumatic Stress, Socioeconomic Status, and Academic Achievement Among Primary School Students." *Psychological Trauma: Theory, Research, Practice, and Policy*, 4:3, 2012. [https://www.researchgate.net/publication/232560514\\_Traumatic\\_Stress\\_Socioeconomic\\_Status\\_and\\_Academic\\_Achievement\\_Among\\_Primary\\_School\\_Students](https://www.researchgate.net/publication/232560514_Traumatic_Stress_Socioeconomic_Status_and_Academic_Achievement_Among_Primary_School_Students)
- <sup>17</sup> [1] McNerney and McKlindon, Op. cit. [2] "The 12 Core Concepts: Concepts for Understanding Traumatic Stress Responses in Children and Families," Op. cit. [3] Krasnoff, Op. cit. [4] Downey, Op. cit. [5] Tobin, Op. cit.
- <sup>18</sup> [1] McNerney and McKlindon, Op. cit. [2] "Child Trauma Toolkit for Educators," Op. cit. [3] Krasnoff, Op. cit. [4] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [5] Downey, Op. cit.
- <sup>19</sup> [1] Cole, et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 1," Op. cit. [2] Krasnoff, Op. cit. [3] Rodenbush, Op. cit. [4] Miller, Op. cit. [5] McNerney and McKlindon, Op. cit. [6] "Child Trauma Toolkit for Educators," Op. cit. [7] Downey, Op. cit. [8] Tobin, Op. cit.
- <sup>20</sup> Pfefferbaum, B., A. Jacobs, J. Houston, and N. Griffin. "Children's Disaster Reactions: The Influence of Family and Social Factors." *Current Psychiatry Reports*, 17: 7, June 2015. [https://www.researchgate.net/publication/276543203\\_Children's\\_Disaster\\_Reactions\\_the\\_Influence\\_of\\_Family\\_and\\_Social\\_Factors](https://www.researchgate.net/publication/276543203_Children's_Disaster_Reactions_the_Influence_of_Family_and_Social_Factors)
- <sup>21</sup> Ibid.
- <sup>22</sup> Ibid.
- <sup>23</sup> [1] Abramson, D. Y.S. Park, T. Stehling-Ariza and I. Redlener "Children as Bellwethers of Recovery: Dysfunctional Systems and the Effects of Parents, Households, and Neighborhoods on Serious Emotional Disturbance in Children After Hurricane Katrina." *Disaster Medicine and Public Health Preparedness*, 4:51, September 2010. <https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/article/children-as-bellwethers-of-recovery-dysfunctional-systems-and-the-effects-of-parents-households-and-neighborhoods-on-serious-emotional-disturbance-in-children-after-hurricane-katrina/AE525D70DA90C9F0EA1A20AF493B780E#> [2] Chan, C. and J. Rhodes. "Measuring Exposure in Hurricane Katrina: A Meta-Analysis and an Integrative Data Analysis." *PLOS ONE*, 9:4, 2014. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3979656/pdf/pone.0092899.pdf> [3] Ward, M.E., K. Shelley, K. Kaase, and J.F. Pane. "Hurricane Katrina: A Longitudinal Study of the Achievement and Behavior of Displaced Students." *Journal of Education for Students Placed at Risk*, 13:2-3, 2008. <https://psycnet.apa.org/record/2008-14746-006> [4] Lamb, J., M. Lewis, and S. Gross. "The Hurricane Katrina Effect on Mathematics Achievement in Mississippi." *School Science and Mathematics*, 113:2, February 2013. Accessed via EBSCOhost.
- <sup>24</sup> [1] Gibbs, L. et al. "Delayed Disaster Impacts on Academic Performance of Primary School Children." *Child Development*, 90:4, July/August 2019. <https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/cdev.13200> [2] Becker, R. "Wildfires Take a Toll on Students' Test Scores Years after the Smoke Clears." *The Verge*, January 24, 2019. <https://www.theverge.com/2019/1/24/18195267/wildfires-australia-california-children-survivors-school-learning>
- <sup>25</sup> [1] Block, M. "Maslow's Hierarchy of Needs." In Goldstein, S. and J.A. Naglieri (eds.). *Encyclopedia of Child Behavior and Development*. Springer: Boston, 2011. [2] Villarica, H. "Maslow 2.0: A New and Improved Recipe for Happiness." *The Atlantic*, August 17, 2011. <https://www.theatlantic.com/health/archive/2011/08/maslow-20-a-new-and-improved-recipe-for-happiness/243486/#.TkVkiRv8USE.facebook> [3] McLeod, S. "Maslow's Hierarchy of Needs." *Simply Psychology*, March 20, 2020. <https://www.simplypsychology.org/maslow.html>
- <sup>26</sup> Ibid.
- <sup>27</sup> "Trauma-Informed SEL Toolkit." *Transforming Education*, January 28, 2020. <https://www.transformingeducation.org/trauma-informed-sel-toolkit/>
- <sup>28</sup> "Creating, Supporting, and Sustaining Trauma-Informed Schools: A System Framework." *The National Child Traumatic Stress Network*, 2017. [https://www.nctsn.org/sites/default/files/resources/creating\\_supporting\\_sustaining\\_trauma\\_informed\\_schools\\_a\\_systems\\_framework.pdf](https://www.nctsn.org/sites/default/files/resources/creating_supporting_sustaining_trauma_informed_schools_a_systems_framework.pdf)
- <sup>29</sup> [1] Cole, S.F. et al. "Helping Traumatized Children Learn: Supportive School Environments for Children Traumatized by Family Violence, Vol. 2." *Massachusetts Advocates for Children, Harvard Law School, and Task Force on Children Affected by Domestic Violence*. 2013. <https://traumasensitiveschools.org/tlpi-publications/download-a->

[free-copy-of-a-guide-to-creating-trauma-sensitive-schools/](#) [2] Craig, S.E. "The Trauma-Sensitive Teacher." *Educational Leadership*, September 2016.

[http://www.ascd.org/publications/educational\\_leadership/sept16/vol74/num01/The\\_Trauma-Sensitive\\_Teacher.aspx](http://www.ascd.org/publications/educational_leadership/sept16/vol74/num01/The_Trauma-Sensitive_Teacher.aspx) [3] "Creating, Supporting, and Sustaining Trauma-Informed Schools: A System Framework," Op. cit. [4] "Strategies and Resources to Create a Trauma-Sensitive School." Wisconsin Department of Public Instruction. <https://dpi.wi.gov/sites/default/files/imce/sspw/pdf/traumastrategies.pdf> [5] McInerney and McKlindon, Op. cit. [6] Downey, Op. cit.

<sup>30</sup> Bulleted text adapted from: "Supporting Children During Coronavirus (COVID19)." National Child Traumatic Stress Network, 2020. <https://www.nctsn.org/sites/default/files/resources/fact-sheet/supportingchildren-covid-factsheet.pdf>