



PROMOTING DISASTER  
LITERACY & RESILIENCE  
THROUGH INTEGRATION OF  
IBM WATSON TECHNOLOGY



# PREPBIZ TRAUMA-INFORMED SOLUTION

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# TRAUMA INFORMED

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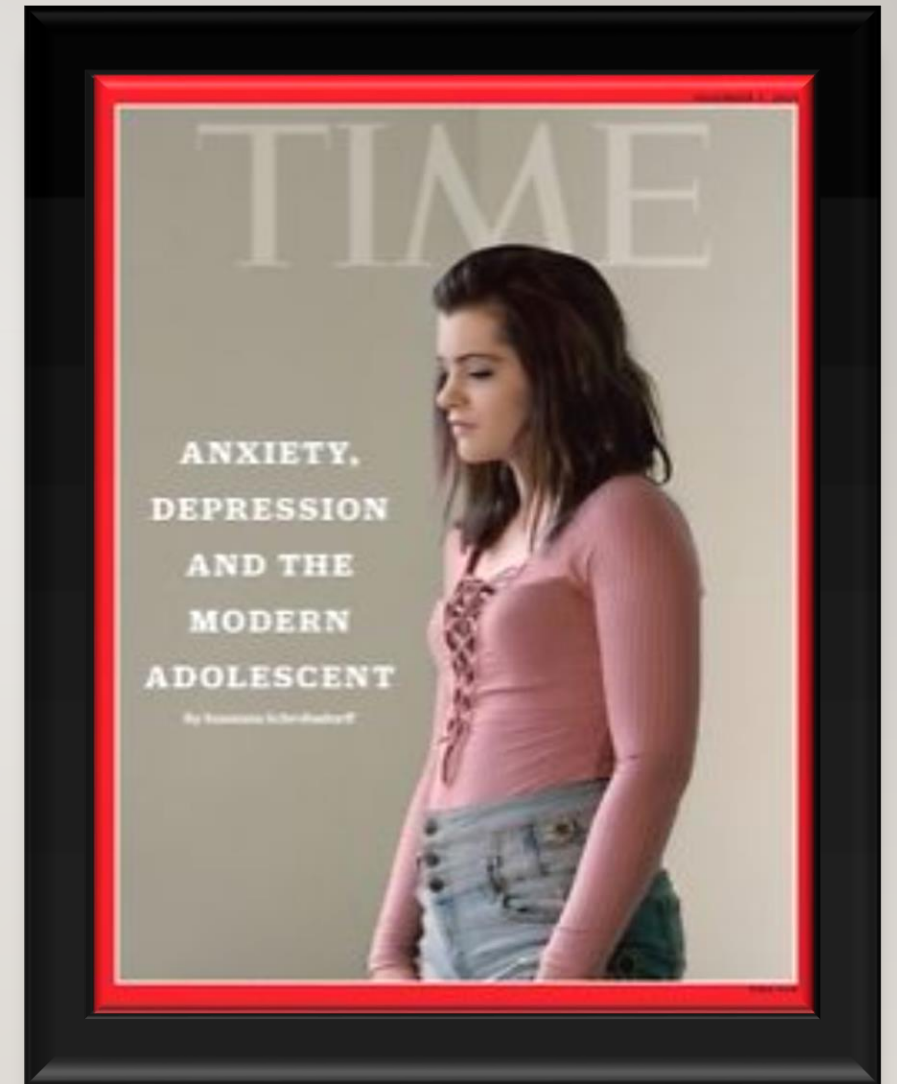
- Trauma informed means that individuals in organizations are educated on the causes and effects of trauma and understand the potential to re-traumatize individuals by providing services and/or interactions in a manner that is **not sensitive** to their experiences and needs.

# COVER TIME MAGAZINE

(NOVEMBER 2016)

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- In 2015, about 3 million teens ages 12-17 had at least one major depressive episode in the past year according to the Department of Health and Human Services.







Each year millions of children are impacted by disasters impacting their lives, families, schools and communities

# Building Resilience

- Children who make it have more resources in their minds, bodies, families and communities
- The greatest threats to children happen when the adaptive systems that normally protect development are harmed or destroyed





Resilience is what enables children to emerge from challenging experiences with a positive sense of themselves and their futures.

Research has since established resilience as essential for human thriving, and an ability necessary for the development of healthy, adaptable young people.



# RESILIENCE CAN BE PROMOTED USING GAME-BASED LEARNING

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- Successful prevention programs alter the balance of risks and assets and introduce powerful systems and programs for human development
- Interventions that work often combines strategies that promote competence, confidence and connectivity with those that reduce problems.





THIS IS **NOT** GAME-BASED LEARNING





# Where PrepWorld Began?

These children are looking for their parents. If you recognize any of these children, please contact the Louisiana Clearinghouse at **1-225-342-8631**. If you are unable to contact the Louisiana Clearinghouse, please call The National Center for Missing & Exploited Children at **1-800-THE LOST(1-800-843-5678)**

Click on the photo below for information on the child



# PARENTS ARE ANXIOUS BUT NOT ACTIVE

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- The average parent spent 5 hours organizing back to school supplies this past summer versus 1 hour on emergency preparedness over the past year.
- Taken from the 2014 Save the Children Report





# Keeping Kids Safe

Data From The Recent 2014 Save the Children Report Reveals

- 49% of parents don't feel very prepared to protect their kids from emergencies or in disasters.
- 42% of parents don't know where to reunite with their child if their school or child care center is evacuated.
- 70% of parents surveyed are concerned about school shootings.



# CHILD TRAUMA— A CRITICAL ISSUE

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- Children are uniquely affected by disasters because they are afflicted not only by the trauma of the event but also by their parents' fears and distress.



# THIS IS WHAT KIDS REMEMBER

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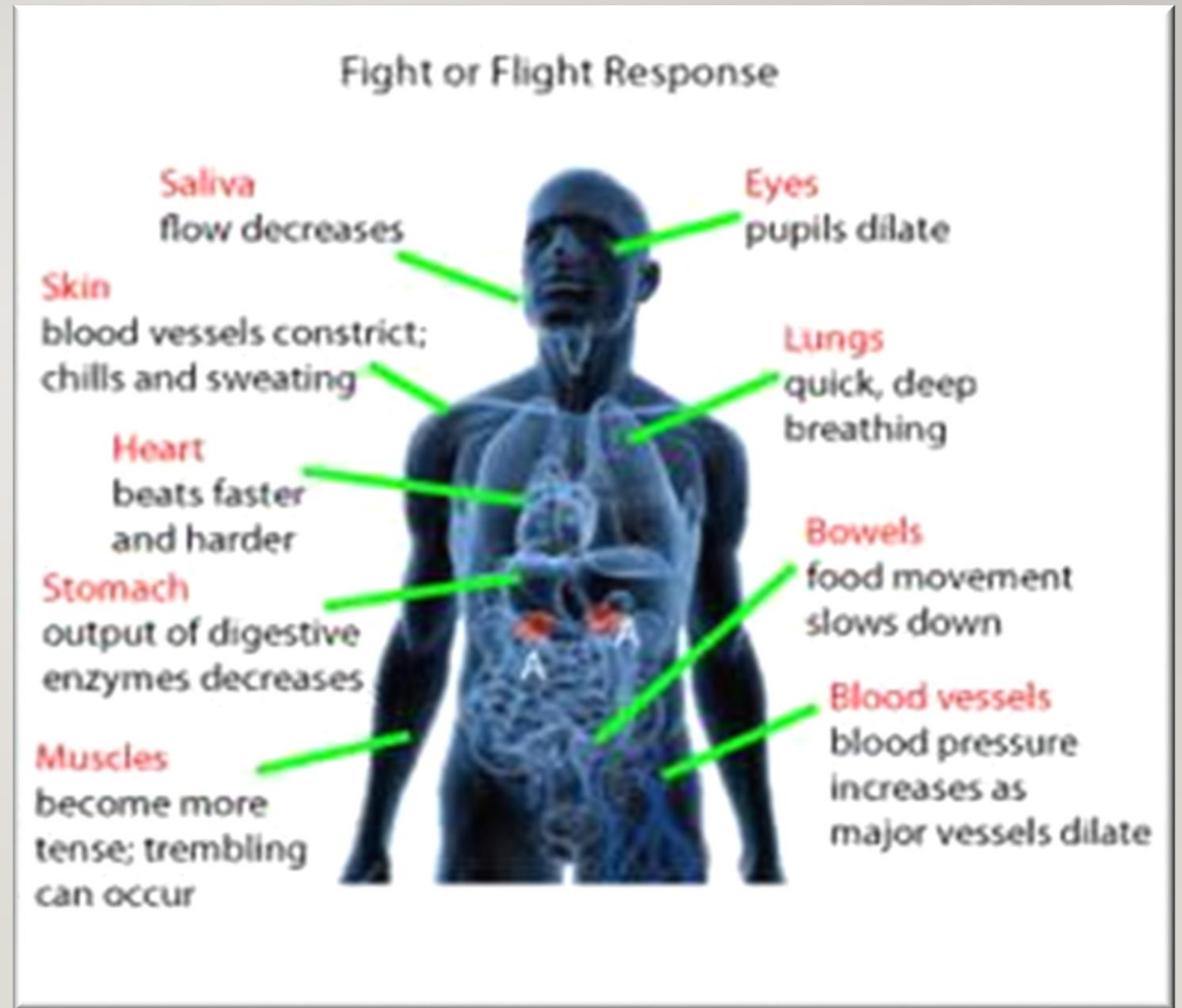


- Disaster trauma, especially when left untreated, has a devastating impact on the child's physical, mental, and emotional well-being.



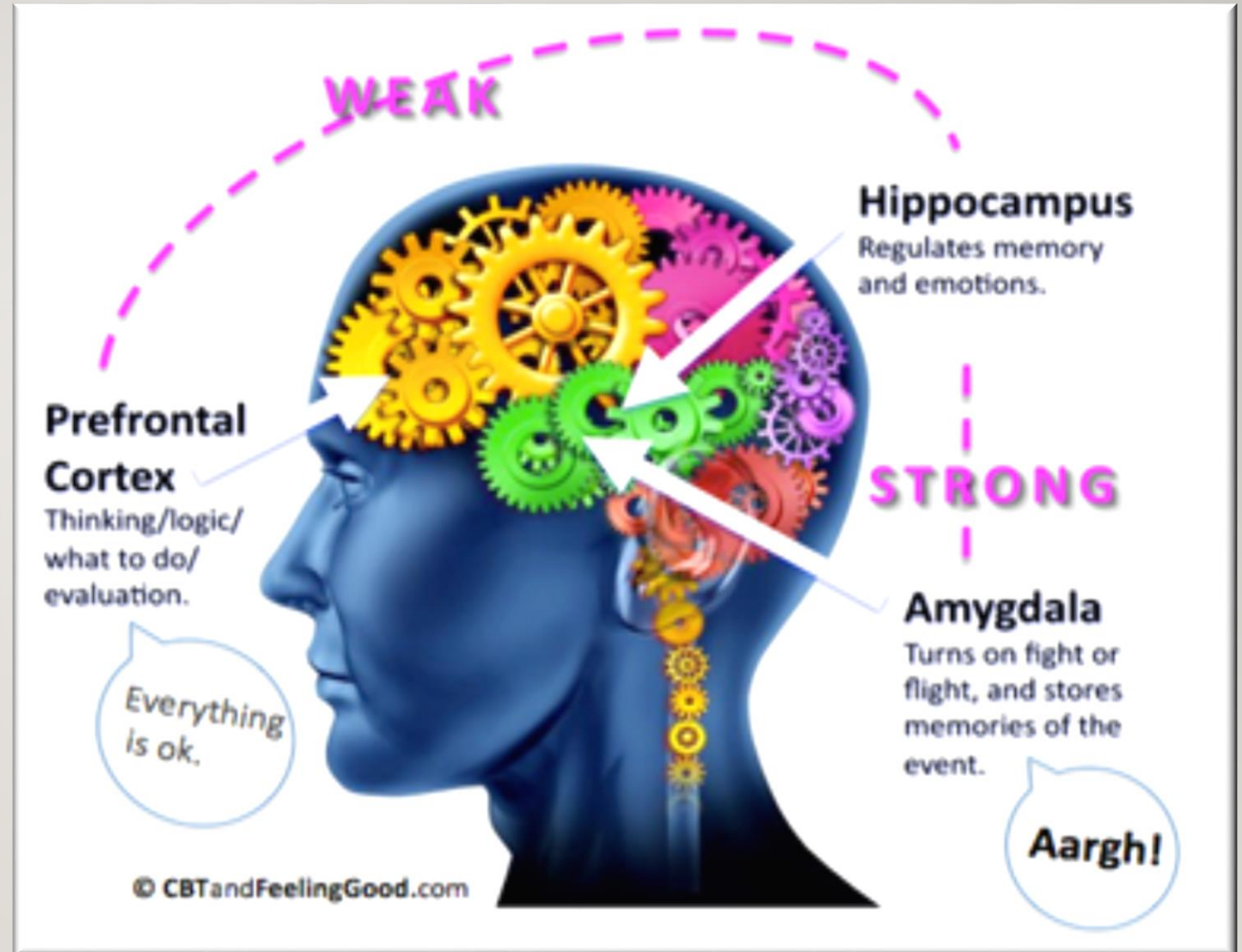
## Consequences of Trauma

- Fight, flight, freeze response
- Hypervigilance, arousal, paranoia
- Perceptual and information processing distortions
- Pain tolerance
- Emotional blunting



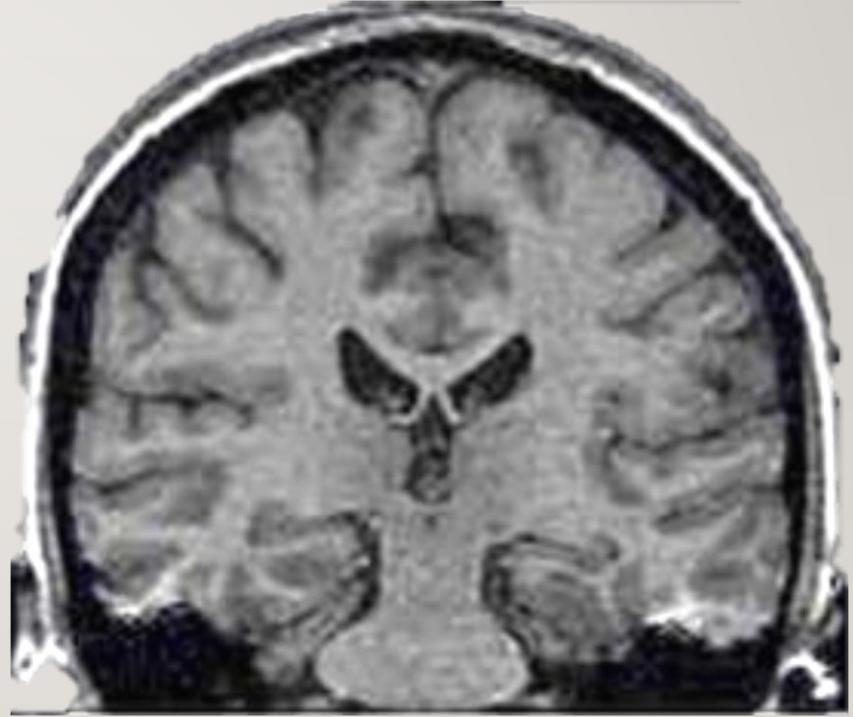
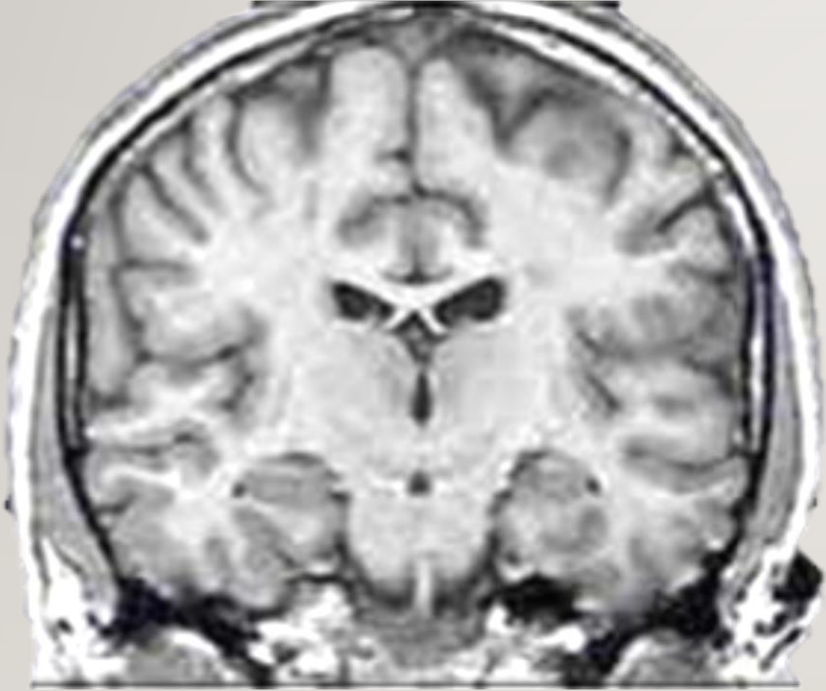
## Decreased

- Memory processing and retrieval
- Reality testing
- Body and emotional awareness
- Immune response





# Long-Term Brain Changes



Untreated child trauma is a root cause of many of the most pressing problems that communities face—problems for which parents, schools and policymakers are held accountable. These include:

- Crime
- Risky Behavior
- Low Life Potential
- Low Academic Achievement
- Increased Absenteeism
- Increased Drop Out
- Poor Health Outcomes







# INTRODUCING PREPBIZ

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USE OF EMPATHETIC CHAT BOTS, ARTIFICIAL  
INTELLIGENCE (AI) AND COGNITIVE  
COMPUTING TO BUILD RESILIENCE IN YOUTH

# PREPBIZ GAME-BASED LEARNING APP

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- PrepBiz is designed to sustain interest and learning with age-appropriate, evidence-based focused content while balancing engagement with learning.
- Elements of preparedness are couched in terms today's youth understand – “gamification,” with each level of mastery being engaging and feeling rewarding.



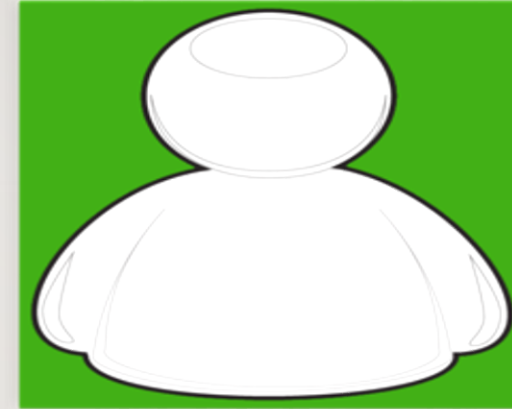
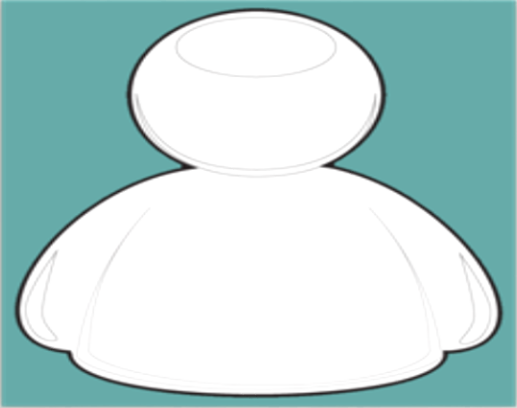


# Teaching Youth To Make Good Decisions

*PrepBiz™* offers a healthy, balanced experience that is informative and challenging. Elements of preparedness are contained in terms today's youth understand –“gamification,” with each level of mastery of more than 25 realistic emergency situations.



# PrepBiz Learning Objectives



Name  
Reading level  
Age  
Experience with technology  
Prerequisite knowledge  
Goals

Name  
Additional knowledge  
Additional skills  
Achieved goals  
More confidence/builds  
resilience



# IBM WATSON TACKLES DISASTER LITERACY AND RESILIENCE

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- Watson uses artificial Intelligence(AI), cognitive computing and sophisticated analytical software teaching engagement knowledge for an optimal performance as a “best practice” question answering machine for youth, schools and adults.



# What Has Been The Single Biggest Innovation in Education in the Last 200 Years?



Technology





# **PREPBIZ TEACHER'S GUIDE WITH STUDENT ACTIVITIES**



- PrepBiz Teacher's Guide utilizes age-appropriate guidelines to enable teachers to utilize real time best practice recommendations to tailor lesson plans according to their classroom interest, size and needs, including 1.7 million homeschool parents in the U.S.

# IBM WATSON CONVERSATION BOT

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A Watson enabled empathetic chat bot that can communicate with children about multiple disasters based on questions asked via speech

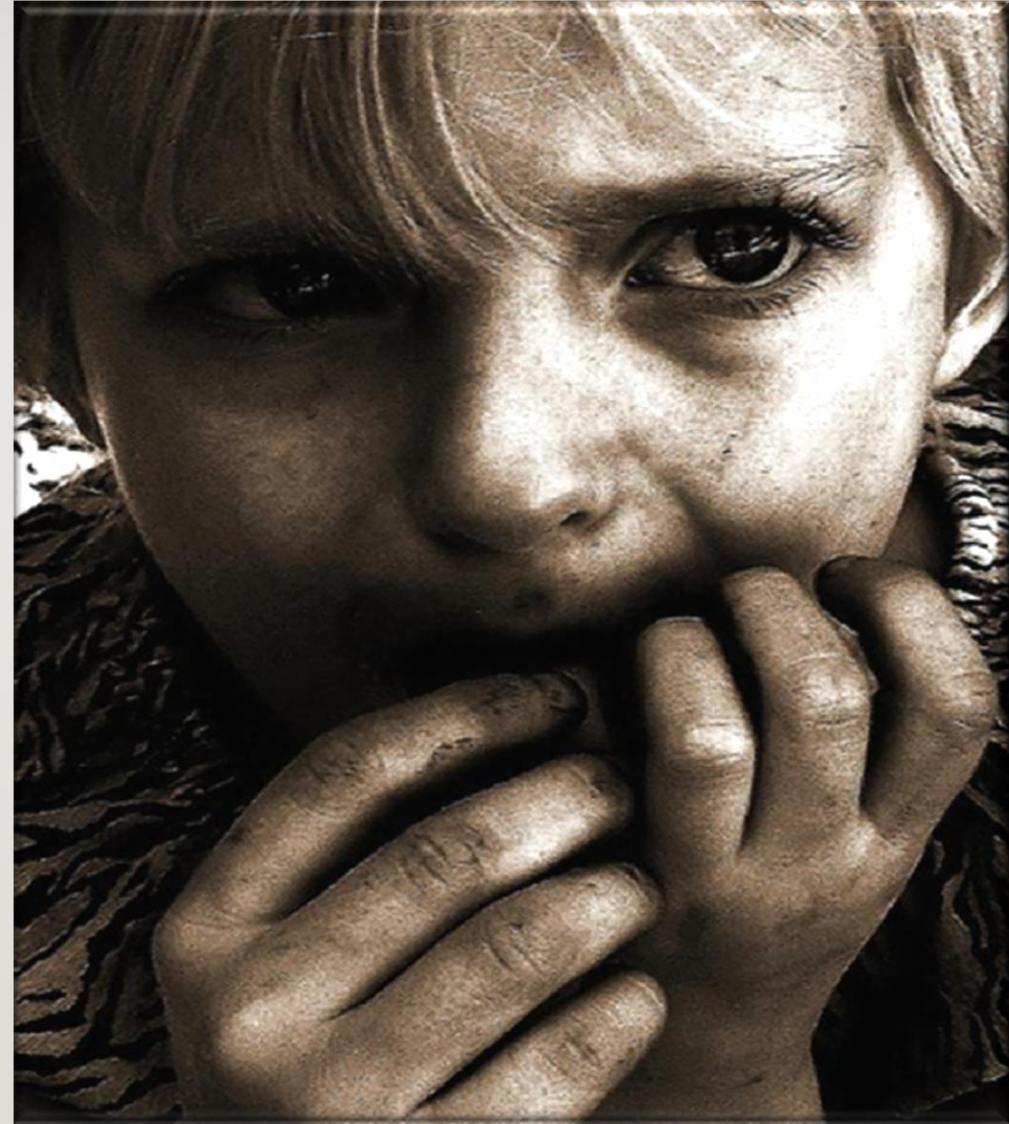




# Key Assumptions

Most kids who have been through a trauma will need one of three needs met or possibly all:

1. Physiological
2. Safety
3. Mental



# Conversation Bot

Therefore any conversation is going to have to address those needs before the child will:

1. Pay attention to and engage the dialog
2. Feel some kind of connection to the bot that will help them build trust in it and the information presented





# Building Trust

**The Chat Bot has to have empathy and charisma:**

1. Empathy allows the bot to build trust and gives the end user confidence in talking with the bot
2. Charisma is a seemingly magical heuristic that gets people to like and trust someone outside of their conscious objections



# WATSON ENABLED VIRTUAL MOBILE GAME

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- A Watson enabled mobile game featuring PrepBiz branded characters that takes geospatial and other data about a user's environment and incorporates it into gameplay.





# PREPBIZ GAME BASED LEARNING

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- PrepBiz characters face such trials as floods, downed power-lines, fires, hurricanes, tornadoes, active-shooter, earthquakes and falling debris.



# PREPBIZ DISASTER LITERACY PLATFORM

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Hurricanes



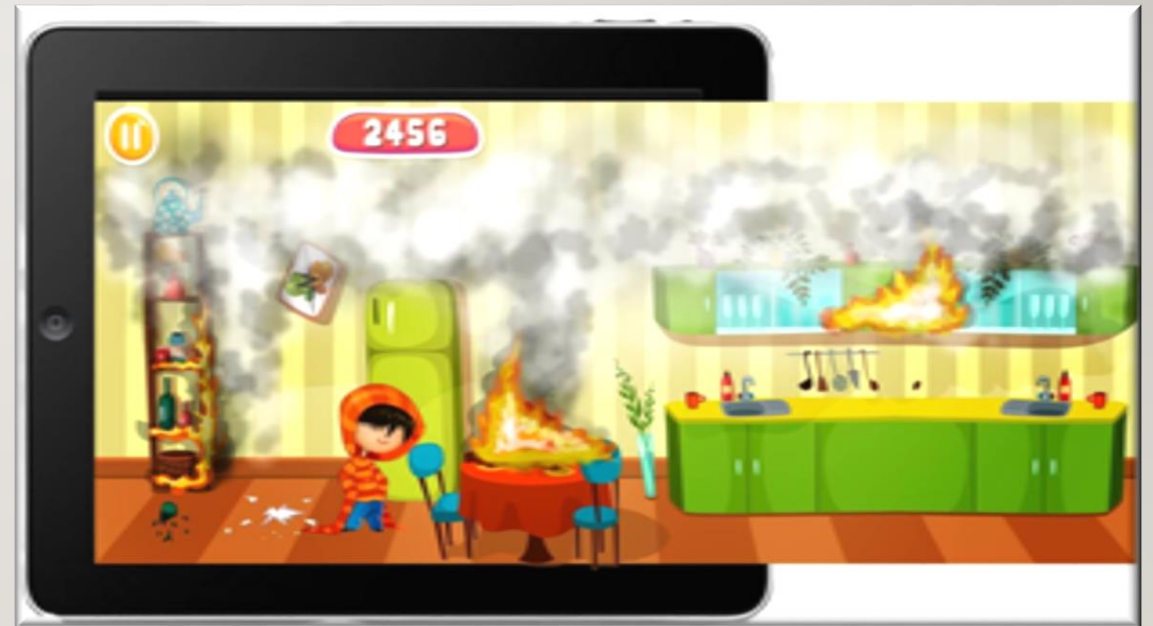
Floods



Tornadoes



Fires





# PREPBIZ (VI) VISUALLY IMPAIRED APP COUPLED WITH IBM WATSON CONVERSATION BOTS

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PrepBiz (VI) will be a cloud based audio-only action game for mobile phones, tablets and computers where ears replace eyes thanks to a very innovative technology: **binaural sound**.





## What Gives Children Comfort When Afraid?

- 29% Stuffed Doll/Animal
- 23% Favorite Toy/Game
- 22% Blanket
- 22% Favorite Book/Reading Material



# META CHANGE

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A world where  
children are better  
equipped to cope  
with traumatic  
events.





Consider.....

If not addressed childhood trauma damages a whole life....not just a childhood



# Thank You

For Additional Information

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