

# Children of Fukushima

~ Raising children under radioactive pollution ~

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Mebae Kindergarten, Fukushima

By Chiharu ITO

# Demeanor of Children Post-Earthquake and the Environment Surrounding Them

Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
<ul style="list-style-type: none"> <li>▪ April-May 2011</li> </ul>	<ul style="list-style-type: none"> <li>▪ Wearing masks, outerwear, and hats while going to and from kindergarten</li> <li>▪ Thorough hand-washing and gargling</li> <li>▪ Insulating sheets at entrances, over shoe racks, and covering windows</li> <li>▪ Carrying water canteens</li> <li>▪ Food provision and milk selection system</li> <li>▪ <b>No outside activities (For a whole year)</b></li> <li>▪ No childcare outside of kindergarten</li> <li>▪ Canceling or refraining from holding school functions</li> <li>▪ No fieldwork or cultivation <b>(Unable to handle objects in nature)</b></li> </ul> <p>3-5 μs/h</p>	<ul style="list-style-type: none"> <li>▪ Crying resulting from anxiety about separation from mothers is rare</li> <li>▪ <b>Children rarely say, "I want to go outside"</b></li> </ul> <p>↓</p> <p>Mindful of the significant lifestyle changes in the immediate aftermath of the quake and the feelings of their guardians, children cannot say selfish things. <b>Excessive level of tension and anxiety</b></p>	<ul style="list-style-type: none"> <li>▪ Securing water, foodstuffs, and gasoline</li> <li>▪ <b>Frantically protecting child and livelihood</b></li> <li>▪ Anxiety about aftershocks and nuclear explosion</li> </ul>	<ul style="list-style-type: none"> <li>▪ Personnel issue instructions to guardians from the top-down (In order to ensure mutual understanding and prevent complaints to teachers)</li> <li>▪ Early-stage execution of evacuation drills</li> <li>▪ Introduction of public counseling offices (For information dissemination and to calm worries)</li> </ul>



Commuting to kindergarten  
wearing masks and outerwear



Insulating sheet

Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
June-July	<ul style="list-style-type: none"> <li>▪ <b>Full utilization of indoor play, securement of active play</b> For example, indoor circuit games</li> <li>▪ Substitution for sand play (<b>Sensory Play</b>) Kapla blocks, various clays</li> <li>▪ Dynamic forms of active play</li> <li>~Adopted the following from a part-time psychologist~</li> <li>▪ <b>Breathing games to address shallow respiration</b></li> <li>▪ <b>Games relying on the body</b></li> </ul>	<ul style="list-style-type: none"> <li>▪ Squealing, ill-tempered crying, and fights occur frequently, perhaps attributable to stress</li> <li>▪ Games mimicking earthquakes and tsunamis have gradually settled</li> <li>▪ Some children exhibit prolonged erythema infectiosum (fifth disease) and slight fevers</li> <li>▪ Sadness is felt since some of the evacuees were from the children's classes.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Confusion of information leads to a loss of confidence in guardians' actions. Because of this, <b>guardians are unable to speak their true feelings</b></li> <li>▪ Pressed by the summer holiday, guardians are confronted with the looming final decision on evacuation and they become perplexed</li> <li>▪ Anxiety about whether or not the decisions they are making are best for themselves and their respective families (<b>Manifestation of discord between spouses and within the family</b>)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Introduction of ways to respond to games mimicking earthquakes and tsunamis, and their convergence during time devoted to artwork</li> <li>▪ Distribution of <b>letters addressing psychological ailments</b>, acknowledging that it's okay for adults to have emotions and to become frustrated or anxious</li> <li>▪ <b>Opening of counseling offices</b> operated independently</li> </ul>



- **Circuit Games**



- **Kapla wood blocks instead of sand play**
- Place for keeping active at any time



- **Inflatable “Cyber Foil” Play**





# Typical Artwork



Picking apples



Field trip to observe swans

# Artwork of Post-Quake Children



Landslide



Tsunami



From the sketchbook of a 3 year-old child



Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
Since Summer Holiday 2011	<ul style="list-style-type: none"> <li>▪ Activities have been refrained from or shortened as an approach to increase the number of happy faces among the children</li> <li>▪ As much as possible, ways are developed for children to create new experiences</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Children grow accustomed to a life in which they do not go outside</b></li> <li>▪ Because children play indoors, they observe and mimic how peers in other grade levels play. Exchange between grade levels has increased</li> </ul>	<ul style="list-style-type: none"> <li>▪ Worries decrease and guardians' feelings shift to a desire to give children the opportunity to do everyday things (Food safety and playing in sand are still concerns)</li> <li>▪ Guardians see action from the city and prefecture (Inspection/decontamination)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Engagement in childcare that makes children happy, activities that they can enjoy</li> </ul> <p>(Returning to the principle of what supplemental childcare offers in terms of rearing children)</p>



Installation of equipment for measuring radiation



Indoor cultivation

# Initiatives in 2012

Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
April	<p>Masks and outerwear disappear</p> <p>Radioactivity stabilizes following decontamination in the previous year</p> <p>0.3<math>\mu</math>s/h</p>	<p>Children crying due to anxieties about separation from their mothers increased in number over the prior year</p> <p>Children begin showing signs of fear toward noises and during evacuation drills</p>	<p>Anxiety toward aftershocks, etc. decreases (Guardians are satisfied with radioactivity countermeasures for kindergarten)</p> <p><b>Guardians can resolve to live in Fukushima</b></p>	<p>• Kindergartens can return childcare activities to normalcy at some level, while remaining mindful of guardians' opinions</p>
2 <sup>nd</sup> Trimester-3 <sup>rd</sup> Trimester	<p><b>30 minutes of outside play</b> with approval from guardians</p> <p>Universal guidance under the management of a childcare professional</p> <p>Cultivation is only for observation, and purchased foods are used for consumption</p> <p>Childcare outside of kindergarten is either outside of Fukushima or held indoors</p>	<p>Children feel a sense of spaciousness and satisfaction associated with playing outside</p> <p>However, they require permission to do so.</p>	<p>They want to allow their children to play outside, but they worry about injury</p> <p>They do not want to allow their children to touch grass, leaves, or bugs</p> <p><b>Do not want to talk about radiation</b></p>	<p>Allowing outside play even for short periods has a positive effect, but there are doubts about its quality</p> <p>How much does this offer in terms of sensory play and experiences with nature?</p>

# Matters observed from Children in 2013

Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
April, May	<p><b>Outside play conducted on a regular basis</b></p> <p>Children are able to handle objects in the natural world as part of their play activities</p>	<p>Children are now able to go outside to play as they please without need for approval</p> <p><b>Increase in injuries</b> from tumbles and falls</p> <p>Children repeat collecting and killing of bugs</p>	<p>They want to give an opportunity for children to have regular experiences</p> <p>They do not want Children to hold back.</p>	<p>Increase supervision and experience in order to prevent substantial injuries</p> <p>Seek guidance and cooperation with guardians on responding to injury and interacting with living creatures</p>

Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
June-July	<p>Recommencement of play activities involving sand</p> <p>Now able to handle flowers to create water-paints and breed plants</p>	<p>Because <b>this is the first experience with sand for some children</b>, children from ages 3-5 engage in the same sensory play</p> <p style="text-align: center;">↓</p> <p>Gripping sand, putting feet into sand, feeling sand, collecting sand in buckets, etc.</p> <p>Physical proficiency tests conducted in the prior year (as of May) show <b>physical proficiency has fallen among 4-year old children</b></p>	<p><b>Counseling on how to relate to children increases</b></p> <p style="text-align: center;">↓</p> <p>Background:</p> <ul style="list-style-type: none"> <li>▪ Exhaustion from earthquake devastation</li> <li>▪ More free-time for counseling</li> <li>▪ Stress among children has begun to emerge in their activities</li> </ul>	<p>Fully utilize forms of sensory play other than sand play</p> <p>Reassessment and improvement of environment for activities involving movement of the body, such as artificial hills and tire playing equipment</p>



# Building an Environment that Stimulates the Senses



Artificial hill climbing



Playing in sand – Sensory play



Dates	Environment and Considerations	Children's Demeanor	Guardians' Circumstances	Response from Kindergartens
September-October	<ul style="list-style-type: none"> <li>▪ Recommencement of field trips for pear, grape, and apple picking</li>   <li>▪ Commencement of acorn and leaf gathering (Conducted as part of childcare)</li> </ul>	<p>5 year-old children are unable to adequately express themselves. They often sulk, become ill-tempered, or quit altogether</p> <p><b>Emergence of children unable to control their emotions.</b> These children hit others and exhibit other violent behaviors</p> <p>Physical proficiency among 4-year olds appears to improve (based on experience)</p> <p>Injuries decrease</p>	<p>Out of 150 total children, only 1 is present whose guardian indicates refraining from childcare outside of kindergarten</p> <p><b>Guardians are now able to focus on their own fulfillment. They can now engage in their own club activities and hobbies</b></p>	<p>Increase in one-on-one response to children for the stability of their psychological state</p> <p>Continued</p> <p>Creation of environment for physical activity, innovation of childcare contents for sharpening of the senses</p>

# Future Roles of Kindergartens

- Exploring and responding to the root causes of children's demeanor
- Impact of Earthquake Aftermath – Discord in the household, minds affected by long-term exposure to media, lack of experiences?
- Is this the mind of a child with special needs?
- Is this the impact of changes in contemporary lifestyles?
- Observing children's circumstances through data
  - Physical proficiency tests, Vocabulary test, children's artwork (Landscape Montage Technique, House-Tree-Person tests), Guardian questionnaires (Awareness surveys)

Kindergartens as places where children can play with their peers, with smiling faces and without fear