

# Redesigning the Play Kits that Support Children in Emergencies

ideas <sup>42</sup>

A more accessible and effective kit to help disaster-threatened children play, learn, and thrive

**Children in areas affected by disaster often miss out on crucial opportunities to play, be creative, and develop skills that will help them throughout their lives. To encourage more enriching opportunities for play, UNICEF developed a play kit with a variety of materials to help engage kids in play, but various behavioral barriers meant that some children weren't benefitting fully. ideas42 worked with UNICEF to update that kit and its accompanying manual, aiming to help as many kids as possible develop, create, and play, whatever their circumstances.**

## Summary

Children are uniquely vulnerable to emergencies. When armed conflict, natural disasters, and public health crises threaten their safety, beyond the immediate consequences of the emergency itself, children are robbed of the experiences they need to develop physical, mental, and psychosocial skills. Children from birth to age eight are the most negatively affected. Up to **87 percent of children who witness a natural disaster experience post-traumatic stress syndrome (PTSD)**, and up to **50 percent of children living in chronic conflict conditions experience PTSD**. Such stressors can harm children's growth and development in the long-term.

Although there is important work to be done in preventing these emergencies, there are also ways to encourage healthy psychological development for children who cannot avoid them. Some of this work involves encouraging play. In 2009, UNICEF developed the **Early Childhood Development Kit (ECD Kit) for Emergencies**. The ECD Kit is a box of over 40 items, from puzzles to books to puppets, designed to provide children ages 0–6 with access to play, stimulation, and early learning opportunities in the face of crises. Since the kit's inception, UNICEF has worked with over 100 of its country offices to integrate over 185,000 kits into existing ECD programs, where frontline workers teach and care for children. As such, the kits are an invaluable resource that frontline workers can use to support young children's learning in contexts where little else is available. They have become a main service-delivery strategy that UNICEF employs to support kids' right to play, having reached almost 9.5 million children.

### Highlights

- ▶ When children face disaster, the harm goes beyond the immediate crisis: kids risk missing out on vital opportunities to develop the mental, social, and physical skills they need, with lifelong consequences.
- ▶ Despite environmental or other contextual threats, children can develop these crucial skills by engaging with kits that encourage play, and with frontline workers who are trained to use those kits.
- ▶ We worked with UNICEF to redesign their Early Childhood Development Kit for Emergencies to make it even more usable and accessible, both to caregivers and to all children, including those with disabilities.

But there remain ways in which the kits are falling short of their potential. For example, frontline workers have varying experience with children’s development and have to care for many children in under-resourced settings; the training and guidance that currently accompanies the kit is not sufficient. Some kids are not being engaged in play. And children’s caregivers (their parents or otherwise primary caretakers at home) are not aware of the kits, clear on why play is important, or encouraged to play with their children. In 2019, UNICEF conducted [an evaluation of the ECD Kit](#) and identified three ways in which frontline workers can use the kits more effectively:

- 1. Facilitate more play-based learning among children in emergencies.**
- 2. Specifically engage *children with disabilities*.**
- 3. Engage caregivers in play-based learning with their children.**

In 2021, to start addressing these challenges, UNICEF partnered with ideas42 to redesign the kit through a behavioral lens—reimagining everything from its contents to its packaging.



## Behavioral Barriers to Using the Kit to Facilitate Play-Based Learning

Why was the kit falling short of its potential? To answer that question, we sought to identify behavioral barriers holding frontline workers back. We began by reviewing UNICEF’s own evaluation of the kit. We then reviewed and audited the “Activity Guide,” a 100-page booklet that provides guidance on how to use each item in the kit and suggests other ECD activities that don’t require any play materials. We also reviewed each item that is currently included in the kit.

Through this process, we identified three behavioral barriers to using the kit.

### **1. Mental models that exclude some children:**

For example, some frontline workers do not think that the kit, or even play in general, is meant for children with disabilities, because the “Activity Guide” does not mention that play is critical for *all* children, nor does it provide guidance on how to use the kit to engage children with disabilities in play.



#### **Mental models**

People’s mental schemas, or representations, of how things work or of how things are.

### **2. Scarcity of time—for reading the facilitation guide and for play:**

For example, many frontline workers do not have the mental energy to read the “Activity Guide” or to use the kit to facilitate play-based learning, because they often have to worry about more immediate concerns, like keeping large numbers of children safe, clean, and occupied.



#### **(Time) scarcity**

Having a shortage of resources, like time, narrows people’s focus and cognitive bandwidth.

### 3. Hassle factors make it onerous to actually use the kits:

For example, frontline workers do not use the kit to facilitate play-based learning as much as they could be because the kit weighs almost 100 pounds and is hard to move, which limits its accessibility—especially if the kit has been stored away to keep its contents safe.



#### **Hassle factors**

Seemingly trivial inconveniences or obstacles that impede a desired behavior.

## Behavioral Redesign of the Kit



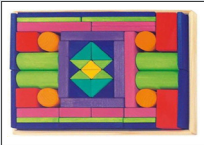
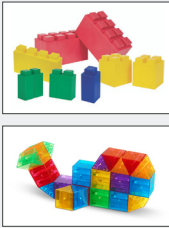
To overcome these behavioral obstacles, we began a process of redesigning the kit. In this process, we engaged a variety of UNICEF team members: staff based in UNICEF’s headquarters, as well as staff from three country offices—Mexico, the State of Palestine, and Uganda. We also invited experts from other organizations that focus on early childhood development or disability inclusion to participate in the design process.

We started with three co-design workshops, which focused on redesigning the kit’s content, packaging, and accompanying “Activity Guide.” We then garnered feedback on these prototypes, including user testing a redesigned “Activity Guide” page and a new kit item with frontline workers, children, and caregivers in Mexico, the State of Palestine, and Uganda. We incorporated their feedback into our final set of recommendations.




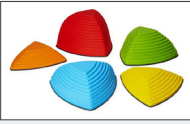
## Redesigning the Kit’s Content

In redesigning the kit, we considered UNICEF’s own 2019 evaluation of the kit, which included recommendations for whether to retain or remove each item. We also used two frameworks to evaluate how well the kit was supporting kids’ development: [the LEGO Foundation’s Skills for Holistic Development](#) and [the UNICEF/Washington Group Module on Child Functioning](#) for young children. We used the former framework to ensure that the kit provided comprehensive support of all five skills—emotional, cognitive, physical, social, and creative—that are essential to childhood development. The latter framework helped us evaluate whether each item in the kit was accessible to children with a range of disabilities, including challenges with seeing, hearing, and fine motor skills. In addition, in order to reduce the hassle of using the kit, we wanted each item to be easy to use for frontline workers and fun for children in a variety of contexts.

For each item in the kit we outlined UNICEF’s previous evaluation of the item, the types of development it supports, and our recommendation for whether to remove, replace, or adjust it. For example:

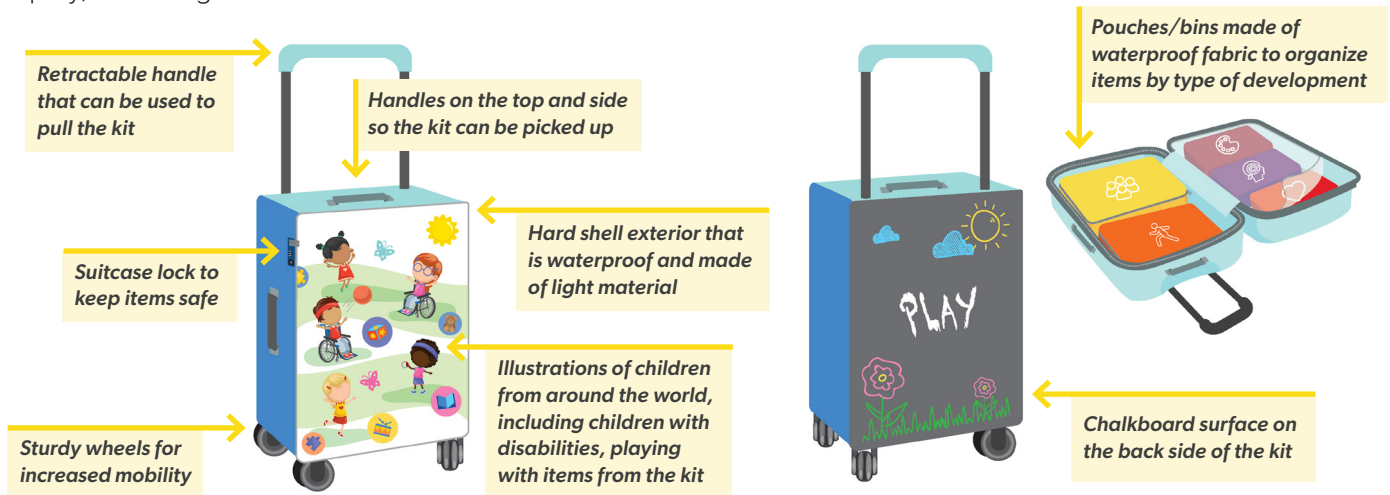
Item	Evaluation	Development	Recommendation
<p><b>Stacking &amp; Sorting Kit</b> (All ages)</p> 	<p><b>Retain &amp; Expand Number: Highest Usage</b></p> <ul style="list-style-type: none"> <li>Observed in high use at every site visited across 3 countries</li> </ul>	<ul style="list-style-type: none"> <li>Physical</li> <li>Cognitive</li> <li>Emotional</li> </ul>	<p><b>Keep</b> and add:</p> <ul style="list-style-type: none"> <li>A set of items that can be stacked and is slightly more advanced</li> <li>A set of counters, preferably wild animal counters to also support small-world play</li> </ul> 
<p><b>Dominoes</b> (All ages)</p>	<p><b>Remove: Low Usage</b></p> <ul style="list-style-type: none"> <li>Low interest for children</li> </ul>	<ul style="list-style-type: none"> <li>Cognitive</li> <li>Social</li> </ul>	<p><b>Remove</b></p>
<p><b>Construction Blocks</b> (All ages)</p> 	<p><b>Retain: High Usage</b></p> <ul style="list-style-type: none"> <li>These are intuitive for children and adult facilitators</li> </ul>	<ul style="list-style-type: none"> <li>Physical</li> <li>Cognitive</li> <li>Social</li> <li>Emotional</li> </ul>	<p><b>Keep</b> but make more inclusive and add another set for building figures/structures. For both sets, consider:</p> <ul style="list-style-type: none"> <li>Including blocks of various shapes, sizes, and materials</li> <li>Incorporating textures and/or Braille</li> </ul> 

We also recommended adding a set of **new items** to the kit, in order to better support all five types of development and the inclusion of children with disabilities. For example:

New Item	Example	Development	Recommendation
<p><b>Flash Cards</b></p>		<ul style="list-style-type: none"> <li>Cognitive</li> <li>Emotional</li> <li>Social</li> </ul>	<ul style="list-style-type: none"> <li>Should show basic concepts like emotions to allow children to identify/discuss them. Other potential concepts to include: shapes, animals, numbers, colors, etc.</li> <li>Cards should incorporate inclusive elements, like Braille and/or textures.</li> </ul>
<p><b>Silks/Fabrics</b></p>		<ul style="list-style-type: none"> <li>Emotional</li> <li>Social</li> <li>Creative</li> </ul>	<ul style="list-style-type: none"> <li>Add to support additional domains of development and pretend play.</li> </ul>
<p><b>Bean Bags</b></p>		<ul style="list-style-type: none"> <li>Physical</li> <li>Social</li> </ul>	<ul style="list-style-type: none"> <li>Include a set with various textures/materials.</li> </ul>
<p><b>Stepping Stones/ Balance Pads</b></p>		<ul style="list-style-type: none"> <li>Physical</li> <li>Social</li> <li>Emotional</li> </ul>	<ul style="list-style-type: none"> <li>Consider adding a few, depending on cost and size.</li> </ul>

## Kit Packaging


Our review had found that it wasn't just the contents of the kit that made it difficult to use; the packaging also introduced hassles limiting its use. Therefore, we focused on making the packaging of the kit more lightweight and mobile. We also organized the kit into smaller compartments for easier use and transport. To address frontline workers' mental models about the kit being too special or valuable to be used regularly, we designed packaging that clearly communicated that its purpose is to engage children in play, including children with disabilities.




## "Activity Guide"

The "Activity Guide" guides frontline workers on how to facilitate play-based learning with young children. However, UNICEF's 2019 evaluation revealed that workers don't tend to use the guide. Given that frontline workers have limited time, we recommended shortening the guide and simplifying the instructions on how to use each item. This included providing more visuals and significantly cutting the amount of text. We expect that this will reduce the mental energy required for frontline workers to review the guide, especially for those with low literacy or limited experience facilitating play-based learning with large groups of children, including children with disabilities.

In redesigning the "Activity Guide," we also wanted to underscore that play can contribute to learning. This can counter mental models among frontline workers and caregivers that play is not important or valuable for young children. Finally, we added specific instructions on engaging caregivers in play, supporting children with disabilities in play, and how to create items using local materials, in order to emphasize to frontline workers that they should be using the kit for these purposes.



**15**  
Counting Puzzle



4-6 Years

**What You Can Do**

- Ask children to put the puzzle together. Talk about the number of pieces in the puzzle. Help them to learn numbers by pointing to and counting the number of dots for each piece.
- Give one piece of the puzzle to each child. Ask them to find their match (five-dot piece finds the number 5 piece). Ask children to line up according to their number/dot match. Then ask children to complete the circle puzzle, adding each pair number in order.
- Give the children lots of practice counting everything. How many little children? How many older children? How many caregivers? Which is the biggest group?
- Write out the numbers 1-10 on cards, one card for each number. Give each child a card. Ask them to find the puzzle piece with the same number of dots.
- Use cards, puzzle pieces, and even children to help children learn simple addition and subtraction. For example, sit in a circle. Ask five children to stand up. Ask one child to sit down. How many children are still standing?
- Ask a child to find the puzzle piece with three dots. Ask another child to find the piece with two dots. Count the number of dots. How many do you have now? (5) Can you find the puzzle piece with the number 5? Repeat this many times.
- Make up silly songs and rhymes using the numbers 1-10. Here is one to get you started: "If you divide me into two piles of objects and each pile has a 2 in it, what number am I? (4)"

**What To Look For**

- Children show interest in counting.
- Children can count up to 10 and count up to 20 objects.
- Children can name written numbers from 1-5.
- Children can name written numbers from 6-10.
- Children understand the words *one* and *many*; *less* and *more*.
- Children begin to understand that adding and subtracting changes numbers.

Activities with Materials

No photo of the real kit item

Little emphasis on learning through play


Too much text

No information on including children with disabilities in play, caregiver engagement, or creating items with local materials

Limited visuals and no illustrations to outline the activity step-by-step

Original design of "Activity Guide" page.

### Music Shakers



**LEARNING**

SOCIAL    PHYSICAL    EMOTIONAL

**PLAY FORMAT**

SMALL GROUP

**HOW TO PLAY**


- 1. SET UP:** Place the shakers in the center of the learning area. Invite children and caregivers to sit around the shakers in a circle.

**4. JOIN:** Have a caregiver ask children to try new ways of using the shakers. Pass the shakers around the circle again, allowing children to test out their new ideas.
- 2. OBSERVE:** Ask caregivers to watch how children use the shakers.

**5. EXPAND:** Help children use the shakers in different ways, like dancing with them or shaking them to music.
- 3. SHARE:** Help children pass the shakers around the circle and take turns shaking them.

**Emphasizes play and embeds caregiver engagement in each activity**

### Music Shakers





**SUPPORTING CHILDREN WITH DISABILITIES**


**Fine Motor**  
Tie a loop of rope or fabric to the handle so children can wear the shakers around their neck or ankles.


**Hearing**  
Place the rounded part of a shaker in a child's hands. Help them shake it to feel the vibrations. Pass the shakers around the circle, allowing all children to try this.


**MAKE IT TOGETHER**

- 

**1. Collect empty plastic bottles and tops.**
- 

**2. Wash and dry the bottles.**
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**3. Pour a handful of dried seeds, buttons, or stones into the bottles.**
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**4. Close tightly with the top.**
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**5. Shake to make music! Notice how different materials in the bottles create different sounds.**

**Includes steps on how to create the item with local materials, plus visuals**

Highlights the types of development supported by playing with the item

Includes photo of the kit item

Adaptations to the activity for including ALL children, including children with disabilities, in play

Redesigned "Activity Guide" page.

Note: Finalized after user testing frontline workers' ability to use the guidance to facilitate play using music shakers (a recommended new kit item) with young children, including children with disabilities, and their caregivers in Mexico, the State of Palestine, and Uganda.

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## Next Steps

With such a wide-reaching intervention as the UNICEF Early Childhood Development Kit for Emergencies, we recognize that this initial effort to redesign the kit is just the start. Additional work is needed to improve the kit and its benefits for young children living in emergency contexts around the world.

As next steps, we recommend user testing a full prototype of the redesigned kit content, packaging, and “Activity Guide” with frontline workers, young children including children with disabilities, and their caregivers across various geographical and crisis contexts. Further, more work should be done to help frontline workers facilitate play-based learning using the kit, such as by creating more opportunities for training and feedback, printing the “Activity Guide” in more useable formats (e.g., flash cards that can be easily transported), building an online repository (including videos) to share guidance, and forming communities of practice to allow frontline workers to support each other and share best practices.

We also recommend running a randomized controlled trial to test whether the redesigned kit, as well as building frontline workers’ capacity to facilitate play, has a positive effect on the learning outcomes of young children, including children with disabilities, in emergencies. In the face of [record humanitarian needs forecast for 2022](#), the kit has immense potential to provide the world’s most vulnerable children with the experiences they need to thrive.

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