

## Recycled Materials

by Lella Gandini



*"I believe we have to develop a culture of thrift that views even the poorest of materials with the greatest respect. You can take almost anything (paper, cardboard, plastic, packaging) and if you invest it with labor, and care, and imagination, you can give it a new life and encourage others*

*to look at that material in a new way."*

Benjamin Bailie Trautman (mechanical sculptor, 2004)

### Observing in an infant/ toddler center

A group of eight toddlers are intently active in a large, well-lit room, some sitting up and exploring things at hand, some moving around with tentative steadiness. The teacher sits in the center of the room. She follows with attention the action of the children who come often to her secure base. She offers her hands, supportive words, and encouraging smiles to one or the other of the toddlers.

Now two of them are intent on picking up shells from an incline on the floor next to a low window, to place them in a



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cardboard box. They bend down, balancing precariously their heavily padded bottoms. Every so often one of them picks up the box and empties it out on the incline; they laugh as the shells scatter. They start their task again. Pick up, put in the box, pick up, put in the box — empty out — the sound is great, and the laughter too. They start again.

A little girl pulls out of a basket a square of light colored cloth and places it on her head; she starts to walk slowly, without seeing. She bangs her hands against the wooden wall that divides the room from the sleep area. The teacher encourages her from her central place: "Pick-a-boo, Marina, pick-a-boo." The game becomes contagious, two other toddlers get the cloth squares on their heads and step over the soft toys and books scattered on the floor. "Pick-a-boo, pick-a-boo." They fall, sitting down with a thud, take off the cloth, and look toward the teacher to check if everything is alright. The teacher smiles and repeats: "Pick-a-boo." Reassured, they pick themselves up and go to explore large sheets of transparent, colored cellophane in a corner of the room.

A boy and a girl are playing with cardboard tubes and a thin plastic pipe. One, the boy, is trying very seriously to pull the pipe through the tubes with great concentration while the other is looking on. The girl observer then gives up to pursue something more attractive, a pull-toy made with recycled wooden dowels. The teacher goes next to the little boy and encourages him; then she offers him a round piece of cardboard with a hole in the middle, which the child clearly likes. As soon as he succeeds in pulling the pipe through, the teacher cheers for him and starts to play a game, gently pulling and shaking the pipe that he is holding.

### Reflections

*For a child the world is full of things to touch, to reach, to hold, to explore, and thus discover. If we observe as very young children engage in their explorations, we will see that they let us know precisely what is attracting their interest.*

*Early in their development, infants react in a very personal way to light and sound, to people, and to objects. They learn to concentrate on what they see and then gradually make movements that eventually bring them into contact with the objects in the sphere of their interest and within their reach. We can notice how a child reacts both to a familiar object and to a new one and over time how personal these reactions are. Observing infants in a good infant/toddler center, where everything has been thoughtfully chosen and arranged with the very children who are there in mind, we see evidence, as soon as they begin to move within that space, of children's inexhaustible passion to explore and experiment with what attracts them.*

## Observing in a preschool

The environment of this preschool is organized so that in each classroom there is a space particularly inviting to engage the children with materials. Here we are in the four year olds' classroom. There are various shelves and tables where natural and recycled materials are available in pleasant arrays of baskets and transparent containers that reveal the contents.

In one area the transparent containers have dividers with different colors of plastic objects of all kinds: such as bottle caps, clothes pins, parts of toys, large buttons, and colored strips of plastic.

Another shelf has containers with metal things. Many of these are odds and ends from family kitchens such as measuring cups and spoons, lids, salt shakers, spare handles and so on; but on the top shelf there is a large variety of soft wire, some coated and some not, wire netting and other pliable ties and connections.

Right there are four children, two girls and two boys, who are getting organized to work on a project for which they have already done several drawings. They had been observing the clouds forming in the sky, beautifully visible from one of their large windows and a skylight.

They want to prepare the frames for their clouds with wire, thin nets, and — maybe — chicken wire . . . they are still discussing and thinking while they

start to carry the materials to a table. One of the two teachers in the room has been following these ideas with the children for a while; she reviews the previous dialogues and the drawings with them. Children and teacher go over what everyone wants to construct and how they are going to help one another. The teacher repeats words that the children might say incorrectly and sums up their goals with them. Then the children start working intensely and talking animatedly. When one needs help the teacher encourages the others to look for help from the other children before intervening.

The frames are taking shape, and one of the girls goes around the shelves to find "rain." She comes back with a container with pieces of cellophane and plastic. She decides to cut them to make the pieces more like big drops. A boy and the other girl decide that they need to find snow to fill their clouds, and they go around the room and even in the next classroom on a quest. They come back beaming with their hands full of plastic packing foam, clear paper straw, and white tissue paper that they start to tear and curl up.

## Reflections

*In this endeavor it is essential to be supported by the attentive adult who points out objects that the child is eager to reach, names them, and also suggests actions that can be performed with those objects. Young children gather in that way many pieces of information and imitate what the adults do. The adult who is truly serious about*



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# BEGINNINGS WORKSHOP



*helping the child to learn will, in turn, imitate and extend the child's exploration.*

*With the support that children receive in their daily encounters, they build up a repertory of known things and widen their fields of knowledge. They use that knowledge to start to experiment with new combinations of objects and actions, building personal theories about how things go together. To be supported in this type of experimentation is necessary for growth and for the relationship that develops between child and adult. The learning about new objects and situations is a deep source of pleasure. We, as teachers, have seen how emotions can favor (or impede if they are negative) the process of learning.*

## Teachers and recycled materials

At times there is a difficulty for teachers to use found and recycled materials with young children. Considering the young age of the children, it is understandable that teachers feel uncertain, are cautious, and pay attention to safety. Most of the time, however, the uncertainty and difficulty come from the lack of opportunity that teachers have had to pause, observe, reflect, and especially explore directly a variety of materials in their own educational experience or during the course of their teaching. We have little time to observe what is around us in the course of everyday life as possible material to transform, create, and construct.

Our experience taught us that when we give ourselves the permission to have a shared experience of exploration, reflection, and transformation of materials among adults (teachers and also parents), we discover so much about the properties and qualities of the materials that we start to find strategies

for using them with the children so as to invent together new ways of transforming them.

## One of many experiences among teachers

In order to help one another discover the richness of recycled materials, become familiar with them, and feel at ease in using them with young children, we organized a workshop to explore them.

The idea was that each participant would bring a bag of recyclable things, along with notes on how and why the choices were made. Once we were together, we divided ourselves in groups of five or six and sat around a table. We asked one person in each group to be a note-taker, so that we could document observations and reflections. The groups followed different ways of sharing the choices made and showing the materials that each person had brought.

One group poured all the bags that the six people had brought in the middle of the table; another group pulled one piece out of the bag at a time, and so on. However, all people started to discover unsuspected qualities of those materials. Then at each table people discussed the criteria for sorting the materials. One teacher wrote in telling about this experience:

*With uncertainty, we created a first division: plastic — paper and cardboard — cloth — packing material — metal — wire — wood — cork, and so on. We created small piles according to this first step. Then we examined each pile and observed the characteristics, and as we were handling the objects and materials we would find more aspects and more subdivisions. Our note-taker was very busy. We started to think also about possible uses. Many of these materials are around us all the time, but we do not notice them; so now we were truly discovering them.*

Another group was sorting the materials by color, first by the most evident differences, then looking at gradations of color, transparency, luminosity, tint, shine, or opaqueness. Another group was concentrating on the tactile qualities of the material, and still another on the sounds that the manipulation of the materials could produce. All this work took place with evident pleasure and a great deal of collegial laughter.

The next step was to create a group composition, each one with a title, to be placed on a very large table, so that all the groups together could show and see all the work and discuss



together what had emerged. Everyone agreed that to do the exploration of materials together, handling them, discovering many aspects and possibilities, had served to refine everyone's ways of seeing and imagining possible uses with the children.

### Final reflections

*Recycled materials come in infinite variety and often have a history. Their re-utilizations and transformations can be very useful in education. Taking stock of the characteristics of shape, form, texture, color, and sound effects helps to develop a reflective attitude that sustains the manual and creative expression of children and teachers.*

*The essential elements of care and imagination that Benjamin Trautman invokes are not a given when it comes to recycled materials for*

*most adults, but as with many other kinds of knowledge, these elements can be cultivated.*

### Notes

The observations of the Infant/Toddler Center and the Preschool, as well as the meeting among teachers, refer to the Programs for Young Children of the City of Pistoia, Italy.

For sources for loose parts or creative recyclables suggested by Walter Drew, see pp. 217-219 in *Designs for Living and Learning: Transforming Early Childhood Environments*, Redleaf Press: St. Paul, MN (Curtis & Carter, 2003).

### References

Topal, C. Weisman., & Gandini, L. (1999). *Beautiful Stuff! Learning with Found Materials*. Worcester, MA: Davis Publications, Inc.

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## Using Beginnings Workshop to Train Teachers by Kay Albrecht

**Observations and reflections:** Gandini offers two examples of the observation/reflection process. The first is the observation of infants and toddlers playing with recycled materials and the second is preschoolers re-utilizing and transforming recycled materials. Encourage teachers to use this process in their own classrooms to enhance the use and reuse of recycled materials. Focusing on the children's experience and learning helps teachers to see the learning potential embedded in their collections of recycled materials.

**Exploring potential:** The workshop format shared in this article is the perfect blueprint for conducting your own staff training in using recycled materials as learning materials. Follow the lead (with all of the opportunities for individual interpretation and creativity) and implement this exciting training experience.

**Piles of recycled materials:** What will you and your teachers do with all of the recycled materials you collect to re-use and transform into learning materials? Follow some of the fabulous suggestions in the article to make sure you can find what you want when you need it to create learning experiences.