

**Exploring  
Beautiful Stuff from Nature**  
with  
Studio Art Materials, Tools and  
Processes  
by  
Cathy Weisman Topal



  
CHILD CARE  
EDUCATION INSTITUTE  
The Industry Leader for Quality  
Professional Development  
A Straighter Line Company

Early Childhood Investigations Webinars  
September 13, 2023

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Rudolf Arnheim originated  
the term, **“visual thinking”**

“... art training is not one of the minor fillers of the curriculum but  
relates to the very fundamentals of education.


What are these fundamentals? **reading, writing and arithmetic?**  
Certainly, these are indispensable skills; but should we not realize  
by now that they are just **skills**? And that even as a list of skills the  
list is incomplete?

If I am not mistaken, the **three fundamentals of education** are

**perceiving thinking forming**

and the tools needed to exert these faculties of the mind are  
**numbers, words and shapes.** Of these three sets of tools the first  
two have been considered the only essential ones since the Middle  
Ages. We must now rehabilitate the third.”

Art Education Magazine, March 1983



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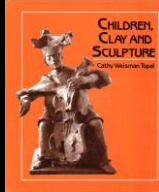
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My personal experience

- teaching junior high school art
- clay disaster

Coming to Smith College

- teaching in the Department of Education,  
laboratory school (elementary) and early  
childhood center,
- discovering answers in the early years
- meeting Lella Gandini and learning about  
Reggio Emilia
- The Hundred Languages of Children  
Exhibition comes to UMass



1983

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The Hundred Languages of Children Exhibition, from Reggio Emilia, Italy, 1989

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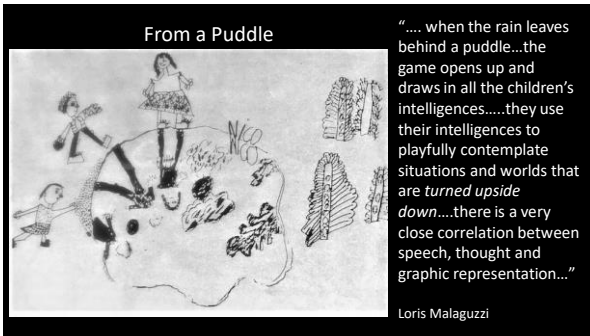
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From a Puddle

"... when the rain leaves behind a puddle...the game opens up and draws in all the children's intelligences....they use their intelligences to playfully contemplate situations and worlds that are *turned upside down*....there is a very close correlation between speech, thought and graphic representation..."

Loris Malaguzzi

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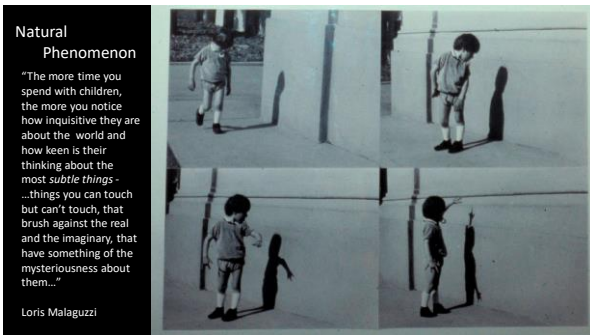
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Natural Phenomenon

"The more time you spend with children, the more you notice how inquisitive they are about the world and how keen is their thinking about the most *subtle things* - ...things you can touch but can't touch, that brush against the real and the imaginary, that have something of the mysteriousness about them..."

Loris Malaguzzi

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Where is the teacher?  
 Extending the Experience

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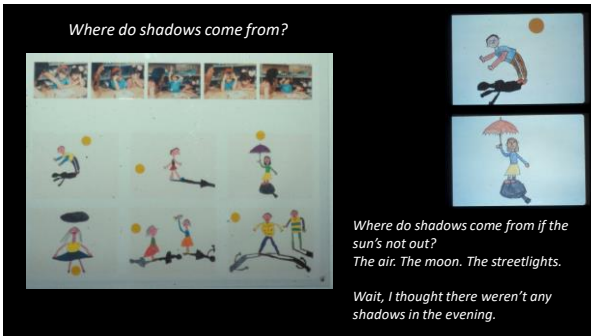
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Where do shadows come from?

Where do shadows come from if the sun's not out?  
 The air. The moon. The streetlights.  
 Wait, I thought there weren't any shadows in the evening.

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Mini atelier in Reggio Emilia  
 La Villetta school, 1990

Using the discovery of the children to extend the experience...

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How do you begin working with the principles of the Reggio Emilia approach?

Cathy and Lella try an exploration in the classroom of three-year-old children...

An early documentation panel

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"Teachers at Fort Hill are trying to look at materials differently. We are researching new possibilities for gathering and exploring found objects and natural materials with young children. We believe in the emergent curriculum – following the lead of the children as they interact with a new material – so we are trying to step back and watch what happens as the children explore."

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In a sense, you are entering the space of the child who is exploring...



Nicholas immediately arranged three sticks that formed a triangle and then built up with more sticks. He said, "I'm building a fish." He then cleaned his board and began again to construct different versions of a fish.

As the materials were shown across the table, David appeared captivated by the possibilities and began experimenting with stick arrangements. After several variations, he said, "I made a giant spider."

The images take the viewer inside the space of the child.  
Not always are we aware of entering such space.

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Three Year Old Children Explore Natural Materials



David said, "I'm making a fish!"

David said, "I'm making a fish!"

As the materials were shown across the table, David appeared captivated by the possibilities and began experimenting with stick arrangements. After several variations, he said, "I made a giant spider."

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A Catalyst for Change



Beautiful Stuff! became a catalyst for change in many early childhood settings. On the book's 20<sup>th</sup> anniversary, Davis Publications published *Beautiful Stuff from Nature* as well as a new, companion edition of *Beautiful Stuff!*

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To create *Beautiful Stuff from Nature* we posed a challenge to teachers of young children in North America with whom we had worked.

*"Sometimes young children see in Nature something new and surprising....."*



*It would be fantastic if you could capture that moment in images and words and see where that moment might lead....."*

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**Ever-Changing Big Skies**  
Albuquerque Public Schools  
Albuquerque, New Mexico

Mary Bliss, Pre-K Teacher  
Dona Sosa, Pre-K Teacher  
Gigi Yu, Early Childhood Art Resource Teacher

In this new book teachers and children from across North America explore and create with natural materials from their local environments.

Ordinary experiences become extraordinary as teachers record images, quotes and reflections in order to make learning visible.

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Children at a public kindergarten in New Mexico noticed the ever changing big skies that surround them. Their observations inspired an investigation.

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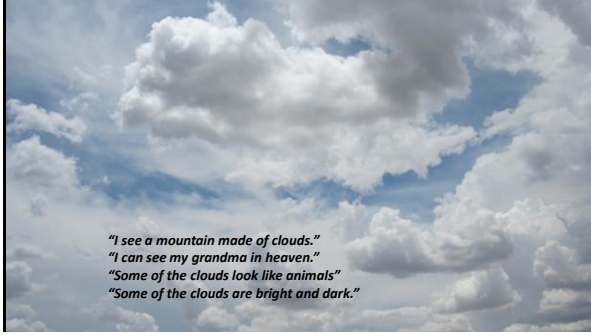
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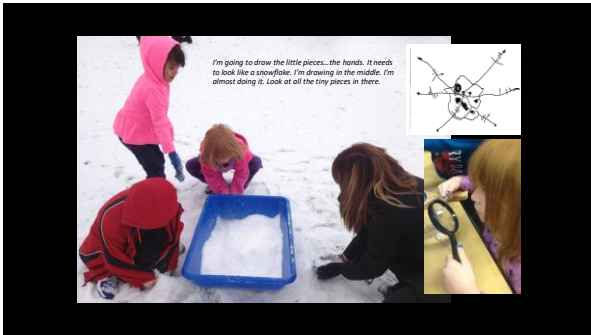
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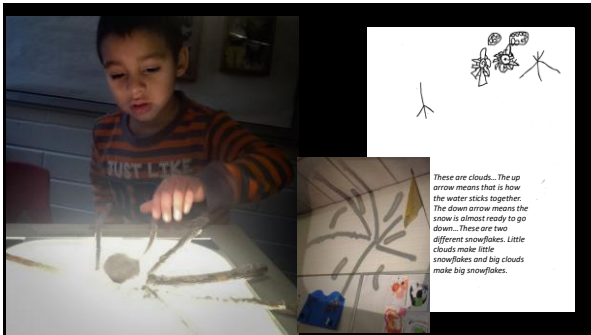
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**Windy, an  
Integral Part of  
Life at Little  
Gate in  
Louisiana**

*Windy is a 20 year-old Cypress tree. She gives us much needed shade in our hot climate. She brings us a peek into understanding seasons since she is actually one of the few trees in our area that is deciduous. She sheds her leaves in the fall, is bare in the winter, and grows green again in the spring.*

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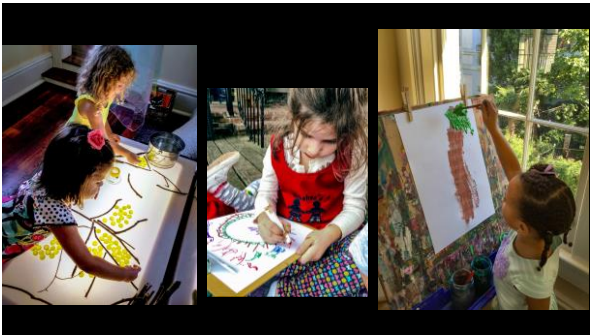
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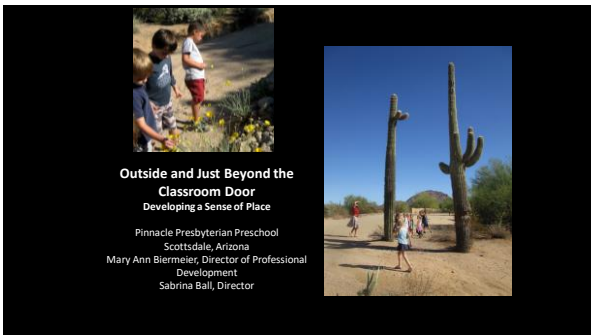
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Sean: I know about things. I think this tree got struck by lightning.

Christina: I think there were some owls in there and they felt like it was going to fall.

David: I liked the cactus. When the cactus fell over, I think it grew too tall.

Avery: Maybe it got too much water.

Sean: Lots of cactus get really tall and they don't fall down.

David: It got too tall.

What science standards are met through this active wondering?



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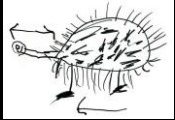
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A desert tortoise donated by one of our families, has become a favorite point of interest on our playground.



Questions you might pose to further any investigation:

- What do you know about \_\_\_?
- What do you wonder about \_\_\_?
- How could we find out?

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The shishált nation community on the Sunshine Coast of British Columbia revives indigenous traditions by beginning with its youngest members.

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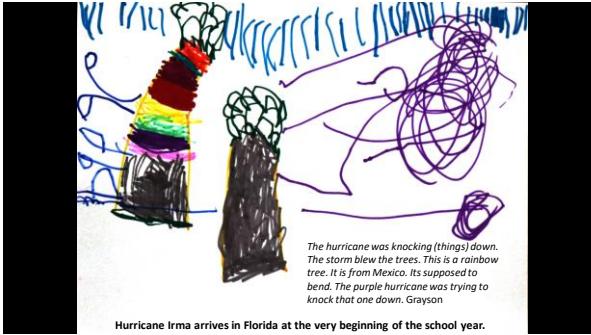
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The hurricane was knocking (things) down. The storm blew the trees. This is a rainbow tree. It is from Mexico. Its supposed to bend. The purple hurricane was trying to knock that one down. Grayson

Hurricane Irma arrives in Florida at the very beginning of the school year.

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The fallen trees find new life in a school.

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Tree Parts Become An Active Presence.

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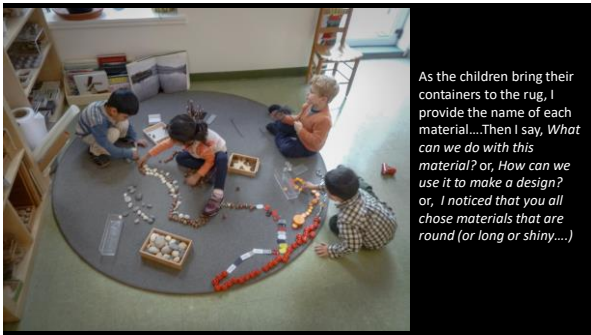
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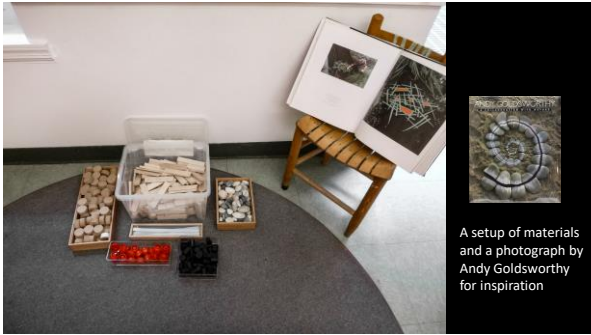
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A setup of materials and a photograph by Andy Goldsworthy for inspiration

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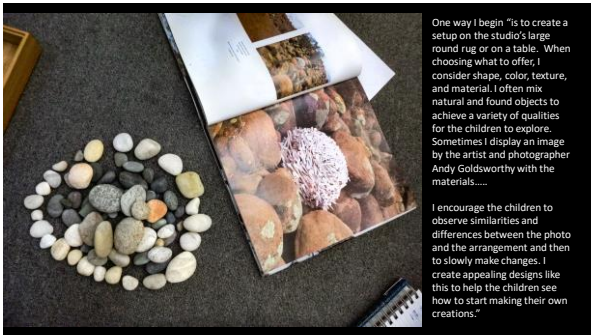
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One way I begin "is to create a setup on the studio's large round rug or on a table. When choosing what to offer, I consider shape, color, texture, and material. I often mix natural and found objects to achieve a variety of qualities for the children to explore. Sometimes I display an image by the artist and photographer Andy Goldsworthy with the materials. ....

I encourage the children to observe similarities and differences between the photo and the arrangement and then to slowly make changes. I create appealing designs like this to help the children see how to start making their own creations.

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Neatly arranged materials in containers on the shelves entice the children and inspire design and construction.

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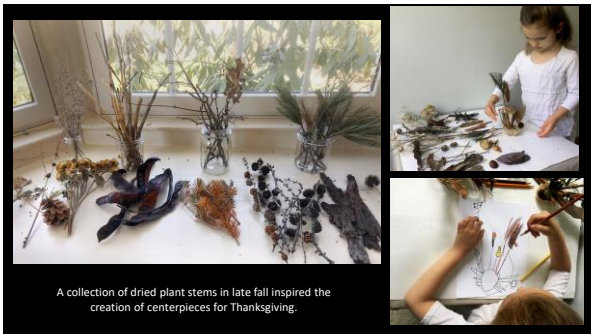
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*Right from the beginning we want our kindergartners to be interacting with nature.*

*We start our science curriculum with natural things from the local environment that we can bring into the classroom for close study.*

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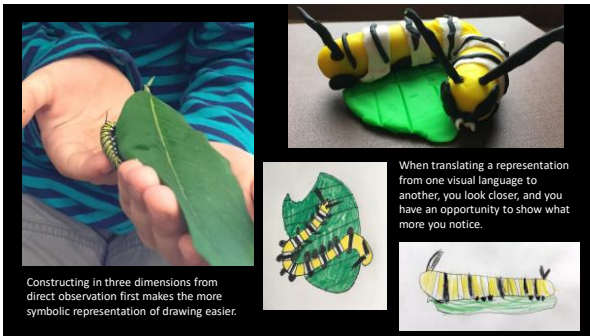
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Constructing in three dimensions from direct observation first makes the more symbolic representation of drawing easier.

When translating a representation from one visual language to another, you look closer, and you have an opportunity to show what more you notice.

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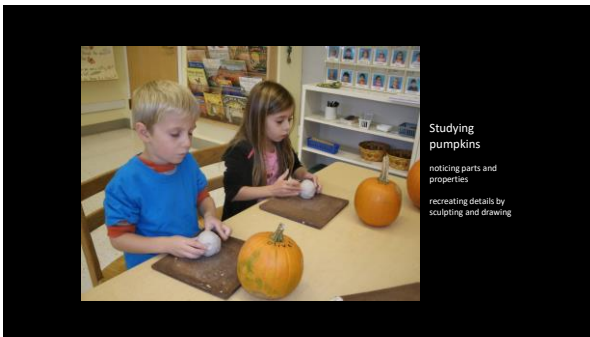
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**Studying pumpkins**

noticing parts and properties

recreating details by sculpting and drawing

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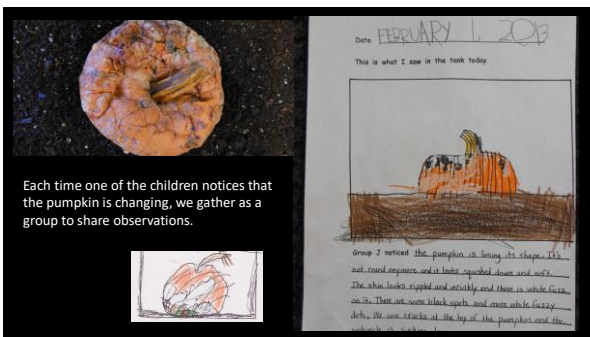
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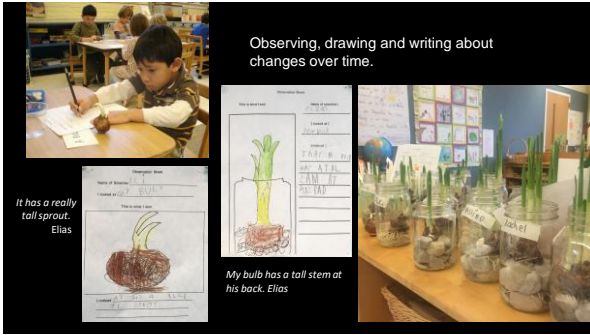
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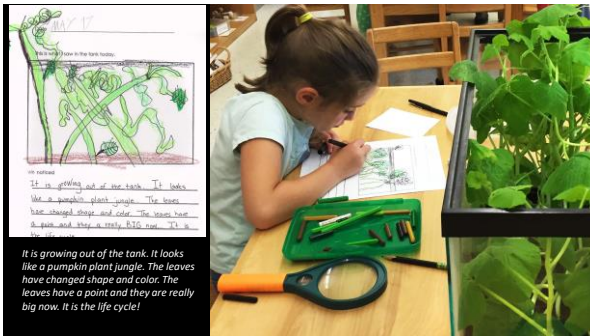
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Illustration of INSECTS

Inventing Insects – One Subject, Many Media

Subject from the "real" world

- Both teachers and children have stories about encounters with insects.
- All insects have certain characteristics in common.
- Insects are infinitely varied.

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Sharing insect encounters, songs, and movement are all important, playful ways to think about the parts of an insect.

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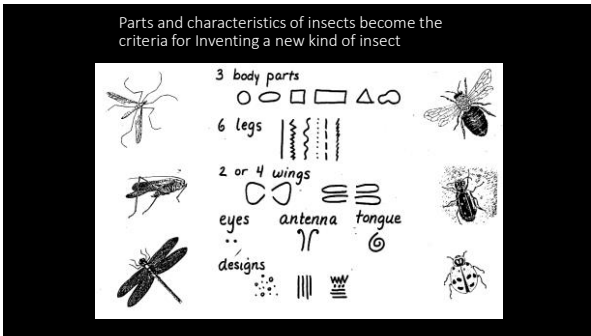
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\*Many children make the leap into representational drawing during this unit – especially with this lesson.

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**Exploring Crayon Techniques**

Use the **side** of the crayon to add color to big areas.

Use the **tip** for small places.

Blend colors

Press lightly

Try graduating the color from light to dark.

What else can you do with crayons?

- Mechanics
  - hand position
  - engaging muscles
  - control
  - energy
- Possibilities
  - shapes
  - sizes
- The Thinking Process

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Start by feeling textures. When eyes are closed fingertips become more sensitive! Notice: no crayons on the table – yet.

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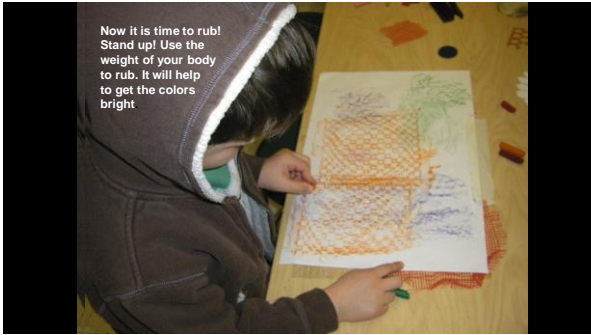
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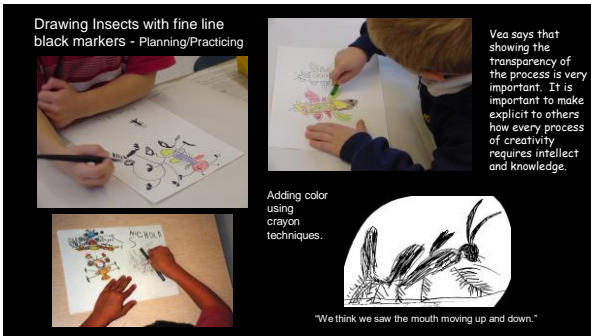
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Parts and characteristics of insects become the criteria for inventing a new kind of insect

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Applying Brushstroke and Shape-making Skills to a New Challenge

What shape will you invent for the head?  
The thorax? The abdomen?

\*Note: one color of paint at a time  
 • passing the paint when the music stops.  
 • brush goes back into the jar before passing.

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After the children have a chance to work with all the colors, the teacher will stop the class and ask children to step back from their work to take a look.

Then the jars of black paint and small brushes that you see on the back table, are offered for carefully adding details.

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**Details**

Near the end, small brushes and black paint are offered for adding details and parts you may have forgotten.

*"It can fly and walk and if it stays on the ground too long it will die."*

*"It has an orange abdomen."*

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How can you use your hands to change the shape of the clay?

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Drawing to save a memory

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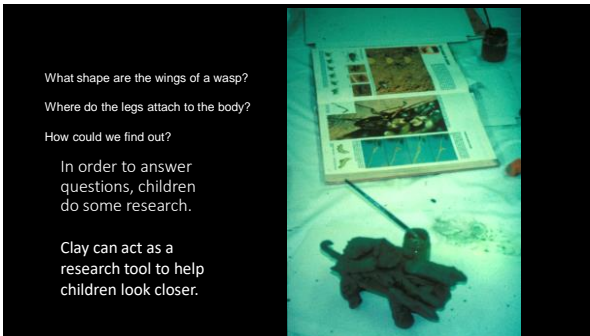
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Using Scissors

First children make a handshake.  
Say, "Hello, hello, hello".


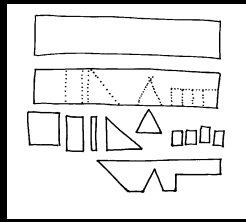
Then thumb goes in the little hole.  
We know. We know. We know.

Next fingers in the big hole.  
2 or 3 is what we said.

Now elbow goes right to your side.  
You're pointing straight ahead.

Then your fingers open wide.  
It's almost time to snip.

Remember, we're just practicing.  
We're trying not to rip.

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Exploring Scissors

- Mechanics
  - hand position
  - engaging muscles
  - control
  - energy
- Possibilities
  - shapes
  - sizes
- The Thinking Process



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The cards on the far right and far left are from my grandmother's kindergarten materials. My grandsons loved practicing cutting using these cards. To my surprise they went home and made their own papers for practicing cutting.

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**Constructing Insects with Cut Paper Shapes**

Hold two papers together and cut.

Fold twice.

Glue with one patch on the inside. Experiment with different glue settings.

When children work with the same concept but change the materials, they have the opportunity to deepen their understandings and to practice a variety of fine motor, spatial, construction, and cognitive skills.

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One subject interpreted through different visual languages

- Curriculum integration
- Once children work in this way, it can be used on other topics

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Young children think in unusual ways. They are always going beyond set ideas as they explore tools, materials and processes.

As they explore and experiment, children raise questions, construct understandings and try out approaches to learning, recognizing themselves as problem-solvers and inventors. In this way they are utilizing the same behaviors as engineers, scientists and artists.

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**Key Learnings**

- Slow down. Cultivate that "delicate and observant way of being with children."
- Take more time to explore materials, tools and processes. Young children are natural explorers. They teach us how to explore if we really pay attention. Teachers need to explore too. Exploring materials is a way to begin.
- Documenting is a way to study children's different ways of exploring . Documenting becomes a way to research each child's way of working.
- Reflecting together, discussing what we hear and notice as teachers is what elevates and brings clarity, understanding and appreciation of individual children. It also makes teaching more collaborative and more fun.
- Reflecting with the children is a way to test our understanding, and to identify new ideas to pursue.

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