Connecting the Dots: Using Best Practices to Support Three- to Five-Year-Olds and Their Families

Vermont Higher Education Collaborative
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Montpelier, Vermont

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National Institute for Early Education Research
Center on Enhancing Early Learning Outcomes
Rutgers, The State University of New Jersey
Agreements for Our Work

- Start on time, end on time or before.
- Be respectful of all people and perspectives.
- Be fully present.
- Listen or share; no side conversations.
- Everyone has the opportunity to speak once before anyone speaks twice.
- Put cell phones on stun.
- Observe confidentiality among colleagues.
- Work together as a learning community.
- All work focuses on increasing knowledge and improving skills.
- Be fully responsible as an individual and team member.
- Do your best.
- Others
A Sense of Urgency
What Role Does ECE Play in Vermont Today?
Average Ratings of Interactions in Pre-K - 3rd Classrooms

- Emotional Support
- Classroom Organization
- Instructional Support

Class Scores

Low Quality | Moderate Quality | High Quality
### Percentage of Children Ready for Kindergarten in Vermont

<table>
<thead>
<tr>
<th>School Year</th>
<th>Social - Emotional</th>
<th>Approaches to Learning</th>
<th>Communication</th>
<th>Cognitive</th>
<th>Wellness</th>
<th>All Domain</th>
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</thead>
<tbody>
<tr>
<td>2011-2012</td>
<td>79.4</td>
<td>78.7</td>
<td>85.7</td>
<td>73.9</td>
<td>83.3</td>
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<td>2012-2013</td>
<td>81</td>
<td>80</td>
<td>85</td>
<td>77</td>
<td>85</td>
<td>62</td>
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<td>2013-2014</td>
<td>75.3</td>
<td>69.4</td>
<td>83.3</td>
<td>65.5</td>
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<td>49.1</td>
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<td>2014-2015</td>
<td>76.3</td>
<td>76</td>
<td>82.6</td>
<td>65.1</td>
<td>85.5</td>
<td>52.3</td>
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<tr>
<td>2015-2016</td>
<td>Not Reported</td>
<td></td>
<td></td>
<td></td>
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<td>81.79</td>
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### VT Kindergarten Readiness Survey Results (2015–2016)

<table>
<thead>
<tr>
<th>State</th>
<th>Total Students</th>
<th>Percent of Students Surveyed</th>
<th>Average Total Score</th>
<th>Number Ready</th>
<th>Percent Ready</th>
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<tbody>
<tr>
<td>Total Enrollment</td>
<td>5865</td>
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<tr>
<td>All Students Surveyed</td>
<td>5290</td>
<td>90.20%</td>
<td>77.98</td>
<td>4327</td>
<td>81.79%</td>
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<td>Boys</td>
<td>2763</td>
<td>52.23%</td>
<td>75.34</td>
<td>2139</td>
<td>77.42%</td>
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<tr>
<td>Girls</td>
<td>2527</td>
<td>47.77%</td>
<td>80.88</td>
<td>2188</td>
<td>86.58%</td>
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<td>Free and Reduced Lunch Eligible</td>
<td>2249</td>
<td>42.51%</td>
<td>72.89</td>
<td>1647</td>
<td>73.23%</td>
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<tr>
<td>Not Free and Reduced Lunch Eligible</td>
<td>3041</td>
<td>57.49%</td>
<td>81.75</td>
<td>2680</td>
<td>88.13%</td>
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<tr>
<td>Attended Publically Funded PreK</td>
<td>2879</td>
<td>54.42%</td>
<td>79.71</td>
<td>2458</td>
<td>85.38%</td>
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<td>Did Not Attend Publically Funded PreK</td>
<td>2411</td>
<td>45.58%</td>
<td>75.93</td>
<td>1869</td>
<td>77.52%</td>
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What are the Characteristics of a Well-Functioning Child?
Characteristics of a Well-Functioning Child


Learn to trust themselves and others;
  Learn self-discipline;
Gain an awareness of others and the ability to feel for and with them;
  Be spontaneous when expressing feelings;
Become self-reliant and self-starting;
  Become increasingly responsible for their own behavior;
Develop a sense of humor;
  Form creative ideas;
Extend basic moving, manipulating; and communicating skills;
  Listen with heightened and prolonged attentiveness;
Acquire factual information and develop the capacity to conceptualize and represent ideas;
  Have a variety of interests and resources;
Find pleasure in the process as well as the product; and
  Show the desire to try, the courage to fail, and the persistence to continue their effort.
Understanding and Educating
The Whole Child
**HeartStart: Social and Emotional Foundations of School Readiness**

**Confidence** — A sense of control and mastery of one’s body, behavior, and world; the child’s sense that he or she is more likely than not to succeed at what he or she undertakes and that adults will be helpful.

**Curiosity** — The sense that finding out about things is positive and leads to pleasure.

**Intentionality** — The wish and capacity to have an effect and to act on that desire with persistence, a characteristic that is clearly related to a sense of competence and of being effective.

**Self-Control** — The ability to modulate and control one’s own actions in age-appropriate ways; a sense of inner control.

**Relatedness** — The ability to engage with others based on the sense of being understood by others and understanding others.

**Capacity to Communicate** — The wish and ability to exchange ideas, feelings, and concepts with others, a characteristic that is related to a sense of trust in others and a sense of pleasure in engaging with others, including adults.

**Cooperativeness** — The ability in a group activity to balance one’s own needs with those of others.
Every Child Needs

• Good health and nutrition
• Unhurried time
• Responsive caregiving
• Safe and supportive environments
• Special support for families with special needs
How Do Children Learn?

- Developmental/Maturational
- Environmental/Behavioral
- Constructivist

Universal and Unique Characteristics

Sequential Development
  - Bursts – Pauses – Regressions
  - Disruption >> Reorganization

Context Matters
How do adults learn?

Unconscious Incompetence

Conscious Incompetence

Conscious Competence

Unconscious Competence

When I hear, I forget.  
When I see, I remember.  
When I do, I learn.  

Confucious
Bloom’s Taxonomy Revisited

- Remember
- Understand
- Apply
- Evaluate
- Analyze
- Higher Order Thinking Skills
- Create
Be A Problem to Your Children

- Be a problem-finder
- Provoke dissonance
  - Environment
  - Relationships
  - Communications
- Be the “guide on the side,” not a “sage on the stage”
- Foster concept development, not recitation skills
- Support “preflection” as well as “reflection”
- Demand evidence of mastery without “quizzing”
- Recognize creativity as being equally important as literacy for survival in an unknown future
Divergent Question Models- “Let’s Pretend”

- **Quantity (Brainstorm)**
  - How many different ways can you use this cup?

- **Viewpoint**
  - What would our classroom look like to a bird flying overhead?

- **Involvement**
  - How would you feel if you were a tear?

- **Conscious Self-Deceit**
  - You have been given the power to be invisible. How would you use it?

- **Forced Association**
  - How is a fish like a snake?

- **Reorganization**
  - Suppose it was night all of the time. What would be the consequences?
Research on play is anything but fun. 
Play is unstructured, spontaneous, entered into for its own sake, inherently fun, & without goals. 
Games have inflexible rules, goals & objectives; often seeking to crown a winner; grow out of aggressiveness. 
Play is not the same as child-initiated activity or chaos. 
Why is play suppressed?
How are you smart?

[Image of a circular diagram with sections for different intelligences: Musical, Bodily-Kinesthetic, Visual-Spatial, Interpersonal, Intrapersonal, Logical-Mathematical, Naturalistic, Linguistic, and People Smart, Body Smart, Music Smart, Self Smart, Nature Smart, Logic Smart, Picture Smart]
Lessons from Neuroscience

ANATOMY OF A TODDLER’S BRAIN

WHINE CENTER

ABC’s, 1-2-3’s, etc.

Barney’s Theme Song

Ways to Negotiate for Candy

Ability to Share

ABC

Dirt Locator

Spill Reflex

Impulse to Contradict

WHAT TIME IS IT ON

Nextness Center

Patient Center

Delay Tactics

Super Turbo Tantrum Center

Involuntary “Why?” Reflex

Dirty Word Permanent Storage Area
ANATOMY OF A PARENT'S BRAIN (EARLY STAGES)

WORRY CENTER
- Ability to distinguish quiet from "too quiet"
- Dexterity to avoid all squeaks in floor of child's room
- New respect for your parents
- Unsolicited advice to offer
- Memory of what life was like before

Bragging Center
- Fear of losing babysitter
- Enhanced hearing
- "Good night!" Moon
- Full name when angry

Curse Control
- Reflex to use child's word for word
- Effective ways to change the subject
- Length of every children's video to the second

Effective Bribes
- "Sleep gland"
- "Child will eat or good"

Off the Mark by Mark Parisi
www.offthemark.com
Synaptogenesis
Neurons and You

[Diagram of a neuron with labeled parts: Dendrites, Cell body, Nucleus, Axon hillock, Axon, Presynaptic cell, Myelin sheath, Synaptic terminals, Synapse, Postsynaptic cell, Signal direction, Synaptic vesicles, Neurotransmitter, Dendrites, Axon, Synapse, Receptor]
Windows of Opportunity

Human Brain Development
Synapse Formation Dependent on Early Experiences

- Sensory Pathways (Vision, Hearing)
- Language
- Higher Cognitive Function

Conception - Birth - (Months) - (Years)

Age

30 Million Word Gap

Cumulative Language Experiences

Cumulative Words Spoken to Child (in millions)

Age of Child

0 12 mo. 24 mo. 36 mo. 48 mo.

Professional: 45
Working-Class: 26
Low-Income: 13

Hart and Risley, 1995
Stress
Once upow a tiwe, three saw a fnuug little god maned Rep that manted to flg. Ae climped ub in a horse mith a lewot on his nahbs aub juwqeb off. Hfter amnile, a pg, promu puck maned Aero cawe dy aub was tne little god thaw ne saw doing. “f’w tryiug to flg”, zaib tne little god. Tne dig pnck zaib, “Gods cau’t flg.” Tne little god left sab tub ne soou leatueb ne conlb nawe gnst is chum fnu cnaziug tacs.

Questions:
1. What type of animal is the main character of the story?
2. What is his name?
3. Does he have a lot of fur or only very little?
4. What did he jump off of while trying to fly?
5. What did he hold in his hands?
6. What type of animal is the second character in the story?
7. Is he big or little?
8. What color is he?
9. Is he a younger or older animal?
10. What is his name?
11. What did the little dog find to do that was equally as much fun? Chasing __________.
Once upon a time there was a funny little dog named Red that wanted to fly. He climbed up on a house with a towel in his hands and jumped off. After awhile, a big grown buck named Hero came by and saw the little dog jumping up and down from the house. The big buck asked the little dog what he was doing. “I’m trying to fly,” said the little dog. The big buck said, “Dogs can’t fly.” The little dog felt sad but he soon learned that he could have just as much fun chasing cats.
<table>
<thead>
<tr>
<th></th>
<th>0-5</th>
<th>K-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approach</strong></td>
<td>Developmental</td>
<td>Academic</td>
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<tr>
<td><strong>Enrollment</strong></td>
<td>Choice/optional</td>
<td>Universal, Mandatory</td>
</tr>
<tr>
<td></td>
<td>Targeted</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Universal</td>
<td></td>
</tr>
<tr>
<td><strong>Governance</strong></td>
<td>Federal, State, District, private</td>
<td>State Board of Education</td>
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<tr>
<td></td>
<td>Health/Human Services/Ed, other entity</td>
<td>DOE</td>
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<tr>
<td></td>
<td></td>
<td>Local school board</td>
</tr>
<tr>
<td><strong>Standards</strong></td>
<td>State: Birth – 3, Pre-K, Birth – K</td>
<td>K-12 Curriculum Frameworks</td>
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<tr>
<td></td>
<td>Federal: Head Start Child Outcomes</td>
<td>Common Core/CCR/Next Gen</td>
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<tr>
<td></td>
<td>Comprehensive domains</td>
<td>Content-specific</td>
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<tr>
<td><strong>Curriculum</strong></td>
<td>Self-selection</td>
<td>State or local required</td>
</tr>
<tr>
<td></td>
<td>180 days or year-round</td>
<td>180 days</td>
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<tr>
<td><strong>Assessment</strong></td>
<td>Required and optional</td>
<td>Defined points;</td>
</tr>
<tr>
<td></td>
<td>Variety of Measures</td>
<td>Prescribed measures</td>
</tr>
<tr>
<td><strong>Teacher Qual.</strong></td>
<td>Varied by auspice (HS -&gt; MA)</td>
<td>Defined by SEA or PSB (BA min)</td>
</tr>
<tr>
<td><strong>Accountability</strong></td>
<td>Varies from none or basic health/safety compliance to student/program outcomes</td>
<td>Student-outcome based</td>
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<tr>
<td></td>
<td></td>
<td>School-/district level performance</td>
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<td></td>
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<td>SLDS</td>
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<tr>
<td><strong>Resources</strong></td>
<td>Parent fees, federal, state, local</td>
<td>Local, state, federal</td>
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### Assessment/Curriculum/Instruction Issues

<table>
<thead>
<tr>
<th>FROM</th>
<th>TO</th>
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<tbody>
<tr>
<td>Bell Curve</td>
<td>“J” Curve</td>
</tr>
<tr>
<td>Grades A-F</td>
<td>Grades A, B, and Incomplete</td>
</tr>
<tr>
<td>Calendar Defined</td>
<td>Outcome-Defined</td>
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<tr>
<td>Curriculum Coverage</td>
<td>Teaching for Mastery</td>
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<tr>
<td>Assigned Activities/Tasks</td>
<td>“Ultimate” Outcome Demonstrations</td>
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<tr>
<td>Fixed Grouping</td>
<td>Flexible Grouping</td>
</tr>
<tr>
<td>Fixed teacher roles</td>
<td>Flexible, team-based roles</td>
</tr>
<tr>
<td>Grading in ink</td>
<td>Evaluating outcomes in pencil</td>
</tr>
<tr>
<td>Offering and providing programs and experiences</td>
<td>Facilitating and intervening for outcome success</td>
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<tr>
<td>Pedagogy</td>
<td>Mathetics</td>
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Developmentally Appropriate Practice or Developmentally Effective Practice?

- All the domains of development and learning—physical, social and emotional, and cognitive—are important, and they are closely interrelated. Children’s development and learning in one domain influence and are influenced by what takes place in other domains.
- Many aspects of children’s learning and development follow well documented sequences, with later abilities, skills, and knowledge building on those already acquired.
- Development and learning proceed at varying rates from child to child, as well as at uneven rates across different areas of a child’s individual functioning.
- Development and learning result from a dynamic and continuous interaction of biological maturation and experience.
- Early experiences have profound effects, both cumulative and delayed, on a child’s development and learning; and optimal periods exist for certain types of development and learning to occur.
• Development proceeds toward greater complexity, self-regulation, and symbolic or representational capacities.

• Children develop best when they have secure, consistent relationships with responsive adults and opportunities for positive relationships with peers.

• Development and learning occur in and are influenced by multiple social and cultural contexts.

• Always mentally active in seeking to understand the world around them, children learn in a variety of ways; a wide range of teaching strategies and interactions are effective in supporting all these kinds of learning.

• Play is an important vehicle for developing self-regulation as well as for promoting language, cognition, and social competence.

• Development and learning advance when children are challenged to achieve at a level just beyond their current mastery, and also when they have many opportunities to practice newly acquired skills.

• Children’s experiences shape their motivation and approaches to learning, such as persistence, initiative, and flexibility; in turn, these dispositions and behaviors affect their learning and development.
Guidelines for developmentally appropriate practice

- Create a caring community of learners
- Teach to enhance development and learning
- Plan curriculum to achieve important goals
- Assess children’s development and learning
- Establish reciprocal relationships with families
Which came first? . . . .

Curriculum

Assessment

Instruction
What is a curriculum?

What + How + When + Where +
How Often + For Whom + By Whom

Why
There is strong agreement on what children should know and do when they enter kindergarten. Having early learning standards is a good thing for children. Having early learning standards lessens opportunities for play. Parents will love shared expectations for their children. Standards means we are moving toward the standardization of what and how we teach.
VELS: Understanding the Basics
# Table of Contents

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<tr>
<th>Arena</th>
<th>Domain</th>
<th>Element</th>
<th>Goal</th>
<th>Indicator</th>
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<td>GUIDING PRINCIPLES</td>
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<td>APPROACHES TO LEARNING</td>
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### SCIENCE

**Element 1: Physical Sciences**

**Goal 1:** Children construct concepts of the properties of matter, sound, motion and energy through inquiry, exploration and investigations.

*By the end of each age group, most children will:*

<table>
<thead>
<tr>
<th>Infants (0-12 months)</th>
<th>Younger Toddlers (9-18 months)</th>
<th>Older Toddlers (18-36 months)</th>
<th>Younger Preschoolers (36-48 months)</th>
<th>Older Preschoolers (48-60 months)</th>
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</thead>
<tbody>
<tr>
<td>1. Attend to and demonstrate interest in objects in their environment, using all of their senses to explore</td>
<td>1. Repeat actions and observe results</td>
<td>1. Use objects in more than one way (e.g., use a bucket as a stool)</td>
<td>1. Investigate and describe different types or speeds of motion</td>
<td>1. Use evidence to discuss what makes something move the way it does and how some movements can be controlled</td>
</tr>
<tr>
<td>2. Move and handle objects to learn more about them (e.g., drop food from high chair to see what happens)</td>
<td>2. Demonstrate ability to push and pull objects</td>
<td>2. Label physical properties of objects (e.g., big, heavy)</td>
<td>2. Use objects to effect motion (e.g., build ramp with blocks so cars go faster)</td>
<td>2. Describe objects by their physical properties and states of matter</td>
</tr>
<tr>
<td>3. Explore ways to make different sounds with their bodies and objects (e.g., vocal sounds, clapping)</td>
<td>3. Act upon objects to make them move in different ways</td>
<td>3. Use basic words to describe speed of motion (e.g., “My car go fast.”)</td>
<td>3. Investigate and identify solids and liquids</td>
<td>3. Investigate the differences between liquids and solids and explore how liquids can become solids, and solids become liquids</td>
</tr>
<tr>
<td>4. Attend to objects that emit light</td>
<td>4. Explore properties of liquids and solids (e.g., dumping water or blocks from a container, roll play dough)</td>
<td>4. Ask questions about motion and sound (e.g., Why?)</td>
<td>4. Use objects to make different sounds (e.g., put beans in a can to make 1 type of sound and in a plastic tub to make another type of sound)</td>
<td>4. Demonstrate the relationship between shadows, the objects that make them, and the light source</td>
</tr>
<tr>
<td>5. Looks for an object that is hidden out of sight</td>
<td></td>
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Standards-Based or Standards-Linked?

**Standards-Based** = Developing curriculum knowing what you want the children to gain (intentional/purposeful/planning).

**Standards-Linked** = After-the-fact association to see what children have gained (incidental/assessment).

Both approaches are **Standards-Referenced**!
Your Class
Curriculum Building

- Teachers as architects
- Teachers as translators
- Teachers as advocates
- Teachers as leaders
WHAT IS THIS TEACHER DOING? THE CHILDREN ARE JUST PLAYING!!

I VALUE PLAY AS AN IMPORTANT MEDIUM FOR LEARNING. I HAVE DEVELOPED A BROAD RANGE OF DEVELOPMENTAL GOALS WITH THE FOCUS ON PLAY. THIS PROGRAM PROVIDES CHILDREN WITH PLAY EXPERIENCES THAT ENABLE THEM TO DEVELOP AND ACCUMULATE THEIR OWN KNOWLEDGE.

Copyright © 1993 Sandra J. Stone
What is this teacher doing? The children are just playing!!

I'm developing mobility of thought...
I'm practicing cooperation...
I'm developing a sense of story and enhancing my story comprehension...
I'm developing more elaborate language...
I'm developing hand-eye coordination...
I'm organizing and conceptualizing my world...
I'm making generalizations about the properties of various objects...
I'm developing classification skills...
I'm testing my balancing system...

I value play as an important medium for learning. I have developed a broad range of developmental goals with the focus on play. This program provides children with play experiences that enable them to develop and accumulate their own knowledge!

I'm learning to "decenter" my viewpoint.
I'm learning how to take turns.
I'm developing gross motor skills.
I'm developing number concepts.
I'm developing a good self-concept.
I'm following a mental plan.
I'm problem-solving.

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Special Issues

The Environment as Teacher
Learning Challenges/Teaching Opportunities
Classroom as Melting Pot
Collaborative Teaming with Families
Transitioning to Kindergarten
“In a completely rational society, the best of us would aspire to be teachers and the rest of us would have to settle for something less, because passing civilization along from one generation to the next ought to be the highest honor and the highest responsibility anyone could have.”

- Lee Iacocca
Once upon a time there was a furry little dog named Reb that wanted to fly. He climbed up on a house with a towel in his hands and jumped off. After awhile, a big brown duck named Nero came by and saw the little dog jumping up and down from the house. The big duck asked the little dog what he was doing. “I’m trying to fly,” said the little dog. The big duck said, “Dogs can’t fly.” The little dog felt sad but he soon learned that he could have just as much fun chasing cats.

#3
What one loves in childhood stays in the heart, forever.
Jim Squires, Ph.D.

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