Teaching engineering using Dramatic Play...
creating a socio-dramatic play area.

Most PreK classrooms have a dramatic play area that invites children to create and act out role plays together. These play areas can also be used as learning environments as they are being constructed, in addition to the traditional use, by engaging the children in the engineering design process to create them. During the course of the year, a variety of Dramatic Play areas (ideally 4 to 6) can be created with the children, building a learning environment that can be used to teach engineering, thinking skills and 21st century interpersonal skills. Once it is created, children can role play in the area as well as be channeled into doing additional engineering designs.

Teacher planning
Before starting the design process with the children, the teacher should plan the activities by thinking about the following questions:

- Do I want to assign roles for the children to have while they do the design project? (Scribe, Project leader, Material manager, Artist, etc)
- What vocabulary do I want the children to learn?
- What thinking skills do I want to emphasize?
- Will the children do all of the steps in the design and building of the dramatic play area or just one or two steps? (ie, they can just work on the initial design and layout of the play area)
- Will we need a schedule for building the play area? How are we going to display and use the schedule?
- Look for a science connection to the play area the children pick.(i.e. a barber shop/hair salon ) … life science: Discuss hair on people, its differences and why it’s different. Why do we have hair?

The process of designing the Dramatic Play area is as follows:

1. Start with the question to the children, “What do we want this play area to be?”
   Explain to the children that they will be brainstorming, and how it works: everyone is invited to give ideas, no discussion at this point, no put-downs. The teacher is scribe, writing on a large chart, as the children give their ideas.

2. Discuss with the children some ground rules for making the decision about which theme they will create.
   - Needs to be a safe environment
   - Needs to be of interest to everyone (will everyone want to play there?)
   - Needs to be realistic to create, in terms of materials and time (can we find, make what we want?)
3. Allow some time for discussion about the proposed ideas (a day or two), both with the whole class and by the children informally. Give children who suggested themes the opportunity to explain why they think their ideas are good ones. Allow for modification of ideas based on the discussions.

4. Determine how the theme will be chosen – by a class vote or by the teacher?

5. Think with children about the design of the play area, materials, and tools. Questions to ask: How do we want to play in the Play Area? What special clothing do we need in the area? What furniture and props do we want? How do we want to layout the play area? Can we draw a diagram of what it will look like? How much space do we need? (This might be determined by counting how many steps are needed to walk the length and width of the area.) Do we need tools to build the play area? Do we need training to use tools?

6. Build the play area. Look at pictures in magazines and books and on the internet, to learn more about the theme. The teacher can read books to the class that will provide more information. Look for experts among parents and school staff who can provide information. Children can create props and furniture from classroom materials and items brought from home. They might build a model of the play area before creating the real thing.

7. While building the play area, review and discuss what worked and what didn’t work. How can we change the design process to make it work better? What are we learning? Encourage children to share things they have learned during the planning and building process.

8. After the children have played in the area for a few days, gather the class for a discussion of how it is working. What can we redesign to make it better? Can we document our design? How about taking pictures of our design? Can we share the design with our family and friends? How about sharing with the students in another classroom what we did?

Important note: This is a cyclical process, so it’s OK to go back a step or two and restart if you find it necessary. The teacher should emphasize that when we get some thing wrong it’s OK as long as we learn from it. Often we learn best when we make mistakes and figure out how to correct them.

Dramatic play permits children to fit the reality of the world into their own interests and knowledge. One of the purest forms of symbolic thought available to young children, dramatic play contributes strongly to the intellectual development of children (Piaget, 1962). Symbolic play is a necessary part of a child's language development (Edmonds, 1976). Drama: What It Is and What It Isn’t
Introducing DeBono 6 hats Mediators for use by the teacher. In Vygotsky’s work, a mediator is something that stands as an intermediary between an environmental stimulus and an individual reposed to that stimulus. The teacher certainly can encourage these types of thinking. The concept of the 6 hats can be a resource for the teacher. In order to make creative thinking part of ordinary thinking, there are six metaphorical hats. The thinker can put one on or take one off to indicate the type of thinking that is being used. This putting on and taking off is essential. The hats must never be used to categorize individuals, even though their behavior may seem to invite this.

**White Hat:** This covers facts, figures, information, asking questions, and defining information needs and gaps. "I think we need some white hat thinking at this point..." means "Let's drop the arguments and proposals and look at the data base."

**Red Hat:** This covers intuition, feelings and emotions. The red hat allows the thinker to put forward an intuition without any need to justify it. "Putting on my red hat, I think this is a terrible proposal." Usually feelings and intuition can only be introduced into a discussion if they are supported by logic. Usually the feeling is genuine but the logic is spurious. The red hat gives full permission to a thinker to put forward his or her feelings on the subject at that moment.

**Black Hat:** This is the hat of judgment and caution. It is a most valuable hat and the one we need to use most of the time. The black hat is used to point out why a suggestion does not fit the facts, the available experience, the system in use, or the policy that is being followed. The black hat must always be logical.

**Yellow Hat:** This hat finds reasons why something will work and why it will offer benefits. It can be used in looking forward to the results of some proposed action. It can also be used to find something of value in what has already happened.

**Green Hat:** This is the hat of creativity, alternatives, proposals, what is interesting, provocations, and changes.

**Blue Hat:** This is the overview or process control hat. It looks not at the subject itself but at the thinking about the subject. "Putting on my blue hat, I feel we should do some more green hat thinking at this point." In technical terms, the blue hat is concerned with meta-cognition.

An individual can ask another individual to put on or take off a particular color of hat. For example, if someone is being very negative about an idea, the other person might say: "That is great black hat thinking, now let's try some yellow hat thinking." In this way a switch is made immediately and without offense.
This chart is a good resource for the teacher to assess whether or not the children are using these thinking skills during the design process. Bloom’ revised taxonomy to be used for developing the thinking skills for the students. Chart form the ______ school in Queensland, Australia.

<table>
<thead>
<tr>
<th>Thinking Skill</th>
<th>Overview</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creating</td>
<td>Generating new ideas, products, or ways of viewing things</td>
<td>Designing, constructing, planning, producing, inventing.</td>
</tr>
<tr>
<td>Evaluating</td>
<td>Justifying a decision or course of action</td>
<td>Checking, hypothesizing, critiquing, experimenting, judging</td>
</tr>
<tr>
<td>Analysing</td>
<td>Breaking information into parts to explore understandings and relationships</td>
<td>comparing, organizing, deconstructing, interrogating, finding</td>
</tr>
<tr>
<td>Applying</td>
<td>Using information in another familiar situation</td>
<td>Implementing, carrying out, using, executing</td>
</tr>
<tr>
<td>Understanding</td>
<td>Explaining ideas or concepts</td>
<td>Interpreting, summarising, paraphrasing, classifying, explaining</td>
</tr>
<tr>
<td>Remembering</td>
<td>Recalling information</td>
<td>Recognizing, listing, describing, retrieving, naming, finding</td>
</tr>
</tbody>
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This portion of the paper by:

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Drama is the portrayal of life as seen from the actor's view. In early childhood, drama needs no written lines to memorize, structured behavior patterns to imitate, nor is an audience needed. Children need only a safe, interesting environment and freedom to experiment with roles, conflict, and problem solving. When provided with such an
environment, children become interested in and will attend to the task at hand and develop their concentration (Way, 1967). Opportunities for dramatic play that are spontaneous, child-initiated, and open-ended are important for all young children. Because individual expression is key, children of all physical and cognitive abilities enjoy and learn from dramatic play and creative dramatics. In early childhood, the term dramatic play is most frequently used and the process is the most important part, not the production. Dramatic play expands a child’s awareness of self in relation to others and the environment. Drama is not the production of plays usually done to please adults rather than children (Wagner, 1976).

Elements of Drama in the Early Childhood Classroom

- Dramatic play includes role-playing, puppetry, and fantasy play. It does not require interaction with another.
- Socio-dramatic play is dramatic play with the additional component of social interaction with either a peer or teacher (Mayesky, 1988; Smilansky, 1968).
- Creative dramatics involves spontaneous, creative play. It is structured and incorporates the problem solving skills of planning and evaluation. Children frequently reenact a scene or a story. Planning and evaluating occurs in creative dramatics (Chambers, 1970, 1977)

This chapter also contains sections on Developmental Stages of Dramatic Play, Ideas for Using Dramatic Play in the Classroom, and Sample Activities

The Importance of Dramatic Play

Creating Sociodramatic Play Boxes

The importance of dramatic play

Research clearly supports developmentally appropriate practices in the early childhood classroom, but recent demands by specific programs and curriculum trends may cause teachers to question whether it can all be done "appropriately." Many times, teachers find themselves struggling with time and organization restraints where one or two curriculum trends take over the classroom, leaving little time for anything else. For example, teachers can become so diligent in planning specific standards related assessments and instruction that they lose time for other strategies that have worked for children in the past. Dramatic play is one effective strategy that is sometimes "pushed aside" to make room for all the new ideas and strategies. It may seem impossible to accomplish everything, but it can be done! The secret to keeping the balance in developmentally appropriate practices involves adjusting our curriculum to new trends and research suggestions without sacrificing the benefits of current practices that have proved beneficial results for young children time and time again.

Research is abundant when it comes to play and its positive effect on children's development. Play is enjoyable for all but often underestimated for its unique way of positively influencing physical, cognitive, and psychosocial development. Children especially can become consumed in their own imaginary world of play. This world of play offers children vast opportunities to
learn about themselves, others, and the environment in which they live. Benefits of play in the classroom include:

- **Physical**: increase in strength, overall fitness, motor skill development, health;
- **Cognitive**: increase in skills such as problem solving, creative thinking, planning, organizing, language, and overall academic success;
- **Social and Emotional**: enhanced development of cooperation, sharing, turn taking, less egocentrism, increase in prosocial values and self esteem, practice of appropriate social roles.

Smilansky (1968) pioneered the idea of a positive correlation between children's sociodramatic play and their success in school. Her study was one of the first that began to tutor low socioeconomic children to play in hopes that they would make academic progress. She found children who were unsuccessful with sociodramatic play tended to have parents with little or no formal education. These children came from environments where play was discouraged as being unrealistic. Her research concludes that adults should value play by providing a context where the play can be supported.

**creating sociodramatic play boxes**

What materials would be best for encouraging dramatic play? Myhre (1993) found that thematic prop boxes were especially useful for promoting sociodramatic play. The dependence of younger children on more realistic props is very important in the early years. It is advisable to provide toddler and preschool classrooms with more realistic and creative props. Proper settings continue to affect children's development of sociodramatic play. Much time, planning, and attention is needed to provide a setting that promotes higher developments of play.

**Suggestions for creating dramatic play boxes for the classroom:**

- Build around thematic units
- Collect inexpensive play materials
- Designate a specific play area in the classroom
- Allow adequate time for play experiences
- Encourage children to be creative with play themes
- Add literacy/print experiences to every play box
- Add items to promote character development and prosocial behaviors

**Questions to assess your dramatic play area at set-up:**

- Does the play center incorporate a variety of materials that will encourage dramatic play of young children?
- Does the play center include materials that will stimulate literacy activities (reading, writing, speaking, listening)?
- Does the play center include teacher-made as well as commercial materials?
- Are materials available that promote creativity and flexibility of play?
- Are the materials developmentally appropriate for young children?
- Are play props included which are conducive to a thematic unit? Is there a "theme" to your play center?
Questions to assess your dramatic play area once in use:

- Are children actively involved in play themes?
- Do projects stem from natural encounters with play materials?
- Are children engaged in high levels of social play, specifically cooperative play?
- Does the center area account for various skill differences and individual learning preferences?
- Are children supporting each other in problem solving activities?

**Conclusion**

Today experts agree that play is beneficial to children and their overall healthy development. Through dramatic play, children learn to assert themselves in a way to build their competence in later adult roles (Elkind, 1981). Developmental psychologists, such as Piaget and Sutton-Smith, define play as specific behaviors involving divergent thinking. The Association for Childhood Education International has stated that play is a natural behavior that is related to children's development and that no adult instruction can take the place of children's own activities and experiences through continual play. Bredekamp (1999) acknowledges child-initiated, child-directed, and teacher-supported play as a valuable element of developmentally appropriate practice. The research gives credence to the many positive results appearing from children's involvement in play.

**References**