

Lesson Plan 20 Title: "Let's see what we can build with"

Concept / Terminology / Topic to Teach: consulting, information gathering, communication, exchange of ideas

Class Goal(s)/Objectives: When coming closer to an end product and after having some more concrete ideas about the end product, engineers do a more detailed information gathering about more detailed elements of the design. Furthermore elements have to be selected to be used for the final model construction to resemble reality and represent the design features as beneficial as possible. Today children will present in class building materials they brought from home, and they will discuss how they could use them to build their final constructions. Parents and friends that are engineers have also been invited to be in class and participate in the discussion and the building process.

Required Materials: 2 gender neutral puppets, hard paper, material that children have brought from home, various different (even controversial) material children can use to start the construction (i.e. paper boxes, big metallic cans, plastic boxes, carton etc) . 4 dolls, 3 cars, 1 ball, 1 dog (per group)

Setting: Classroom, Large group time, small group time.

Step-By-Step Procedures: During large group time you will start with revisiting what the final goal is (i.e. building a school, a garage, or whatever the children have already decided in previous sessions. Let the children see the different material, touch them, and say if they like to use them to build their building or not. Andy can ask how many children brought information or materials from home. According to this number split the children in smaller equal groups and ask the children to present to their friends their new information and ask them if they like or dislike the new ideas.

Plan For Independent Practice: In the small groups have the children present one idea to their friends. Children can rotate so that no child will get to wait for long. Have the dolls, cars etc on the table so that children can use them when discussing if

they think the dolls etc fit in this boxes, or how they are going to use the space etc. Every time an idea gets discussed, write it on a paper. Start building using the materials brought in class. While building, encourage the children to experiment with the various materials and have them explain their preferences. Write down their construction ideas. Take pictures.

Closure (Reflect Anticipatory Set): End the class by repeating all the new ideas and showing to the children which one was the most popular. Hang the most popular ideas discussed on the class wall (even better if pictures exist).

Assessment Based On Objectives: Every child should have brought up one new idea and explain why it is a good idea to the other children in the small group. Every child should demonstrate active participation in the building process.

Possible Connections To Other Subjects: Language and reasoning (while presenting the new ideas), science (when choices are getting discussed).