

Lesson Plan 6 Title: "Let's improve our models"

Concept / Terminology / Topic to Teach: Design, model, improve.

Class Goal(s)/Objectives: After brainstorming and doing some first drafts on paper engineers start to try to come up with 3D models of the construction. These can be made out of many different materials. These can be paper models, cardboard models, models with mixed materials...anything that can help them start visualizing the final construction, while still being flexible enough to move components in order to experiment with possible solutions. Today you will revisit the 3D models you created, discuss, and attempt to improve them.

Required Materials: 2 gender neutral puppets, the toys that represent Sam's dolls, cars etc, sets of blocks, variety of materials (at least 3 different) the children could incorporate into their building. (i.e. small plastic cups, pieces of cloth, toy furniture or environmental elements), image of Sam and Andy with models to be placed on the wall under the already existing ones photos from last sessions constructions. Furthermore two images presented bellow should be placed on the cardboard. They should be presenting children's work done in previous lessons.

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

NOTICE. This large group session should be shorter to give the children more time to build and to use the toys on the building as much as possible.

Step-By-Step Procedures: During large group time you will start with revisiting what happened in the last to classes (always using the puppets that are talking about it). Sam is going to tell Andy that during the last classes the children came up with some great models in order to help her with the toys situation. Sam will then mention the ideas that the children have come up to in the last building session showing the photos to Andy.

VERY IMPORTANT: When discussing the constructions with the children ask them if they can think of anybody they could ask or anywhere they could look in order to get more ideas about how to build something. Note what they say, since this may be

used as the theme for the following lesson plan. Then Andy will propose that it would be nice to actually try to improve these models by using even more materials with the blocks, and will ask the children to go to the (different for each group) building area.

Plan For Independent Practice: During small group time Andy asks the children to try to see what their improved models would look like. Every group will be placed in an area with a set of blocks the extra material and Sam's toys, to try to build what they were designing in the previous classes.

Closure (Reflect Anticipatory Set): End the class by asking the children to explain what exactly they have been building. Take photos.

Assessment Based On Objectives: children should come up with some construction that at least one of Sam's toys is using.

Possible Connections To Other Subjects: motor skills improvement, language (while explaining their construction), art (in case they will decide to color or construct anything to use in their construction).

Images to be placed on the cardboard:

