Lesson Plan

Team Model Building

Dennis Beske
Sheboygan South High School
(920) 803-7855
E-mail: dbeske@sheboygan.k12.wi.us

Lesson Objectives

-To develop a team strategy to replicate a Lego model
-Build the model identical to the instructors model
-Define job assignments to construct the model
-Communicate effectively to complete problem in required time

Rationale

People on a daily basis are required to complete projects quickly, efficiently, and with zero waste. To complete these products takes the effort of a team and not just one individual. This is accomplished through the developing and sharing of ideas to solve the problem to meet the required goals. This exercise will aid in the development of team thinking and cooperation to meet the goal. This requires the team to develop a design and building strategy. An independent observer monitors the entire development and building of the project. This allows the team to have an independent look as to how the project was approached and possible recommendations on how to improve their efforts. This feedback is immediate and addresses any issues observed during the exercise.

Materials

One large set of Lego or similar building set

Procedure

1. Divide the class into teams of four to six people in each group. (1- observer, 1-builder, 2-4 people to explain how the model is to be built)

2. Each group assigns one person to be the observer. This person is to only observe. At no time will the observer provide any input into how to solve during the exercise. They **cannot speak** during the exercise. At the end of the exercise the observer will give the group immediate feedback as to what were strengths and weaknesses seen in the groups procedures. Suggestions can be made at this time as to how to improve their success. Some of the things that the observer should be looking for: Effectiveness of their strategy; individuals moods: IE anger, frustration, humor, cooperation; Leadership roles; effectiveness in planning or lack of proper planning. The observer should write down their observations. They should not rely on their memories to recall

what was seen. That way there is no argument between the team building and the observer.

3. Only one person will handle the model during the building of the project. This is the **only person** that will attach the parts and build the model.

4. The instructors model will be located in an isolated section of the classroom. Behind a screened area works well. Only one student from each group can be up at the instructors model at any time. They can pick up the model to observe how the model is constructed, but they must not allow the model to be seen by any of the remaining members of the class. They are not allowed to verbally relay information or discuss any information across the room. They must first return to their group to pass along any information concerning the model. They may hand the pieces to the builder to facilitate the building and define how the object is to appear.

5. Each team will be given the same number of pieces matching in size, quantity, and color as the instructor's model. When the team has completed the model, it will be compared to the instructor's model for complete accuracy. This exercise is timed. The instructor's model will be constructed of random shapes, sizes, and colors. Initial models should be limited to 20 to 30 pieces. Depending on the complexity of the model allows 10 to 15 minutes to complete the model. Times and number of pieces can be adjusted to the level of the class. A winner will be declared when a model is 100 percent correct. It is strongly suggested that the instructors model is really glued together in the event the model is dropped and damaged.

6. Upon completion of the building exercise the observer will debrief the team with their observations. In addition to debriefing the group observed they can also explain to the class what was observed and get class inputs as to how to improve.

7. I have found this exercises to be both challenging and educational for the students. Students enjoy this activity and request to do again and again building more complex models. They not only get into the competition aspect of the activity, but they also improve their communication and problem solving skills while conducting self-evaluations and team building experience.

8. This lesson can be modified to fit your class needs and requirements. This lesson works very effectively in the area of technology, but can be adapted to any classroom situation that is developing team building, problem solving, and communication skills.