# Collaboration and Communication in Construction Lesson Plan: 5th Grade

**Suite%20of%20Arrows%2014.wmf**

Collaboration and Communication in Construction Lesson Plan (1 Hr - 1 ½ Hr)

**Overview:**

This lesson is for 5th grade ELA students. Students will participate in discussions and activities. Through these discussions, students will participate and understand some of the key roles that are needed on a construction site and why collaborating and communicating are important to have success in construction.

**Objective:**

Students will participate in discussion and activities to learn about the building process and the variety of important professions in the building industry. Students will learn about working together and the importance of communication to achieve a goal when given certain roles or assignments.

**Materials**:

* Two lesson plans need to be printed off (One for you and one for Teacher)
* Print out 10 activity worksheets and detail sets for entire class
* Legos for activity. Each group will need approximately 200 1x2 bricks (more are likely to be needed as different groups will select different colors)
* A few sheets of graph paper for each group.
* Colored pencils.
* Print off a set of name cards for each group (Owner, Architect/Design, Construction Manager, Subcontractor)

**Discussion:**

Discuss with the students that to build a home there are four main roles (Homeowner, Builder/CM, subcontractor, and designer) explain the roles of each of these people in the homebuilding process. To keep the student’s attention and engaged use stories and questions. After the discussion is completed, explain that you are going to do an activity where in groups they will perform these four roles.

**Activity:**

Students will be broken up into four-person groups. They will be given 20 minutes to complete this activity. Each group will be given an activity worksheet and set of name tags to begin. The set of Legos will be “purchased” by the builders, from you, as a part of the project. Students will be expected to use the worksheet to instruct them through the activity.

**Conclusion:**

After the groups have 20 minutes to do their exercise, then we will lead a 5 minute wrap-up discussion/reflection. Questions that can be asked may include: How was communication important to the success of the project? Did you run into any problems with your construction, what and why do you think it occurred? What would happen if one of the members didn’t accomplish their directed role?

**Assessment:**

Students will be assessed on two components. First, their participation in the PowerPoint as is observed by the teacher. Second, each group will be assessed upon their participation and completed worksheet during the activity. This will be assessed through observation of groups during the activity as well as the completed worksheet turned in.

**Curriculum:**

**Common Core Standards:**

* 5.SL.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others’ ideas and expressing their own clearly.
* 5.SL.1.b Follow agreed-upon rules for discussions and carry out assigned roles.
* 5.SL.1.c Pose and respond to specific questions by making comments that contribute to the discussion and elaborate on the remarks of others.
* 5.LA.4.c Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation and determine or clarify the precise meaning of key words and phrases.

**Texas Essential Knowledge and Skills for English Language Arts and Reading 5th grade:**

* 110.7.b.1 Developing and sustaining foundational language skills: listening, speaking, discussion, and thinking – oral language. The student develops oral language through listening, speaking and discussion.
* 110.7.b.3 Developing and sustaining foundational language skills: listening, speaking, reading, writing, and thinking—vocabulary. The student uses newly acquired vocabulary expressively.

**Oklahoma Academic Standards for English Language Arts 5th Grade used in exercise:**

* 5.1.R.1 Students will actively listen and speak clearly using appropriate discussion rules with awareness of verbal and nonverbal cues.
* 5.1.R.3 Students will engage in collaborative discussions about appropriate topics and texts, expressing their own ideas clearly while building on the ideas of others in pairs, diverse groups, and whole class settings.
* 5. 4.R.5 Students will use a dictionary, glossary, or a thesaurus (print and/or electronic) to determine or clarify the meanings, syllabication, pronunciation, synonyms, and parts of speech of words.

**Collaboration and Communication in Construction Lesson Plan Script**

This lesson plan does not have a power point to accompany it. It is intended to engage the class in a discussion so the teacher should be cognizant of engaging all students (not allowing one or two students to dominate and encouraging all students to comment).

# Intro

**Hello, I am *Insert Name* and I am *Insert Title*. I am here today to teach you about homebuilding, and the many roles required in the building process?**

* **First off, what do you think a Construction Manager Does?**
* **What is a Building Process?**

*The building process is the process that goes into completing a construction project. There are many steps, so the roles must work together to ensure that the process is as smooth as possible.*

* **What is Communication?**

*Communication is essential for the success of a goal. In construction it is also important. The Project Manager must make sure that all parties are on the same page, and that jobs are all working together*.

* **What is the definition of Communication in your dictionary, and page number you found it in?**

*This will depend on the dictionary used:*

1. *The imparting or interchange of thoughts, opinons, or information by speech, writing, or signs.*
2. *Something imparted, interchanged, or transmitted.*

* **Give an example to where communication might be hard on a construction site.**
* **What is Collaboration?**

*With construction being such a broad industry, it requires working with a variety of people. Teamwork is needed to ensure that goals are completed. Collaboration is defined in Webster’s Dictionary as: the action of working with someone to produce or create something.*

1. **Can you give an example of group (Besides on a Construction Site) that needs to collaborate?**

* **How do both Communication and Collaboration work together?**

## **Education & Work**

* **So communication and collaboration are very important in building a house. What education do you think is needed to be able to build homes?**

*Guide students to discuss jobs and the education required for them.*

*On-the-job-training (un-skilled laborer),*

*Apprenticeships or certificates (skilled labor),*

*College degrees (construction managers)*

* **What does a Construction Manager do?**

*Construction managers must be able to communicate effectively because they work as a bridge between Owners, Architects, Superintendents, and Sub Contractors. They coordinate building projects and deal with how the building process will be approached. They oversee the budget and must be attentive to the cost of items that go into the building. They ensure that the job site is safe, and that the correct materials are used, so the architect’s design is realized, and the project stays within budget.*

* **What is a budget?**

*An estimate, often itemized, of expected income and expenses for a given period of time.*

* **Why is keeping a project under budget important?**
* **Why is maintaining a safe project important?**

## **Why Construction?**

* **Why do you think construction is important?**

*Residential Construction has grown every year since 2009. It is also one of the largest and most diverse industries in the U.S. accounting for nearly 7% of our GDP (Gross Domestic Product). The Construction industry is a large part of our national economy and is responsible for providing many jobs in many professions.*

* **Besides a Construction Manager, what are some other jobs needed in home building?**

*Architect/designer, subcontractors, superintendents, realtors, inspectors………………*

* **Do you know anyone who works in the homebuilding industry?**
* **What does an architect do?**

## *An architect or designer have an important role, they decide what a home will look like and where things will be in the home. They make the drawings that construction managers follow to build the home. They may work with home owners to create the design. They must be conscious of building codes and requirements.*

* **Have you ever heard of an interior designer?**

*An interior designer only works with the inside of a home to determine room sizes, and layout, lighting, and what finishes will be used.*

## **Does anyone know what a subcontractor is?**

*The word Subcontractor is a broad word that represents the different trades that do work on a project. The construction manager coordinates these trades to build the home. A few subcontractors include; electricians, painters, and carpenters. Sub-contractors are the workhorses to any project, and their specializations are acquired from years of industry experience and training.*

* **Do you know any other types of sub-contractors?**
* **How does a Plumber, Electrician, or Carpenter learn their jobs?**

*Point out that in some places they just learn on the job, or go to trade school, and other places there are unions that train them. Point out that skilled labor earns more than many professions (a career calculator can be found at* [*www.workconstruction.org*](http://www.workconstruction.org)*).*

* **In this class room what work might have been done by a subcontractor**?

Now we are going to do an activity!

**Go to Activity**

**Discussion Reflection Following Activity (possible questions)**

* **How was communication important to the success of the project?**
* **Did you run into any problems with your construction?**
  + **What and why do you think it occurred?**
* **What would happen if one of the members didn’t accomplish their directed role?**

**Home Owner**

You are building a new home!

Talk to the architect/designer about how you would like your house to look (shape, location of walls, and colors).

You have a budget of $200.

**Architect/Designer**

Get a sheet of graph paper from the teacher.

Talk to the Owner about what shape, location, and colors they would like their house to be.

Based on the owner’s input, draw the home design on the graph. Use colored pencils to show colors.

You may create any shape or size desired as long as you stay within budget. Probably, that will mean the house isn’t be much larger than 12 x 12 and 5 courses high. It will not have a roof.

When the design is complete, give it to the construction manager.

**Construction Manager**

Watch the owner and architect work. You may need to remind them that there is a budget of $200, and a house much bigger than 12 x 12 and 5 courses high will exceed the budget.

Once the architect is done with the drawings, count the number of blocks that are needed.

Calculate how much it will cost to build the house (each brick costs $1.00), If it will cost more than $200 explain to the owner and architect how much they need to remove to stay within budget.

When the design is within budget, go get the blocks needed from the teacher.

**Sub-Contractor**

You are acting as a masonry subcontractor.

Take the Legos from the Construction Manager and count them. Determine how many days it will take to build the house (Each brick requires 1 hour and there are 8 hours in a day).

You only have 25 days before your next job starts, so if the job will require more than 25 days explain that to the Construction Manager, Architect/Designer, and Owner that a change is needed.