For a project to be successful, it is very important to have good drawings and communication between designers and contractors. Discuss real world examples of this concept while explaining how 2D drawings (construction documents) are used to represent and build a 3D building.

**Mini-Lesson/Modeling (20 min)**

Present students with a 2D drawing of a 3D object (your Lego® model home). Demonstrate to the students how you built the model based on the blueprint. Explain that they will also be using Legos® to translate blueprints into houses.
Small Group/Independent Work Time (40 min)
- Students can work independently or in teams.
- Each team will be handed the blueprints to a tiny house, graph paper, and pencils.
- The students will need to decide on the scale of the project (1/4" = 1").
- The students will be given the Lego® pieces.
- The students will work to build the Lego® structure using the blueprints, paper, and pencil.
- When a team believes that they are finished they notify a “City Inspector” (mentor) that they are ready for “Final Inspection”
- The “City Inspector” rules as to whether or not the team completed the structure correctly.
- Mentors should guide students toward a proper build and encourage any changes which need to be addressed.

Presentations (15 min)
Students/teams will present their tiny lego houses to the rest of the class. They will discuss the process they used during the build, how they collaborated to complete the project, & whether or not they feel as though they were successful and why.

Reflection/Closing (10 min)
Discuss the main take-a-ways with the students (the importance of good drawings and communication, measuring & calculating scale, making adjustments as necessary.)

Looking to Next Week (5 min)
Provide a brief overview of what’s to come in the next session.

Clean-Up (10 min)
2D to 3D - LEGO HOUSE 3

![3D House Image]

2D to 3D - LEGO HOUSE 4

![2D House Image]