

CWIC Brix



Construction Simulation Game

Contents

What is Included in this kit?.....	3
Objective	4
Setup.....	5
Roles	6
Architect.....	7
Construction Manager.....	9
Quantity Surveyor	11
Builder	13
Scoring	15
Rules	16
Brix list.....	17
Example - Teams of 5 (up to 25 people).....	18
Example – Teams of 4 (up to 16 people).....	21

Collaborative effort from the CWIC Team.

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What is Included in this kit?

Name	Quantity	Max. per model	Image
2x4 Green	172	34	
2x2 Natural	172	34	
2x1 Grey	116	23	
2x1 Black Slope	32	6	
4x1 Cyan	16	3	
2x2 Red Slope	12	2	
2x8 Yellow	12	2	

Objective

In CWICbrix, the objective is to replicate an existing model made of bricks, that is hidden from view. Working in a team with set drawbacks on how you can communicate, the game simulates the real-life construction industry.

Like Broken Telephone, a game where one person passes information to another person, which is then passed onto another person and so on, in such a way that the other people cannot decipher what was communicated, CWICbrix works in a similar way.

There is a maximum budget that each team is given, based on the design of the existing model, which includes the size and colours of each brick.

The aim of CWICbrix is for your team to have the most accurate recreation of the existing model, using the least amount of the budget.

The team with the most accurate and cheapest build is the winner!

Setup

Who's Home?

Construct a model using the bricks provided, calculating the total budget using the Brici-list, keeping a few bricks as extras. Find a suitable spot to hide the model, see [Example pg.17](#) for a premade version.

Where do you build?

Set designated areas for each team to build their model, give each team 1 copy of the Brici-list, see [Brici-list pg.12-13](#), for the Quantity Surveyor.

Who's who?

Make sure the team knows their roles and what each person is doing and that each team has a fun name. See [Roles on pg.5](#) for info.

Spend wisely!

Set out a maximum budget, based on the model you create, or the example given in this booklet. Teams should avoid going over this budget.

Where's the blueprint?

Show the Architect where the model is positioned, they can have one free look before it becomes a paid service for repeated looks.

Roles

First you will need to be assigned roles. There are 4 key roles in this game, all with different responsibilities, skills, abilities and drawbacks.


In groups, form a team that has at least one of each of these roles. In your team, decide which role suits each person and their skills the best, as stated in the skills section.


Read the next 4 pages for a description of these roles.

Don't forget to give your team a name!

Architect

The designer of the group and is responsible for the existing model, communicating the features, colours and number of bricks of the model to your team, ensuring that your team recreates the model with accuracy.

 **Skills** – memorising objects, counting, managing numbers, people skills, communication.

 **Abilities** – can view the model for free the first time and then pay £800 for another look, up to a maximum of 5 uses.

 **Drawback** – can only communicate with the Construction Manager.

What does an Architect do in the real world?

In the real world, an Architect's role is in the design of a building project.

They are responsible for deciding what a building looks like, the layout of the rooms, the materials that are used to construct the building and can even decide how the building is put together.


Imagine you are the one that gets to decide what your house looks like, or the school you go to? An Architect would have designed it.


The exciting role of an Architect can either be someone who loves creative subjects such as art or design technology (DT) or can be someone who enjoys the technical aspects of architecture such as science, mathematics or information technology (IT).


Even a combination of all the above interests is valued in architecture, so if this sounds like you, shout out about it and become an Architect yourself!

Construction Manager

Is responsible for managing the drawings of the model, creating plans and elevations so that the other members of your team can develop your own model based on the existing model.

 **Skills** – drawing, communication, people skills, memorising numbers and colours.

 **Abilities** – can draw the plans and elevations of the model, using the drawing templates.

 **Drawback** – can only communicate through drawings.

What does a Construction Manager do in the real world?

The role of a Construction Manager is important; they are the ones who work with everyone on a building site to make sure that the construction of a building goes smoothly.


They are responsible for managing people and making sure that everyone is doing their job and doing it well and safely. Without the Construction Manager, any site would be chaos!


The Construction Manager role is suitable for those who like being a **leader**, working together as a team to achieve great things. They are good at **mathematics**, managing time and people as well as being wizards with **information technology (IT)** so that they can work with other professionals to make stuff happen.

If this sounds like you, shout out about it and become a Construction Manager!

Quantity Surveyor

Keeps track of the budget, calculating the total cost of building the model. Counting the number of bricks used and recording the colours and sizes of these bricks.

 **Skills** – counting, managing numbers, recording data, interpreting drawings, devising lists, communication.

 **Abilities** – has access to the Brici-list, a table where all the bricks are itemised and priced, to aid in working out your budget.

 **Drawback** – has a maximum budget of £72,000.

What does a Quantity Surveyor do in the real world?


The role of the Quantity Surveyor is to calculate and manage the budget of a project. They make sure that the cost of materials and time are kept in check so that the project doesn't go overbudget.


The Quantity Surveyor is great at **mathematics**, being able to manage money and numbers. Having good **communication** when working with clients to achieve the goals they want out of their project is also key, ensuring that the project meets a good balance between quality, cost and time.


If you are someone who loves working with numbers and managing items such as materials, then shout out about it and become a Quantity Surveyor!

Builder

Assembles the model such that it resembles or ideally replicates the existing model and is responsible for buying the appropriate bricks as seen on the drawings.

 **Skills** – interpreting drawings, efficient building skills, devising lists, communication.

 **Abilities** – has access to the bricks from the Brici-shop to be able to build the model.

 **Drawback** - every brick counts towards the total budget, including ones that are not used in the final model.

What does a Builder do in the real world?

The role of the Builder can be many things; they are the ones physically building are key in making a building come into reality.

They can be a vast range of roles including Electricians, Plumbers, Bricklayers, Carpenters and everything in between. They enjoy being active and hands on with a range of tools whilst also working together to create great quality work.

They are often good at design technology (DT), mathematics, art and sports. They often prefer to do things with their hands rather than trying to learn from a heavy textbook.

If this sounds like you, shout out about it and become a specialised Builder!

Scoring

Accuracy

The more accurate your team's model is, the higher the score. Accuracy is calculated by taking the total number of bricks of the existing model and taking away 1 point for each incorrect brick of the team's model.

Cost Efficiency

Keeping under budget is key, for each £100 saved (rounded to 100), an additional +1 point is added to your score. Remember that bricks left unused contribute to your total budget!




Teamwork

Gain points for working well together, each player gets +1 point for every role they were able to stick too and who didn't cause any arguments.

The total score is calculated by the following:

$(\text{Accuracy} + \text{Remaining Budget}) \times \text{Teamwork}$

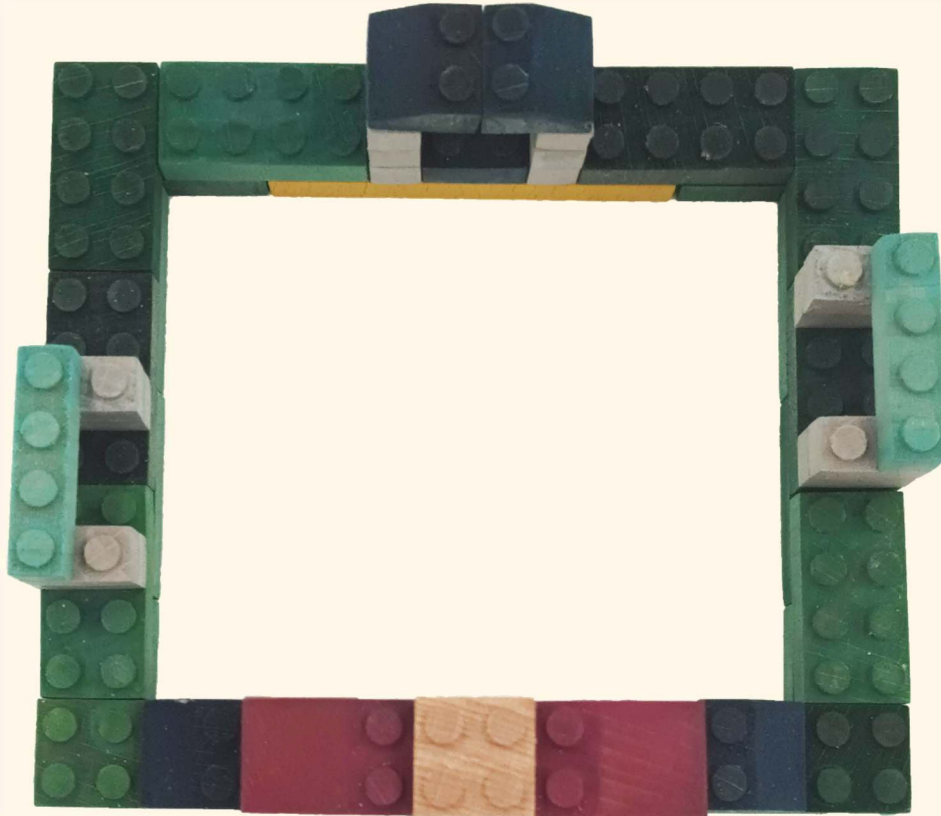
Rules

-  Communication is key, find ways to work together, even with the drawbacks given to each role.
-  Remember that the Architect can only communicate with the Construction Manager and the Construction Manager can only communicate through drawings. The Builder and Quantity Surveyor can only use the drawings to help them work out the model.
-  A responsible person will manage the Brici-shop, keeping track of all the bricks being used. Whilst another responsible person manages the existing model, only allowing the Architects to view the model, so no peeking can occur.

Brix list

Colour	Size	Price	Image	Quantity
Green	2x4	£500		
Natural	2x2	£1000		
Red	4 Slope	£1500		
Black	2 Slope	£2000		
Cyan	1x4	£2500		
Grey	1x2	£1250		
Yellow	2x8	£2000		
Architects Visits		£800		
Totals				

Example - Teams of 5 (up to 25 people)



Floor Plan



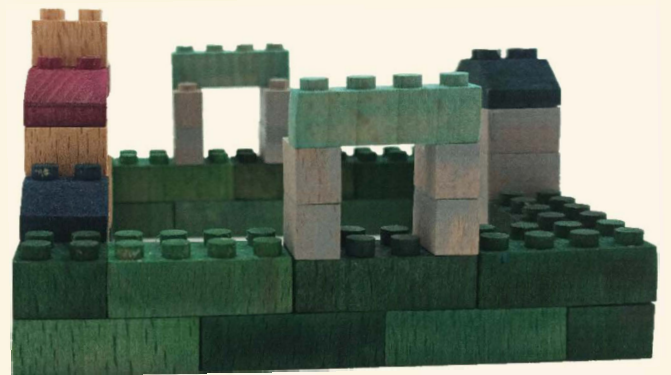
Front



Back



Left

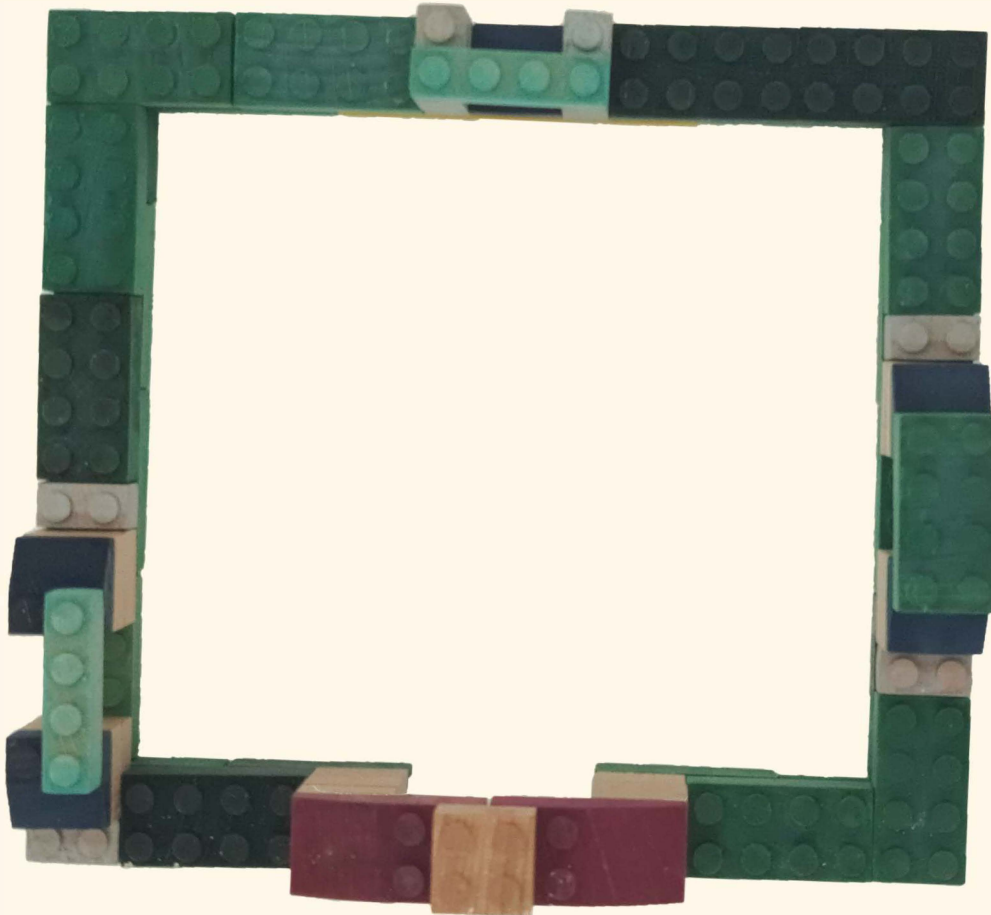


Right

Total Bricks used (Teams of 5)

Name	Quantity	Image
2x4 Green	20	
2x2 Natural	7	
2x1 Grey	14	
2x1 Black Slope	4	
4x1 Cyan	2	
2x2 Red Slope	2	
2x8 Yellow	1	

Example – Teams of 4 (up to 16 people)



Floor Plan



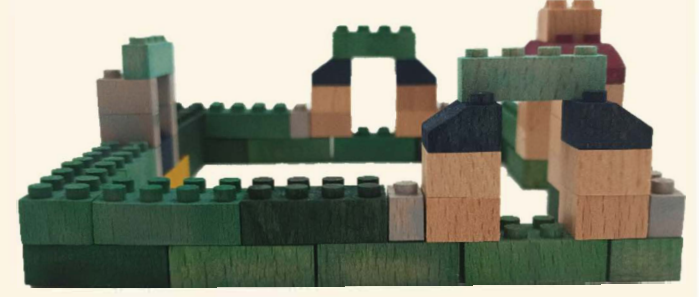
Front



Back



Left



Right

Total bricks used (Teams of 4)

Name	Quantity	Image
2x4 Green	25	
2x2 Natural	15	
2x1 Grey	10	
2x1 Black Slope	5	
4x1 Cyan	3	
2x2 Red Slope	2	
2x8 Yellow	1	