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##### The Building Project

###### Briefing Notes

The Building Project has been devised to highlight the different processes and people involved in a Construction Project.

###### Session Leader’s Role

At least two, preferably three, supervisors are required for this exercise to run smoothly. One should be the Session Leader, while the others should be the Architect and the Supplier.

The Session Leader briefs the students at the start and provides feedback at the end, as well as answering questions from the teams throughout the exercise.

The Architect monitors the visits of the teams to see the model and calculates spend for each team

The Supplier deals with the material requisitions and calculates spend for each team.

All 3 will need to help verify the calculations on the students final account sheets before the feedback session.

###### Accommodation

For this exercise you will need two rooms, one for the Architect and Supplier and one for the teams to work in their groups. The students should not be able to see into the Architect/Supplier room from the outside. The Session Leader and the Architect will each need a stopwatch. The teams will need paper, pens and calculators. The Architect & supplier will also need calculators.

###### Purpose

The Building Project looks at the processes and people involved in the industry, and in particular, the organisation of a building project and the relationship between the team members responsible for its successful completion.

The pupils should be split into groups of 5. (If there are only enough for 4 per team, merge the role of the Planner with Project Manager.) Each team will then form a mini construction company comprising a Project Manager, a Site Engineer, a Quantity Surveyor, a Planner and a General Foreman.

###### Objective of the Activity

The object of the exercise is for each team to reproduce an exact replica of the model built by the Architect in the second room, as quickly, efficiently and as cost effectively as possible.

###### Rules

Each team begins with 15 minutes of planning and preparation time, within which they allocate the roles, study the role responsibilities and work out their strategy for the exercise.



The winning team will be the one which makes the most accurate replica within the allocated project time of 40 minutes. The Project Manager must be the first member of the team to visit the Architect and their project time starts when he/she enters the “office”. Only one person is allowed into the Architect’s office at any one time.

###### Scoring

The Project Manager (PM) is allowed two one-minute visits to the Architect’s office without payment and must be the first person to visit the office. After the free 2 minutes, the PM can purchase extra time at £500 per 30 second period, or part of.

The Site Engineer is allowed to visit the Architect’s office for up to 2 minutes without payment. Any time with the Architect above this can be purchased at a cost of £500 per 30 second period, or part of.

Each visit that the Quantity Surveyor (QS) makes to the Supplier will be charged at a rate of £250 to cover transportation costs.

Each incorrectly placed block incurs a penalty of £1000.

Each unplaced block incurs a penalty of £1000.

Each unpurchased block incurs a penalty of £5000.

If the QS requests an item that is not in the box they should be informed that it is “Out of Stock”. (N.B. The QS should not be allowed to see inside the box from which they are being “supplied”.)

###### Evaluation

Feedback should be given to the teams in respect of who won the exercise and why. It is also a good opportunity to for them to identify the strengths and weaknesses of the way they worked.

Questions to ask might be: -

“How well did team members work together?”

“Were the right people in the right job roles – what might you change?”

“What did you learn about the process involved in carrying out a construction project?”

“What problems and difficulties did you find during the activity?”

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**The Building Project**

**ARCHITECT’S RECORD SHEET**

**Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Start Time: \_\_\_\_\_\_\_\_\_\_\_**

**Finish Time: \_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| **Project Manager** | **Site ENGINEER** |
|  | **Duration of visit** |  | **Duration of visit** |
| **Mins** | **Secs** | **Mins** | **Secs** |
| **1st visit –****1 min**  |  |  | **1st visit** |  |  |
| **2nd visit** |  |  |
| **2nd visit –****1 min** |  |  | **3rd visit** |  |  |
| **4th visit** |  |  |
| **3rd visit** |  |  | **5th visit** |  |  |
| **4th visit** |  |  | **6th visit** |  |  |
| **5th visit** |  |  | **7th visit** |  |  |
| **6th visit** |  |  | **8th visit** |  |  |
| **7th visit** |  |  | **9th visit** |  |  |
| **8th visit** |  |  | **10th visit** |  |  |
| **Total visiting time** |  |  | **Total visiting time** |  |  |
| **- 2** |  | **- 2** |  |
| **TOTAL** |  |  | **TOTAL** |  |  |
| **GRAND TOTAL** |  |  |

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**The Building Project**

**THE FINAL SCORE SHEET**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Team** | **1** | **2** | **3** | **4** | **5** | **6** |
| Start time |  |  |  |  |  |  |
| Completion time |  |  |  |  |  |  |
| Duration |  |  |  |  |  |  |
| Time Penalty |  |  |  |  |  |  |
| Materials Costs |  |  |  |  |  |  |
| Transportation Costs |  |  |  |  |  |  |
| Fees to Architect |  |  |  |  |  |  |
| Sub Total |  |  |  |  |  |  |
| **Building Accuracy** | **1** | **2** | **3** | **4** | **5** | **6** |
| No. of Misplaced Blocks x £1000 |  |  |  |  |  |  |
| No. of Unplaced Blocks x £1000 |  |  |  |  |  |  |
| No. of Unpurchased Blocks x £5000 |  |  |  |  |  |  |
| Total Cost |  |  |  |  |  |  |
| **Ranking** |  |  |  |  |  |  |

**Team Brief**

* In the portfolio provided, you will find 5 badges for the roles you need to allocate and a job description for each one of them. You should now allocate the roles of :

 Project Manager

 Site Engineer

 Planner

 Quantity Surveyor

 General Foreman

\* In the event of there being just 4 team members, please merge the roles of Project Manager & planner.

* You will also find a price list for the materials you will be working with, some order forms for the Supplier and a Final Accounts form.
* You should study the job descriptions carefully because they contain some detailed rules regarding how you must work towards your objective of reproducing the Architect’s model.
* You have 15 minutes to read, understand and allocate the job roles, as well as work out your strategy for the activity. You will be penalised if you do not start the project promptly.
* Your Project Manager must be the first person to visit the Architect and your 40 minutes of project time will commence as soon as he/she enters the office.

N.B. Only one person is allowed in the Architect’s office at any one time.

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**The Building Project**

**Project Manager – Job Description**

Responsible for:

* The successful completion of the project utilising the expertise of the team in the most efficient and cost effective manner.

Restrictions:

1. You may visit the Architect’s office twice during the game at no cost. These visits will each be of 1 minute duration. Additional visits to the Architect will be charged at £500 per 30 second period, or part of.
2. You may not make any notes or sketches whilst in the Architect’s office.
3. It is your responsibility to ensure that all team members are fully aware of their own roles and responsibilities.
4. The clock will only stop when the Project Manager informs the Session Leader that the model is complete and the Final Accounts should be handed over at this point.

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**The Building Project**

**Site Engineer – Job Description**

Responsible for:

* Informing the General Foreman of the requirements of the Architect so that he/she can construct the model. To do this you will need to liaise with the Architect to establish his/her requirements.

Restrictions:

1. You may visit the Architect’s office for up to two minutes free of charge.
2. Any time spent with the Architect above the 2 free minutes will be charged at £500 per 30 second period, or part of.
3. You may not make notes or sketches whilst in the Architect’s Office.

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**The Building Project**

**Quantity Surveyor – Job Description**

Responsible for:

* The ordering and collection of materials, maintaining a record of all costs and the production of the Final Accounts.

Restrictions:

1. Only you may approach the Supplier to order and collect materials.
2. Each load of materials will have a transportation fee of £250.
3. Once you have delivered the materials to your team from the Supplier, the only person allowed to handle them is the General Foreman. Any other team member who touches the materials will incur a fine of £1,000 per offence. All such offences must be entered onto the Final Accounts Sheet.

1. The Final Account sheet must be completed and handed to the Session Leader for the team to have finished the Project.

Additional Information:

1. Both the Project Manager and the Site Engineer can visit the Architect’s office free of charge for up to 2 minutes each. After their free visits, they will be charged at £500 per 30 second period, or part of.



**The Building Project**

**Planner – Job Description**

Responsible for:

* Advising the Project Manager on the most logical and systematic approach to the project.
* Co-ordinating the Project Manager & Site Engineer in visiting the Architect to get the most accurate information
* Helping to ensure that the tasks are undertaken in the most cost-effective manner.

Restrictions:

1. Your job is to advise the Project Manager who is in overall charge of all matters on site.



**The Building Project**

**General Foreman – Job Description**

Responsible for:

* The day-to-day construction of the project as directed by the Project Manager and the Site Engineer.

Restrictions:

1. Only you may construct the model. Once the materials have been delivered by the Quantity Surveyor, you are the only person allowed to touch the materials. Interference by other team members will result in fines of £1,000 per offence.



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**The Building Project**

### MATERIALS PRICE LIST

|  |  |
| --- | --- |
| BUILDING MATERIALS | UNIT COST (£) |
| Green Cube | **1500.00** |
| Green Large Flat |  **750.00** |
| Green Rectangle |  **800.00** |
| Red Cube |  **325.00** |
| Red Small Flat | **1100.00** |
| Red Triangle | **1750.00** |
| Red Cylinder | **2000.00** |
| Red Rectangle | **1000.00** |
| Yellow Rectangle |  **250.00** |
| Yellow Bridge | **2500.00** |
| Yellow Large Flat | **1700.00** |
| Yellow Small Flat |  **950.00** |
| Yellow Cube | **1250.00** |
| Blue Rectangle |  **300.00** |
| Blue Triangle | **1150.00** |
| Blue Half Cylinder | **1900.00** |
| Blue Small Flat | **1400.00** |

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**The Building Project**

**MATERIAL REQUISITION FORM**

**Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |
| --- | --- |
| QUANTITY | MATERIALS |
|  | **Green Cube** |
|  | **Green Large Flat** |
|  | **Green Rectangle** |
|  | **Red Cube** |
|  | **Red Small Flat** |
|  | **Red Triangle** |
|  | **Red Cylinder** |
|  | **Red Rectangle** |
|  | **Yellow Rectangle** |
|  | **Yellow Bridge** |
|  | **Yellow Large Flat** |
|  | **Yellow Small Flat** |
|  | **Yellow Cube** |
|  | **Blue Rectangle** |
|  | **Blue Triangle** |
|  | **Blue Half Cylinder** |
|  | **Blue Small Flat** |

**SIGNED ………………………………………………**

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**The Building Project**

**FINAL ACCOUNT**

**Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |  |
| --- | --- | --- | --- |
| Description | Unit Cost (£) | Quantity | Total (£) |
| Green Cube | **1500.00** |  |  |
| Green Large Flat |  **750.00** |  |  |
| Green Rectangle |  **800.00** |  |  |
| Red Cube |  **325.00** |  |  |
| Red Small Flat | **1100.00** |  |  |
| Red Triangle | **1750.00** |  |  |
| Red Cylinder | **2000.00** |  |  |
| Red Rectangle | **1000.00** |  |  |
| Yellow Rectangle |  **250.00** |  |  |
| Yellow Bridge | **2500.00** |  |  |
| Yellow Large Flat | **1700.00** |  |  |
| Yellow Small Flat |  **950.00** |  |  |
| Yellow Cube | **1250.00** |  |  |
| Blue Rectangle |  **300.00** |  |  |
| Blue Triangle | **1150.00** |  |  |
| Blue Half Cylinder | **1900.00** |  |  |
| Blue Small Flat | **1400.00** |  |  |

**Sub Total £\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Transportation**

**No. of loads = \_\_\_\_\_\_\_\_ x £250.00 = Sub Total £\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Fees to Architect**

**Duration of visits = \_\_\_\_\_\_\_\_\_ @ £500.00**

**per 30 seconds**

**(less 4 free mins)**

 **Sub Total £\_\_\_\_\_\_\_\_\_\_\_\_\_**

 **Fines Incurred £\_\_\_\_\_\_\_\_\_\_**

 **Total Cost : £\_\_\_\_\_\_\_\_\_\_**

