**Obstacle Course Project**

**This is an optional extra credit project due the first class period after Spring Break. It will be worth 25 points added onto your 3rd nine weeks average**. **It will not be accepted late.**

**A completed sample version of this project can be found on my website, at http://www.houstonisd.org/Domain/46808**

The Houston City Council wants to draw more people to its public parks by setting up an obstacle course where they can hold races. They have set aside a 100 x 50 meter area (about the size of a football field) of Memorial Park to use and they want you to design the course!

**The Map**

You will create a two-dimensional map on graph paper showing the layout of the obstacles and other course elements. Your map must include:

* At least EIGHT obstacles
	+ Obstacles must be a minimum of 20 square meters
	+ Shapes of obstacles must include rectangles, triangles, and trapezoids. An obstacle can be made up of more than one shape, if you want.
* A starting line and a finish line
* A path that connects the obstacles
* Four bathrooms
* Two spectator stands
* One first aid station
* One warm-up area
* A course name
* A map legend with scale

**The Obstacles**

 As you create your course you need to think of some obstacles that participants will need to complete. Below are 20 for you to choose from, OR you can make up your own.

|  |  |  |  |
| --- | --- | --- | --- |
| Barbed Wire Crawl | Wall Climb | Maze | Balance Beam |
| Fire Jump | Mud Crawl | Jump Ropes | Net Climb |
| Rope Climb | Monkey Bars | Tunnel Crawl | Over-Under Beams |
| Tire Drag | Hurdles | Mud Hill | Spider Web Crawl |
| Sandbag Carry | Swimming Pool | Rope Swing | Log Carry |

It’s okay if your obstacles are fun or silly! Just make sure they are feasible. You don’t want to design a course no one can use!

**The Math**

 To make sure you are using your space efficiently, City Council wants a report on how much of the 50m x 100m area will actually be covered by obstacle course. You will need to calculate the area of each of your obstacles and the path connecting them. The goal is to have at least 50% of your available space covered by obstacle course and other required structures.

Calculate each obstacle’s area on the given pages. Then find the total area in the table below.

|  |  |
| --- | --- |
| **Element** | **Area (square meters)** |
| Obstacle 1 |  |
| Obstacle 2 |  |
| Obstacle 3 |  |
| Obstacle 4 |  |
| Obstacle 5 |  |
| Obstacle 6 |  |
| Obstacle 7 |  |
| Obstacle 8 |  |
| Path |  |
| Bathrooms |  |
| Spectator Stands |  |
| First Aid Station |  |
| Warm-Up Area |  |
| **Total** |  |

You were given a total of 5000 m2 to plan. What percent of this area is in use by your course? \_\_\_\_\_\_\_\_\_\_\_\_

Write a paragraph summary of what you learned during this project:

Area Calculations Page

|  |
| --- |
| Obstacle 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 4: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 5: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 6: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 7: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |
| Obstacle 8: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Description | Sketch (label with dimensions) | Area Calculation |