**Kinetic Art Project**

**You will be making an automaton.**

Essentially you will be using a box (or another solid structure) to conceal a system of gears, pulleys & cams that, when turning, will allow art, placed on the outside of the box, to move.

The same concept is used in windup jewelry boxes, with a rotating figurine & children’s pull toys.

   

**Materials:**

* The school with provide the axels, gears, cams, skewers, paper, hot glue.
* Each team will receive 1 axel, 1 MDF cam of choice, 2 MDF wheels which students may glue at will!
* ***The school’s plastic cams and gears must remain reusable!***

***You may NOT hot glue or permanently attach these!***

* Students are asked to supply: a box & any extra craft supplies. Cardboard can be used to make extra gears & cams if needed. Should a student like to use extra MDF wheels and plans to permanently glue them, they can be purchased from the teacher at cost for $0.50 each.
* Students may bring parts from toys, Lego, K’nex etc if they wish.

**Important Dates:**

Tuesday, March 15th , 2016 Project is introduced. Q & A. Brainstorm.

Thursday, March 17th, 2016 1st workday. Obtain supplies, brainstorm & start.

***You have a weekend here! Look on-line for ideas, go to Dollarama for craft supplies!***

Tuesday, March 22rd, 2016 Workday

Wednesday, March 23rd, 2016 Workday

Thursday, March 24th, 2016 Last Workday. Follow-up sheet will be handed out.

***Take home if needed! EATER WEEKEND!***

Wednesday, March 30th, 2016 Project due.

**Evaluation:**

The project will be evaluated according the rubric on the next page & the mark obtained from the follow-up sheet. **It will count as 2 lab marks in term 3.** (Competency 1)

**Your automaton must have:**

* 2 or more different types of systems (cam & follower, gears, belt & pulley, leaver, slider crank, etc.)
* Have a theme (a sport, animal duo, event, theme in pop culture, anything you can think of).

**Evaluation Rubric:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Features** | **2** | **4** | **6** | **8** | **10** | **Mark** |
| **Effectiveness and Mechanical Design**  | Major problemsdoes not function | Functions irregularly or with low effectiveness | Functions satisfactorily(needs minor adjustments) | Functions wellworks, but jams or slips periodically | Excellent design and function(reliable guiding & connections) |  **/10** |
| **Features**  | 1 incomplete systemOr1 system & no art | 1 system & artOrArt is not involved with the movement of the system | 2 identical system with artOr2 different system & art has minimal effort | 2 different types of systems&art is well done | 3+ systems(at least 2 are different) & art**Or**2 systems + extra element |  **/10** |
| **Overall Presentation & Effort** | Lack of effort displayed | Minimal effort displayed \*No theme | Adequate effort displayed\*No common theme | Good effort displayed\*Theme present | Excellent work and effort displayedTheme present |  **/10** |
| **Behaviour****&****Use of supplies** | Names are clearly present on the **FRONT** of the project.All plastic materials returned in good condition.Group cleaned their table each day.Group worked effectively each day.Each member contributed to the project. (Individual deductions possible here), |  **/10** |
|  |  |  |  |  | **Follow-up sheet** |  **/10** |
|  |  |  |  |  | **Final Mark** |  **/50** |

* **Effort is shown by:**
	+ **Painting/decorating the box so that it no longer looks like a cereal box for example. Your project should have a finished look to it!**
	+ **Having an evident theme. (you may give your automaton a title)**
	+ **Your motion transmission or translation systems function well and have a guiding system so that it continues to function.**

