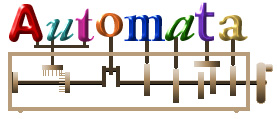
**Kinetic Art Project**

**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.

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&docid=tSDg-ScYoMrTCM&tbnid=uKcU7oEfe-dXsM:&ved=0CAYQjRw&url=http://articulatelondon.blogspot.com/2013/02/yinka-shonibare-globe-head-ballerina.html&ei=sV4fU-fWNYjmrQHQmoCABQ&bvm=bv.62788935,d.aWc&psig=AFQjCNFLFqyhy18dwZWrS0ThDgA4gWLnKA&ust=1394651118849333) [](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&docid=adIr1sv0aPbgBM&tbnid=Lx7LFeWm5_7nUM:&ved=0CAYQjRw&url=http://www.njdean.co.uk/childrens-musical-jewellery-boxes-bal948.htm&ei=0F4fU8fnL5T5qAHUq4HoBQ&bvm=bv.62788935,d.aWc&psig=AFQjCNFLFqyhy18dwZWrS0ThDgA4gWLnKA&ust=1394651118849333) [](http://www.bing.com/images/search?q=pull+toy&view=detailv2&&id=8C5AC4CB348439D048556C650810CF6C82508B96&selectedIndex=11&ccid=kbpWxF9G&simid=608038795895114219&thid=OIP.M91ba56c45f46ca1e5e06c21a5cfa1f90H0) [](http://www.cpsc.gov/en/Recalls/2001/CPSC-Pottery-Barn-Kids-Announce-Recall-of-Wooden-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 problems  does not function | Functions irregularly or with low effectiveness | Functions satisfactorily  (needs minor adjustments) | Functions well  works, but jams or slips periodically | Excellent design and function  (reliable guiding & connections) | **/10** |
| **Features** | 1 incomplete system  Or  1 system & no art | 1 system & art  Or  Art is not involved with the movement of the system | 2 identical system with art  Or  2 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 displayed  Theme 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.**

[](http://www.google.ca/url?sa=i&rct=j&q=&esrc=s&frm=1&source=images&cd=&cad=rja&uact=8&docid=NWAbM9RU-NMD1M&tbnid=fnV3IZlC-DppLM:&ved=0CAYQjRw&url=http://blog.dugnorth.com/2008_06_01_archive.html&ei=NhMhU_W7G8euqgHi2IGoDQ&bvm=bv.62922401,d.b2I&psig=AFQjCNFeMP4Q5qpjIYo5dyrcusTvOh00ew&ust=1394762879777841)