

Mobilizing and Stabilizing Technology— Mobiles and Stables

Context

For one of our first projects in design, we have been asked to construct sculptures! The sculptures will be displayed in the school and we want to show off our understanding of elements and principles of design. We may even decide to sell some sculptures as collectable art!

Problem

Design and construct a kinetic object— a “mobile”.

Design Constraints

- Air is the only source of power that can be used to make the object move.
- Must fit without being crushed or folded into a 3 ft x 3 ft x 3 ft box
- Total cost must *not* exceed \$2.00 in materials that you want to buy
- Must use only dead organic, inorganic or synthetic (used or recycled) materials
- Must *not* involve offensive materials
- Must *not* include dangerous materials
- Must be a design that is original (can be modeled after other sculptures)

Design Considerations

- Pay close attention to appropriate form of materials, simplicity, unity and economy
- Balance and motion are very important principles
- Remember, the entire object does not have to move (Can use a “stable” for a base)
- Try to express your own feelings in your design (funny, playful, spiritual, honest, etc.)
- Meaning and representation are very important and you will be asked to explain your theme (may be environmental, modern, postmodern, political, etc.)
- The modern mobiles of Alexander Calder are great examples, but do *not* design an identical duplicate of these
- Do your very best in your design and in finishing your mobile
 - *No Sloppy work!

Sequence

- Think about and sketch your designs and choose appropriate forms and materials
- Collect the materials that you need
- Be sure you like your design and check to make sure it is workable
- Cut your materials and smooth any sharp edges
- Do your gluing, fastening or welding or painting before you assemble the mobile
- Assemble pieces temporarily before you try to balance your mobile
- Hang the mobile or place it on the stable and work on balance
- Tell me when you are completed with your mobile

Management Issues

- End of Day 1 or 2: Approval of design sketches
 - End of Day 1 or 2: Approval of materials
 - End of Day 5: Submit finished mobile for display
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- Be sure to obey all safety rules when using tools and machines!
 - Remember to be polite to people who help you!

Related Studies

- Drafting and Sketching
- Modern art and technology
- Geometry
- Materials science

Honest Self Evaluation

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| 1. I stayed within the design constraints and deadlines— | _____ | out of 5 marks |
| 2. My mobile is very much like my approved sketch— | _____ | out of 5 marks |
| 3. My mobile moves when air passes through it— | _____ | out of 5 marks |
| 4. I have a nice display of the principles and elements of design— | _____ | out of 5 marks |
| 5. My mobile is an effective representation of my theme— | _____ | out of 5 marks |
| 6. My finished mobile represents quality work— | _____ | out of 5 marks |
| 7. My use of resources was economic— | _____ | out of 5 marks |
| | _____ | Total out of 35 |

Assessment

Student's Assessment	Student Total	_____
Design Principles		
• Appropriate Form	_____	out of 10
• Simplicity	_____	out of 10
• Representation and Meaning	_____	out of 10
• Economy	_____	out of 10
Craft and quality	_____	out of 10
Deadlines, Safety and Participation	_____	out of 15
	_____	Total out of 100