Lifting Device Contest

Object:

To build a device/machine capable of lifting the greatest weight a specified height using wind power generated by a common household hand-held hair dryer.

Rules:

1. Building materials may be anything except those used commercially to collect wind.

2. The device must be no larger than 1 meter in length, width, or height.

3. The blow dryer will be provided at the contest. It will be kept a uniform 30 cm from the wind collector.

4. Weights will be provided.

5. Weight must be lifted a specified height above the floor in a single lift within a five-minute time period. Devices which are not capable of lifting a load to at least the height specified for the participant's grade level will be disqualified.

6. Required heights for loads are determined by grade level:

K-2: 20 cm 6-8: 40 cm

3-5: 30 cm 9-12: 50 cm

7. No time outs are permitted during the contestant's 5-minute time period. Once the time period has begun, repairs and adjustments must be made within the time period.

Scoring:

The winner will be the device that lifts the greatest amount of weight to the required height for each grade level in any single lift within the five-minute time period.

Comments:

Practice on site to determine how much weight to use.

Hair dryer may be clamped to a ring stand or have a 30 cm wooden rod attached to it.

Selected Reading:

Usborne's Understanding Science: Machines, ISBN 0-7460-1962-9.

Design Technology: Children's Engineering, ISBN 1-85000-590-7.