香港教育大學
The Education University of Hong Kong

The Education University of Hong Kong
2021-2022 Quality Education Fund Thematic Network – Tertiary Institutes
STEM Project Team

SCHOOL: LOK WAH CATHOLIC PRIMARY (P5)

TOPIC: WIND TURBINES DESIGN FOR ALTERNATIVE ENERGY

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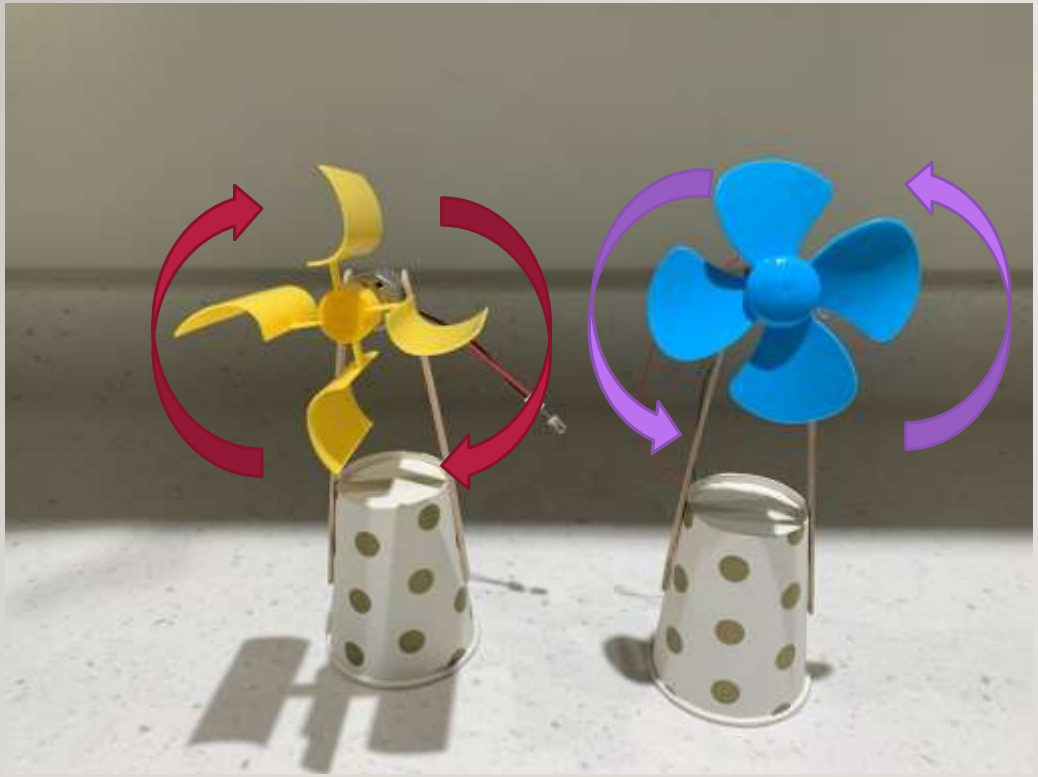
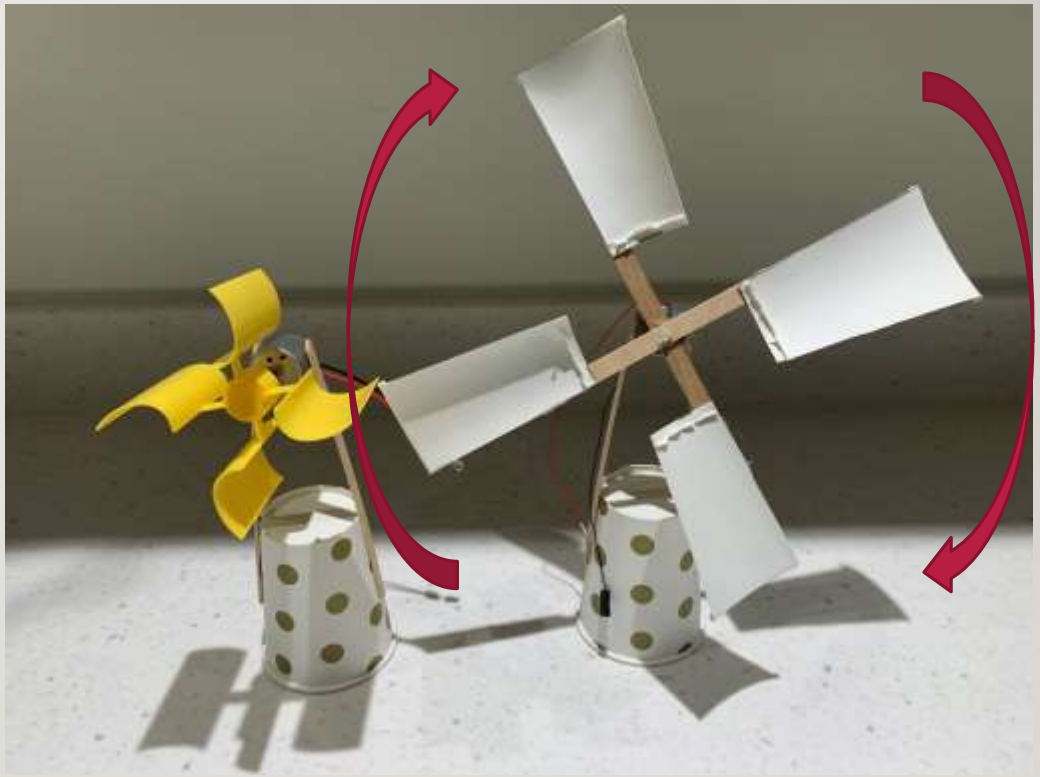
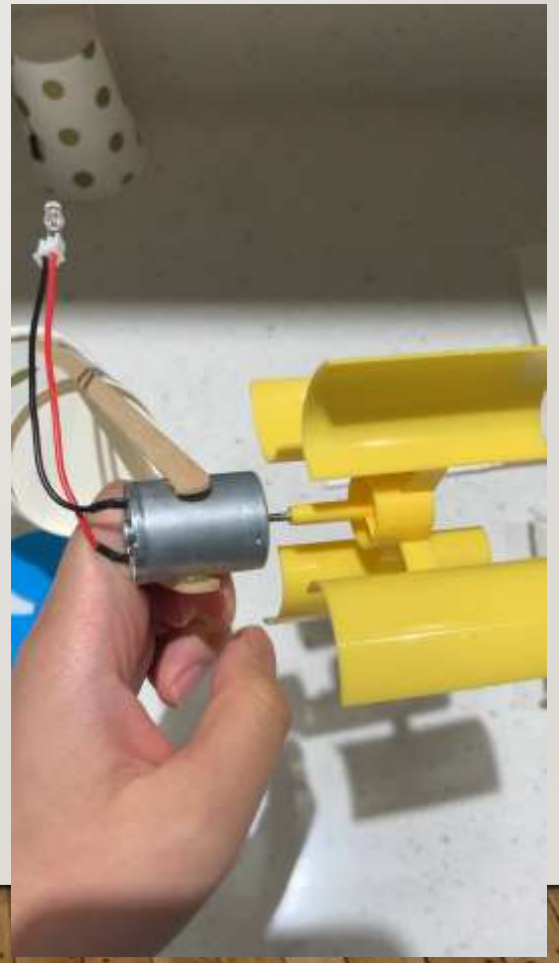
風力發電機 - 扇葉





PAPER CUP – OUTDOOR YELLOW – BY HAND



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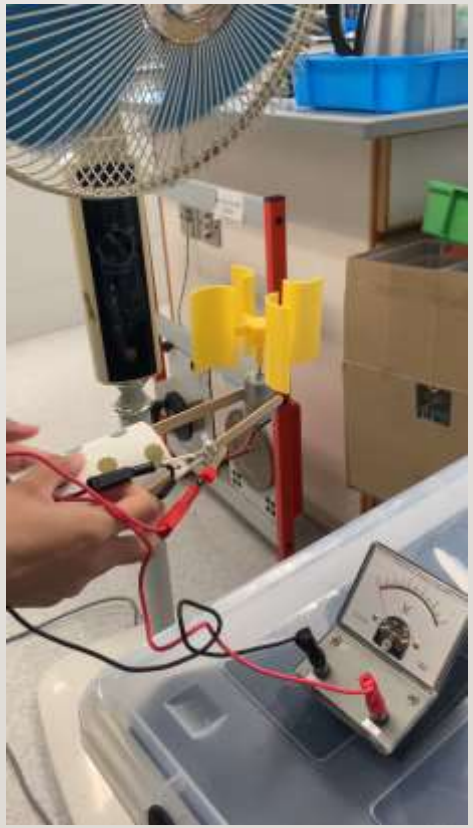
FAN(MODE_1) TEST WITH VOLTMETER



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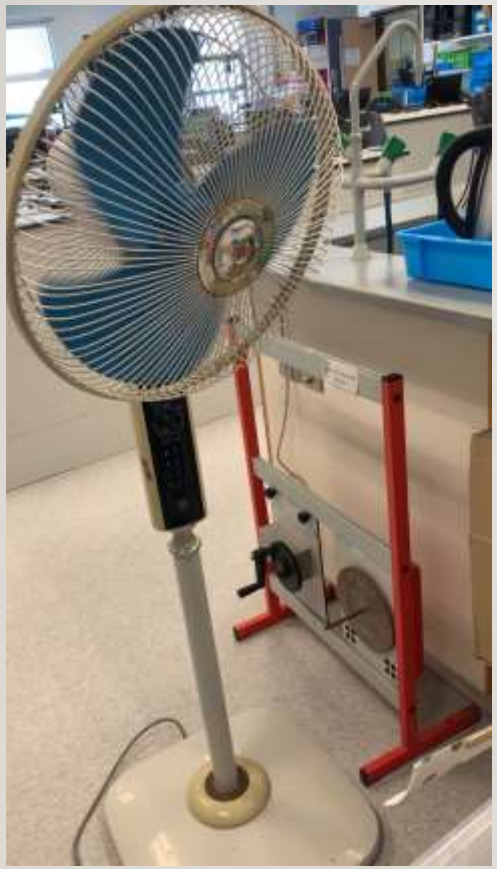
FAN(MODE_1) TEST WITH UT33C+



V = ~1.6-1.7

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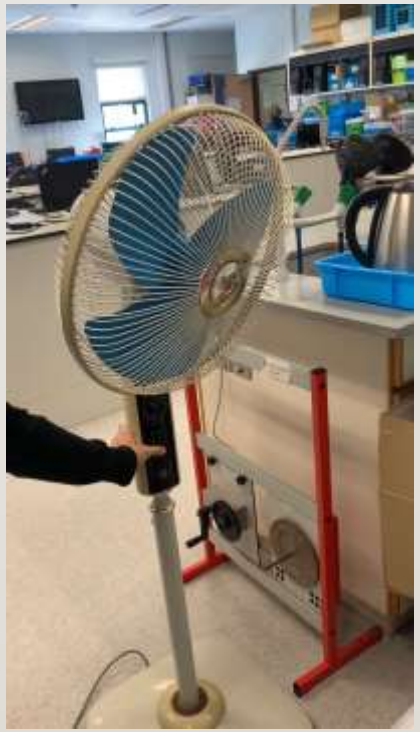
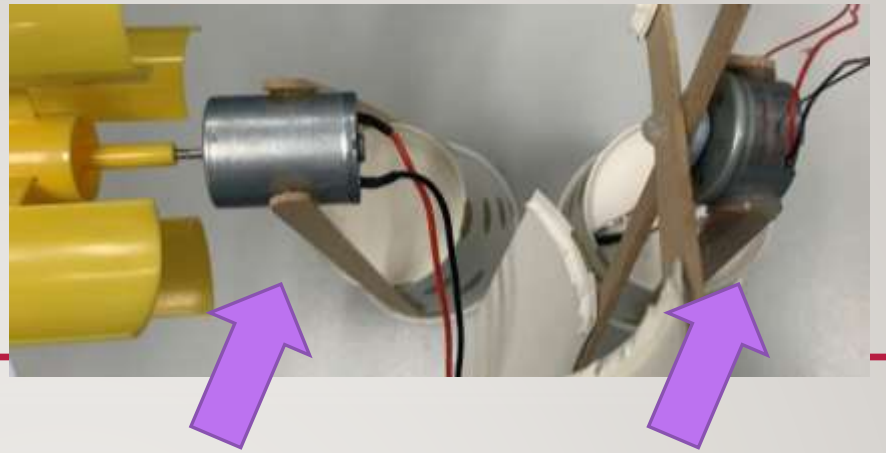
ADDITIONAL (1)



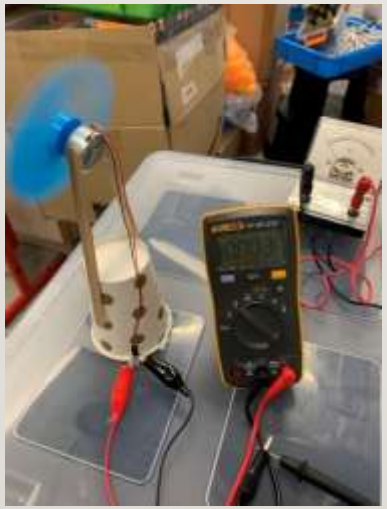
Blue -
clockwise and anticlockwise

ADDITIONAL (2)

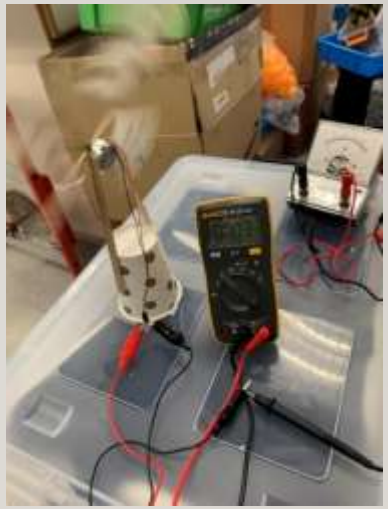


BASIS	MOTOR	GENERATOR
Function	The Motor converts Electrical energy into Mechanical Energy	Generator converts Mechanical energy to Electrical energy.
Electricity	It uses electricity.	It generates electricity
Driven element	The Shaft of the motor is driven by the magnetic force developed between armature and field.	The Shaft is attached to the rotor and is driven by mechanical force.
Current	In a motor the current is to be supplied to the armature windings.	In the generator current is produced in the armature windings.
Rule Followed	Motor follows Fleming's Left hand rule.	Generator follows Fleming's Right hand rule.
Example	An electric car or bike is an example of electric motor.	Energy in the form of electricity is generated at the power stations.

Generator (發電機)



Motor (摩打)



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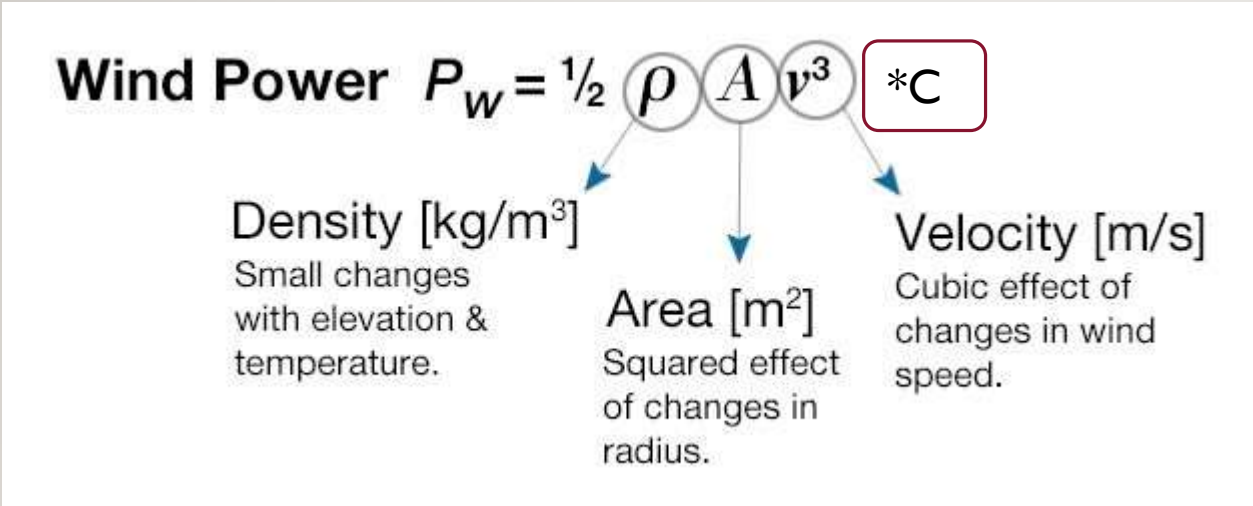

C = coefficient of performance