

ASIAN TRY ZERO G 2017-2018

SPINNING RING EXPERIMENT REPORT

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SPINNING RING

EXPERIMENT PURPOSE

- “ The purpose of the experiment is to determine whether the absence of gravity affects the upward force and torque exerted onto the ring

HYPOTHESIS

- “ The weaker the gravity acts on an object, the more likely for the object to overcome its weight(due to gravity) when an external force is exerted onto it
- “ With the absence of gravity, the object will easily escape from the stick due to unbalanced force acting on it.

MATERIAL AND METHODS

- “ Materials – A pencil and a cello tape
- “ Methods
 - 1) Insert cello tape surround pencil
 - 2) Start making the cello tape revolves by moving the pencil in a circular motion
 - 3) Fasten the spinning of the cello tape by making the hand movement faster
 - 4) Observe and record the result

EXPERIMENT RESULT

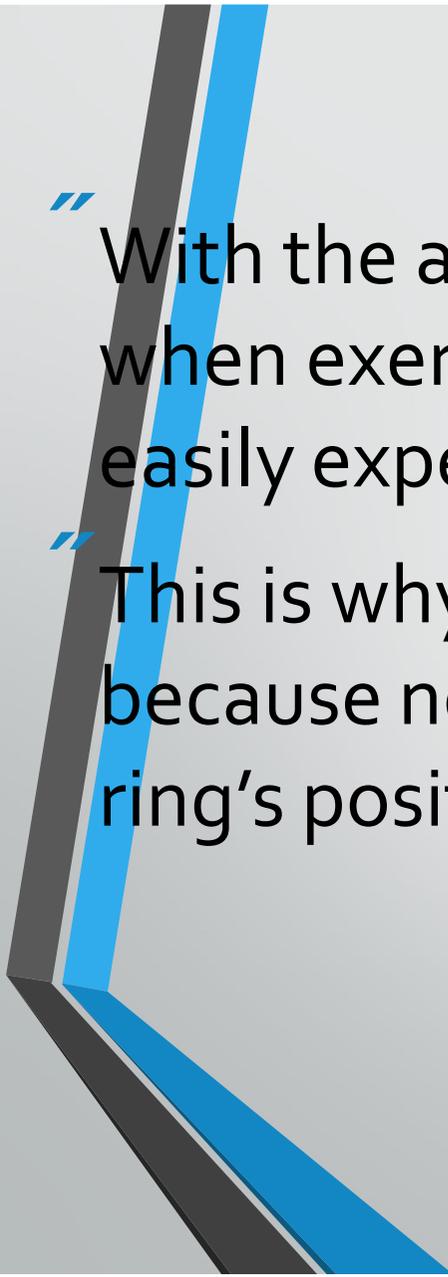


Observation made :

- “ The ring behaves similiarly when spinned on the Earth and with the absence of gravity
- “ However, it is easier for the ring to escape from the stick as there is no force(gravity) that prevents the ring from escaping the stick

DISCUSSION

- “ Every object has weight(on Earth), which pulls it down towards the ground
- “ In order to lift something up off the ground, you need to exert an upward force. In order to make something spin you need to exert a push or pull that creates a torque
- “ So, to make a cello tape and stay up in the air, you need to exert an upward force and a torque with your pencil by your hand
- “ Another force involved in the process is friction, the force resisting two surfaces sliding against each other
- “ To keep it in the air you have to keep spinning it and pushing it up, until a balanced force is achieved.

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- “ With the absence of gravity, an object has no weight, thus when exerted by the torque and upward force, it begins to easily experience unbalanced force. A lift is created.
 - “ This is why the spinning ring can easily escape the stick, because no force is exerting downward to maintain the ring's position

