The G5 KCFS Gazette
Kang Chiao International School, Hsinchu Campus, International Department
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Cargo Drop
貨物空投

Cargo Drop

Cargo drops are used to bring supplies (food, medicine, etc.) to places where cars cannot easily go and airplanes cannot land. The cargo is dropped from the airplane and must safely get to the ground for people to use. This delivery system is mostly used today for Humanitarian Aid. The students had to use their knowledge and creativity to design and build a cargo drop device in an effort to investigate problems associated with supply delivery in remote regions.

Designing and Testing a Cargo Drop

Students have developed an understanding of how variables: drag, air speed, wind speed, direction, weight, height, shape, and size will factor into a successful cargo drop. Students have also utilized their knowledge of potential and kinetic energy in their designs and build. Then, using this knowledge, they came up with their own unique designs to solve this problem.

Reflection

The students then tested their ideas and designs to see what combination of materials and in what order these materials were needed to achieve their goal of dropping an egg from different heights without letting it break. Through testing their different prototypes, they discovered how to achieve the best result. They also realized the importance of Humanitarian Aid that is needed throughout the world.

貨物空投

貨物空投用於將物資(食物、藥品等)運送到汽車無法輕易到達以及飛機無法降落的地方。貨物從飛機上掉下來，必須安全到達地面供人們使用。 空投運送系統今時主要用於人道主義援助。學生必須利用他們的知識和創造力來設計和建造一個貨物空投裝置，以調查與偏遠地區供應運送相關的問題。

設計和測試貨物空投

學生瞭解阻力、空速、風速、方向、重量、高度、形狀和尺寸等變數是如何影響貨物空投能否成功的，他們在設計和創造中也需利用位能和動能知識。接著，透過這些知識，他們想出獨特的設計來解決這個問題。

反饋

接下來，學生測試他們的想法和設計，以瞭解需要什麼樣的材料組合，以及如何組成這些材料的順序，才能使從不同高度落下的雞蛋不破損。透過測試不同的模型，學生發現如何達到最佳結果，也意識到全球人道主義援助的重要性。

1 2 ASK + IMAGINE 提問 + 創思

Students research different variables they need to account for in their design.
學生研究他們需要在設計中考慮的不同變數。

3 PLAN 計畫

Students design their cargo drop devices, and then choose the best one to create.
學生設計貨物空投的裝置，並選擇最好的一個來製作。

4 CREATE 創造

Students create and test their cargo drop devices.
學生製作及測試貨物空投裝置。

5 IMPROVE 改進

Students improve their cargo drop devices.
學生改進貨物空投裝置。

6 PRESENT 展現

Students reflect, then present their findings to the class.
學生反饋並向全班同學展示他們的發現。