

Sailboats 帆船

Sink or float

Why do some things float? This may seem like a simple question, but is it really? You might think that heavy things sink and light things float, but is that always true? Think about the massive container ships that carry thousands of heavy containers across the ocean. They're not light, yet they float. Paperclips are light, yet they sink in a glass of water.

In this project, this is exactly what the student investigated through multiple tests and experiments. The students made predictions, and during the inquire stage, they found the answers to these questions. They learned that boats are acted on by 2 forces, gravity and buoyancy. And also that an object's density influences its ability to float.

Sailboats

After learning more about the topic, the students were ready to build their own sailboats. They discussed the different parts of the sailboat, like the mast and sails, bow and stern, and the hull and keel. They tested their boats, with and without a keel, and made some great discoveries.

沉浮

為什麼有些東西會浮起來？這似乎是個簡單的問題，但真的是如此嗎？你可能會認為重的東西會沉，輕的東西會浮，但事實總是如此嗎？想一想運載數千個重型貨櫃橫跨大海的大型貨輪，它們不輕，但可以漂浮。迴紋針很輕，卻會沉入一杯水中。

在這項專題，學生透過多次測試和實驗研究沉浮。他們進行預測，並在探究階段找到了這些問題的答案。他們瞭解到船受到兩種力的作用，即重力和浮力。同樣，物體的密度會影響它的漂浮能力。

帆船

在進一步瞭解這個主題後，學生準備建造自己的帆船。他們討論帆船的不同部分，例如桅杆和帆、船首和船尾以及船體和龍骨。他們測試了帶龍骨和不帶龍骨的船隻，並得到了一些重大發現。

1

ASK + IMAGINE
提問 + 創思

2

We conducted several experiments and tests to learn more about gravity, buoyancy and density.
我們進行了多次實驗和測試，以瞭解更多關於重力、浮力和密度的知識。

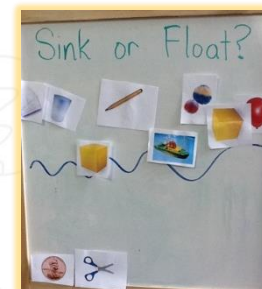


3

PLAN
計畫



Before making our own sailboats, we tested different materials.
在製造我們自己的帆船之前，我們測試了不同的材料。



4

CREATE
創造



We made our own sailboats.
我們製作自己的帆船。



5

IMPROVE
改進



After the create stage, we had additional time to make changes and improvements, and test our sailboats.
在創作階段之後，我們有更多的時間進行修改和改進，並測試我們的帆船。

