

中國銀行(香港)呈獻:

Bank of China (Hong Kong) Presents:

國家發展成就系列

National Development and Achievements Series

# 無盡探索

中國的航天、航空及航海

ENDLESS EXPLORATION

The Journey of Chinese Aerospace, Aviation and Navigation

趣味習作 Activity Sheet

教師指南 Teachers' Guide

姓名 Name: \_\_\_\_\_

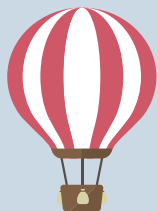
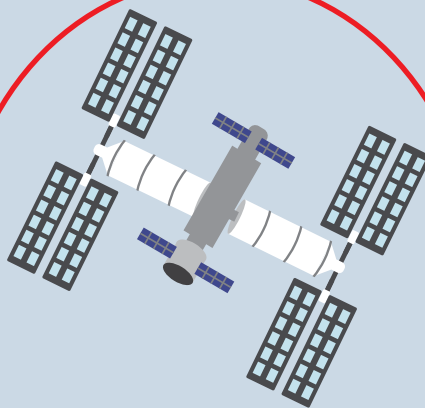
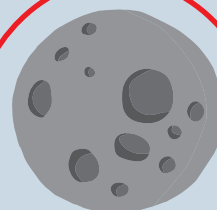
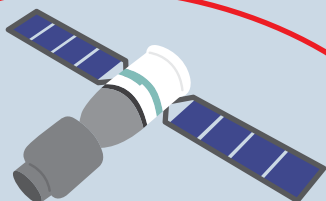


探索太空

Space Exploration

太空人乘坐由火箭發射的載人太空船前往太空探索。他們在太空中會看到哪些事物？請圈出正確答案。

Astronauts fly to space in crewed spacecraft launched by rockets to explore. What can they see while in space? Please circle the correct answers.

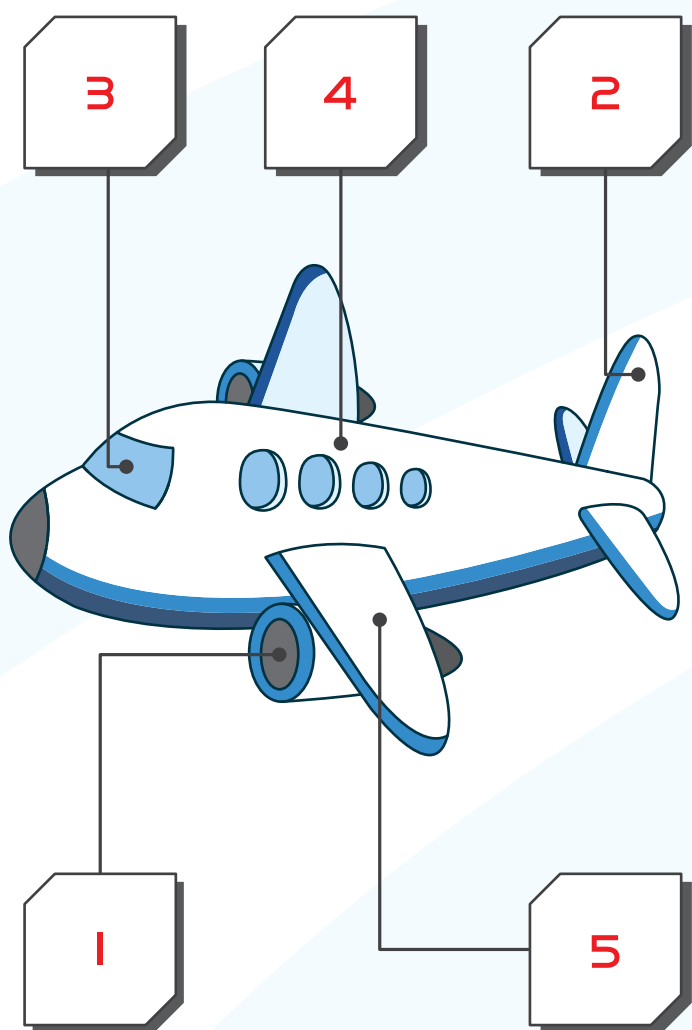
人造衛星  
Artificial  
satellite彗星  
Comet太空人  
Astronaut空間站  
Space station月球  
Moon載人太空船  
Manned spacecraft



## 翱翔天際 Soaring in the Sky

飛機載我們前往世界各地。你知道飛機有哪些重要的部分嗎？它們分別有甚麼用途呢？請在空格中填上正確的數字。

The airplane takes us to explore different places around the world. Do you know the important parts of an airplane and what each part is for? Please fill in the correct numbers in the blanks.



### 1 引擎 (Engine)

為飛機提供推進力

Provides thrust for the airplane

### 2 尾翼 (Empennage)

有助保持飛行的穩定性和控制方向

Helps maintain the airplane's stability and control its direction during flight

### 3 駕駛艙 (Cockpit)

裝有先進的設備，用作飛行操作、狀態監控、導航和通訊

Features advanced devices for flight control, monitoring status, navigation and communication

### 4 機身 (Fuselage)

承載乘客和貨物

Carries passengers and cargo

### 5 機翼 (Wings)

空氣流過時使飛機產生升力

Generate lift as air flows over them

### 知多一點點

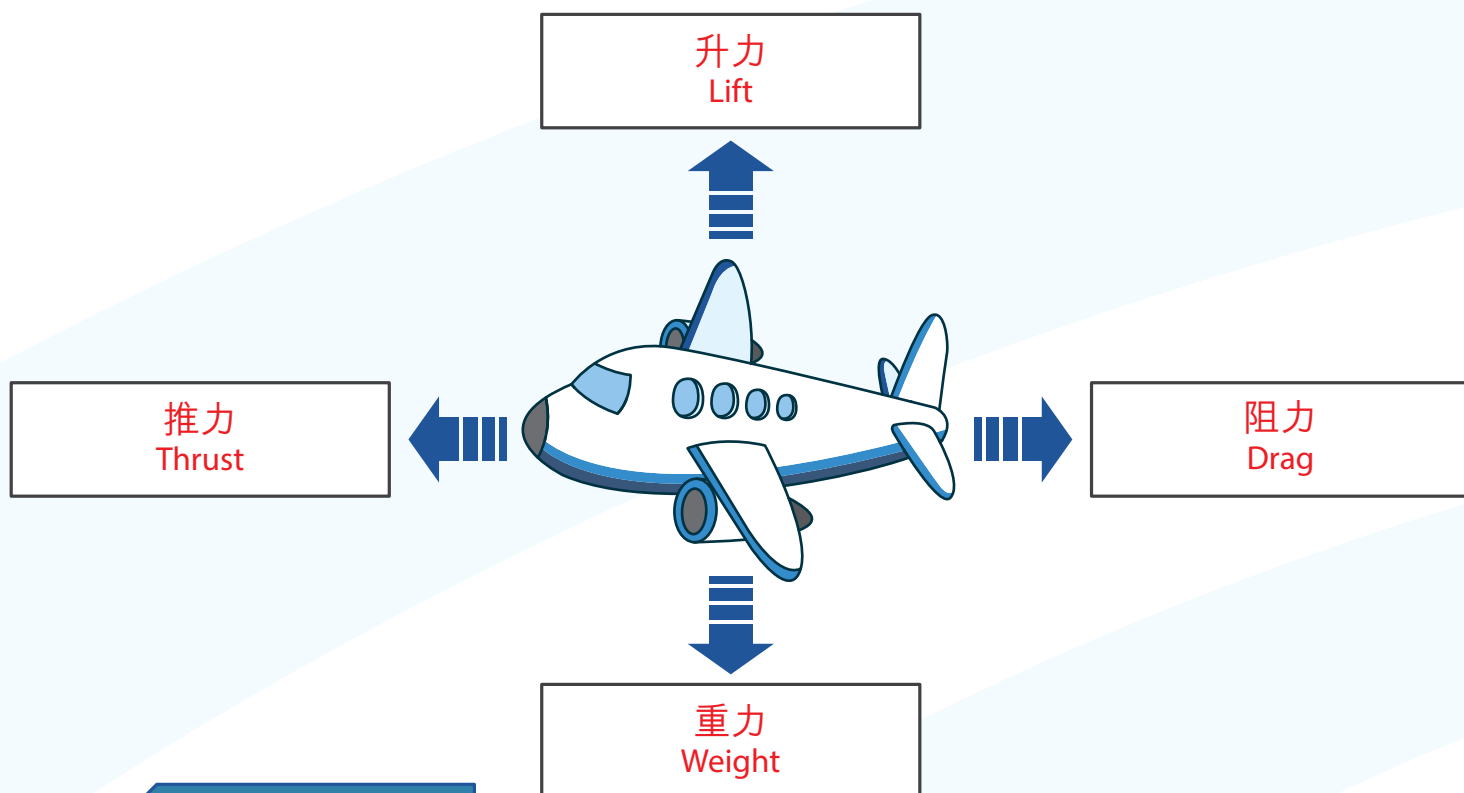
Further exploration

飛行器是任何能夠飛行的機器，例如飛機、直升機和熱氣球。

An aircraft is defined as any machine capable of flight, which includes airplanes, helicopters, and hot air balloons.

飛機能在天空飛行，主要靠四種力量的相互作用。你知道有哪四種嗎？請在下圖中填上正確的答案。

Airplanes fly in the sky mainly due to the interaction of four forces. Do you know what these four forces are? Please fill in the correct answers in the picture below.



### 知多一點點

#### Further exploration

飛機飛行時受到四種力的大小和方向相互作用，分別是：

- ▶ **升力**：由機翼產生，方向垂直向上，克服飛機重量，使其能升空；
- ▶ **重力**：地心引力作用於飛機，方向向下，阻礙飛機上升；
- ▶ **推力**：由引擎產生，推動飛機向前飛行；
- ▶ **阻力**：空氣對飛機前進的反作用力，方向與推力相反，會減慢飛機的速度。

There are four forces that interact with each other in terms of magnitude and direction when an airplane is flying:

- ▶ **Lift**: generated by the wings and directed vertically upwards, overcoming the weight of the airplane to enable it to lift off;
- ▶ **Weight**: the force of gravity acts on the airplane in a downward direction, preventing it from rising;
- ▶ **Thrust**: generated by the engine, propelling the airplane forward;
- ▶ **Drag**: the reaction force of the air on the airplane's forward progress, acting in the opposite direction to thrust, slowing down the airplane's speed.



## 深海探秘

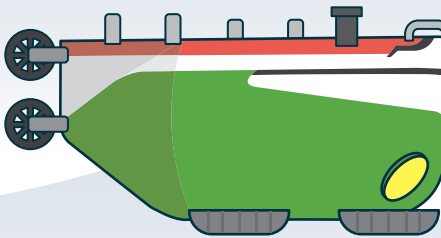
Deep Sea Odyssey

載人潛水器「蛟龍號」可下潛至超過七千米深的海底，「奮鬥者號」更可下潛超過一萬米。你知道深海是甚麼模樣嗎？快來畫出你心目中的深海世界吧！

The manned submersible Jiaolong can dive to depths of over 7,000 metres, while Fendouzhe can go even deeper, exceeding 10,000 metres. Do you know what the deep sea looks like? Let's draw the deep sea world as you envision it!

### 參考答案

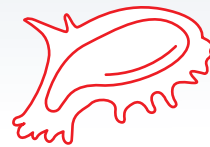
Suggested answers



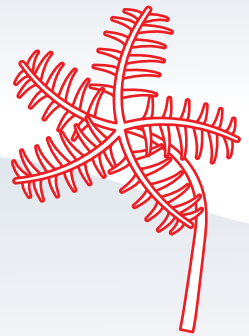
馬里亞納獅子魚  
*Pseudoliparis swirei*



深淵鉤蝦  
*Hirondellea gigas*



海參  
Sea cucumber



海百合  
Stalked crinoid

### 知多一點點

Further exploration

深海環境具有極高的水壓、極低的溫度以及食物資源稀缺的特點，並非所有生物都能適應。地球上最深的海溝——馬里亞納海溝中的挑戰者深淵，是目前已知的最深海域。科學家乘坐深海潛水器前往該處探索，發現了多種能適應深海環境的生物，例如海百合、海參和深淵鉤蝦等。

The deep ocean is characterised by extremely high water pressure, low temperatures, and scarce food resources, which not all organisms can adapt to. The deepest trench on Earth, Challenger Deep in the Mariana Trench, is the deepest known point of the ocean. Scientists have travelled there in deep-sea submersibles and discovered a variety of organisms that have adapted to the harsh conditions of the deep sea, such as stalked crinoids, sea cucumbers and *Hirondellea gigas*.