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Hydroelectricity 水力發電

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The Scenario

Remote communities are in need of reliable power, so our Grade 6 engineers stepped up to find a way to harness the natural energy of flowing water to generate clean electricity.

The Mission

The challenge was to design and build a functional waterwheel. The machine needed to capture the water's motion and spin a motor fast enough to light up an LED bulb.

The Result

It was a glowing success! Students engineered working turbines that successfully converted water's kinetic energy into electricity, proving they have the power to design sustainable energy solutions for the future.

情境

偏遠社區需要穩定可靠的電力，因此六年級的小小工程師挺身而出，尋找利用流動水的自然能量來產生潔淨電力的方法。

任務

此項挑戰是設計並建造一個可運作的水車。這個裝置必須能捕捉水流的動能，並讓馬達轉動得足夠快，以點亮一顆 LED 燈泡。

成果

成果非常亮眼！學生成功設計出能運作的渦輪，將水的動能轉換成電能，證明他們具備為未來設計永續能源解決方案的能力。



1

ASK + IMAGINE
提問 + 創思

2



We explored different energy sources, hydroelectricity, and waterwheels.

我們探索不同的能源、水力發電以及水輪機。

3

PLAN
計畫

4



We sketched our waterwheel designs.

我們將水輪機設計畫成草圖。

4

CREATE
創造

5

IMPROVE
改進

6



We constructed our waterwheels, axles and stands.

我們建造水輪機、軸心和支架。

We tested our turbines under flowing water.

我們在流動的水中測試我們的渦輪。

6

PRESENT
展現

7

We demonstrated our final turbine prototypes.

我們展示最終的渦輪原型。

