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01 暴龍「潛」進海底，守護海洋。(科博館提供)
T-Rex dives to the bottom of the sea to protect the ocean. (Photo: National Museum of Natural Science)

恐龍穿衣：科博館與實踐大學的創意跨界

許鳳玉 | 設計學院院長

國立自然科學博物館(以下簡稱科博館)攜手實踐大學設計學院服裝設計學系，展開一場創意與教育的對話，將時尚元素融入博物館展品，不僅吸引觀眾目光，更激發對環境永續與科學探索的關注。從 2023 年的「太空探險家」到 2024 年的「潛水裝」，這項創新專案展現學校與博物館藉由跨界合作注入新活力，並以趣味方式傳遞重要的社會議題。

雙方合作契機始於 2023 年暑假，科博館焦傳金館長與展示組同仁參訪實踐大學設計學院，探討如何結合教學與實務應用，使博物館展品更貼近生活。雙方迅速達成共識，啟動兼融創意與技術的產學合作計畫。10 月，設計學院許鳳玉院長率服裝設計學系曾慈惠、王思豪二名教師及四名研究生，為科博館機械暴龍進行「量身訂製」。設計團隊利用 AI 生成圖像，將暴龍量身數據導入 3D CLO 模擬軟體，實現數位化設計流程。這次合作不僅讓暴龍「煥然衣新」，更為科學展覽增添時尚魅力，成功結合教育、創意與社會關懷，開創博物館從時尚到永續的展覽新視野。



提案1
遊樂園派對



提案2
太空大冒險



提案3
水手歷險記



提案4
粉紅叢林探險

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2023 恐龍著裝提案
Proposals for the 2023 dinosaur outfit

恐龍變裝的啟航

2023 年起，科博館與實踐大學攜手為恐龍廳的機械暴龍形塑年度主題創意，吸引眾多目光，並成為傳遞公共議題的重要平臺。首年以「太空探險家」為主題，將恐龍打造成銀光閃耀的時空旅者，展現濃厚的科技形象與未來感，啟發觀眾對未知世界的想像。

2023 年：太空探險家的奇幻旅程

2023 年主題設計靈感來自對遠古生物的好奇，想像恐龍穿越時空進而探索自身謎題。恐龍服裝以銀色與橘色為主，銀色布料加金屬塗層呈現反射效果，橘色布料以金蔥絲織造，從不同角度閃耀紅橘光。團隊運用 3D 模擬技術完成設計，但因恐龍體型與人類不同，需調整版型與彈性材質，以避

免損壞，整體製作耗時逾一個月。服裝結構由填充棉花與廢布剪裁的 100 多條布條組成，服裝以拆解方式組合，方便穿脫，不僅減少廢料，且實現資源永續利用，展現兼具設計與環保的創新思維。

2024 年：環境永續的海洋守護者

2024 年主題聚焦「環境永續」，為暴龍裝扮新角色，成為象徵環境保護的「海洋守護者」。實踐團隊提出 8 套設計方案，包括「白化珊瑚捍衛戰士」、「地球救火隊」等，最終由觀眾票選出「海洋保護者 - 潛水裝」為年度主題。

設計團隊將暴龍打造成清理海洋垃圾的「海洋守護者」，身穿潛水裝，搭配蛙鞋與氧氣瓶。靈感來自對海洋保育的關懷，形象鮮明且具行動力，吸引大、小朋友關注海洋汙染問題，並喚起年輕一代



03 恐龍穿衣 - 太空大冒險
The space explorer outfit



04 實踐大學設計團隊為暴龍著裝
SC design team putting the outfit on.

05 暴龍 - 太空探險家
T-Rex the space explorer

對環境的責任感。團隊採用 3D 模擬技術設計，配件以環保 EVA 材質製成，潛水服則利用廢布拼接而成。經過多次調整，以確保服裝輕便且適合恐龍的姿態，完美結合創意與永續理念。

永續文化的新典範

科博館與實踐大學的跨界合作，成功將創意設計與科學教育緊密結合，以創意與技術，從概念到實體，結合環保與數位科技，賦予恐龍展品全新生命。未來可望延續此種模式，探索更多展覽主題與形式的可能性。透過創新設計，博物館將進一步縮短與公眾的距離，成為引領永續文化潮流的重要平臺。這樣的合作不僅豐富博物館的教育功能，也重新定義設計與科學的結合方式，為社會大眾帶來啟發與深思，進而再次審視人類與自然世界的連結。■

06 暴龍太空裝組裝平面版片
Pieces of the T-Rex space outfit to be assembled





07 科博館 2024 年再度攜手實踐大學設計學院，為館內「機械暴龍」打造新行頭。(科博館提供)
In 2024, the Museum collaborated again with SC's College of Design to make a new outfit for the mechanical T-Rex.
(Photo: National Museum of Natural Science)

Dressing up for the Dinosaurs: Cross-collaboration of SC and the National Museum of Natural Science

Hsu Feng-Yu (許鳳玉), Dean of the College of Design

The National Museum of Natural Science (the Museum) collaborated with Shih Chien University's Department of Fashion Design to launch a dialogue on creativity and education. Fashion elements were incorporated in exhibits to attract visitors' attention and encourage more focus on environmental sustainability and scientific discovery. From the “**space explorer**” in 2023 to the “**diving wetsuit**” in 2024, the innovative cross-collaboration between the university and the Museum rejuvenated existing exhibits and raised awareness of important social issues in a fun way.

The idea of the collaboration began in the summer of 2023, when the Director Chiao Chuan-Chin (焦傳金) and his exhibition colleagues visited the College of Design

at Shih Chien University (SC). They discussed about how to combine teaching and real-world applications to make museum exhibits connect to everyday life. Both sides quickly reached an agreement to launch a university-industry collaboration that focuses on creativity and techniques. In October, Hsu Feng-Yu, Dean of the College of Design, led Tseng Tzu-Hui (曾慈惠) and Kevin Wang (王思豪), teaching staff from the Department of Fashion Design, and four graduate students to provide a customized design for the mechanical Tyrannosaurus rex (T-Rex) at the Museum. The design team used AI generated images to import clothing fit data into the 3D fashion design software CLO, realizing a digital design process. The collaboration not only provided new clothes for the T-Rex but also added the elements of fashion to a science exhibition. The project successfully

combined education, creativity and social issues to raise awareness of sustainability through fashion in museum exhibitions.

A project to dress up the dinosaurs

Starting from 2023, the Museum and SC have worked together to demonstrate creativity through the annual theme of the mechanical T-Rex. The dinosaur has since

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特地為小暴龍打造「美人魚裝」增添趣味，營造奇幻氛圍。
(科博館提供)

The little T-Rex was dressed up in a mermaid outfit.
(Photo: National Museum of Natural Science)



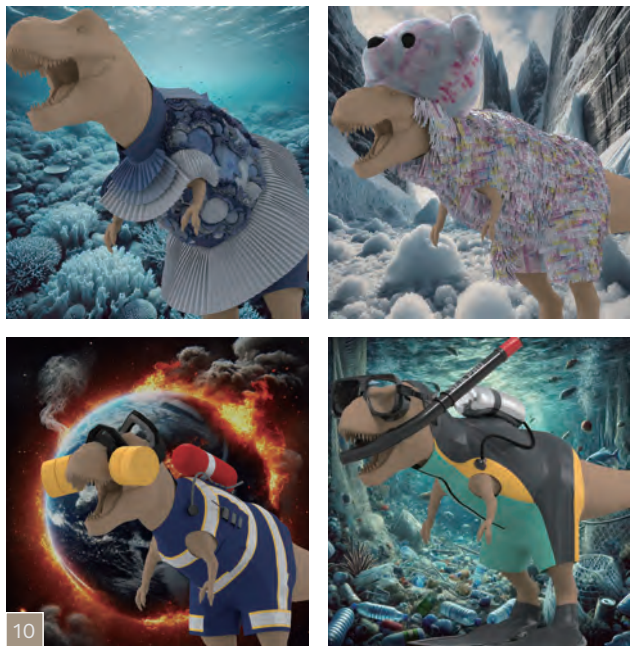
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科博館親子恐龍化身為潛水員與人魚

The mommy and baby dinosaurs became the diver and the mermaid.

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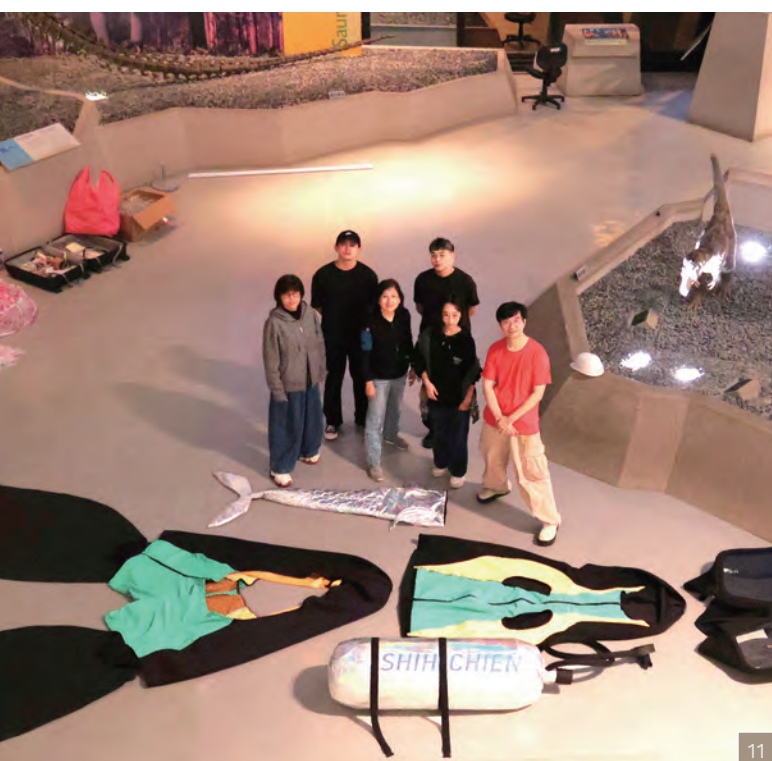
2024 恐龍著裝提案
Proposals for the 2024 dinosaur outfit

attracted attention and become a crucial platform to deliver messages on public issues. The theme for the first year of collaboration was “the space explorer”. The T-Rex was dressed in a shining silver suit to demonstrate an image of future technology and imagination in an unknown world.

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暴龍著裝花絮 (科博館提供)
Images of the team dressing up the T-Rex (Photo: National Museum of Natural Science)



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2023: A fantastic journey of the space explorer

The theme of 2023 was inspired by curiosity about ancient creatures, an imaginative journey of the dinosaur travelling through time to explore the questions of life. The outfit was silver and orange. The silver fabric with a metal coating creates reflections. The orange glitter fabric reflects a red orange glitter at different angles. The design was made using 3D simulations. Due to the different body shapes of dinosaurs and humans, the garments fit and the fabric used needed to be adjusted. The entire process took more than a month to complete. Made using fiber filling and deadstock fabrics, the outfit was designed in a way that was easy to be put on and taken off. The design reduced waste and used recycled fabrics, an innovative approach to incorporate a focus on environmental protection in design.



13 王思豪老師與團隊為暴龍裝氧氣瓶
Assistant Professor Kevin Wang and his team put the scuba cylinder on the T-Rex.

14 實踐團隊為暴龍裝蛙鏡
SC team putting the mask on the T-Rex.

2024: The ocean protector of environmental sustainability

The 2024 theme focused on environmental sustainability. The T-Rex became the ocean protector. Among the eight proposals put forward by the SC team, including “warrior against coral bleaching” and “firefighter for the earth”, **“the ocean protector with a diving wetsuit”** was selected by the public to become the theme of the year.

The T-Rex was dressed up as an ocean protector cleaning up ocean debris with a wetsuit, fins and a scuba cylinder. The idea came from a focus on marine conservation. Both children and adults were encouraged to pay attention to marine pollution, and the younger generation was encouraged to take responsibility for the environment. The design team leveraged 3D simulations, using eco-friendly EVA materials to make the accessories and deadstock fabrics to make the wetsuit. Following several adjustments, a lightweight outfit that

fits the movement of the dinosaur was completed. It was a perfect combination of creativity and sustainability.

New paradigm for sustainability

The cross-collaboration between the National Museum of Natural Science and Shih Chien University successfully combined creative design and scientific education. Creativity, environmental protection and the latest technology were used to provide new life to the dinosaur exhibit. This type of collaboration is likely to continue in the future for both sides to explore more possible themes and forms of exhibitions. With the innovative design, the museum becomes more accessible to the public and serves as an important platform to promote the culture of sustainability. The cross-collaboration not only enriches the museum function of education but also redefines how design merges with science. It provides the public an opportunity to be inspired and reflect on the connection between humans and the natural world. ■