教案一：藝術《廢棄材料造船》

活動形式：集體活動
活動目標
1. 認知目標：認識廢棄物料可以再利用，學習運用乾淨的廢紙盒、塑膠瓶等物料製作小船。
2. 能力目標：嘗試運用貼、組合的方式製作簡易小船；發揮想像力進行創作，提升小手操作與創造能力。教師負責所有尖銳工具，幼兒不接觸剪刀。
3. 情感目標：享受手工創作與水上測試的樂趣，體驗「廢物再造」的樂趣，建立環保創作的態度。

活動準備
物質準備：清洗乾淨的塑膠瓶、紙盒、瓶蓋、吸管、雙面膠、教師專用剪刀、大水盆。
經驗準備：幼兒已有觀察物件浮沉的經驗，看過不同種類小船的圖像。

活動過程
（一）情境導入：廢物變出新玩具
教師出示清洗乾淨的舊塑膠瓶、紙盒、瓶蓋，向幼兒提問：「這些東西用完之後，是不是一定要丟掉？它們還可以有甚麼新用途？」
引導幼兒自由猜想。教師帶出主題：這些廢棄物料可以搖身一變，成為好玩的玩具。今天我們就利用廢物，製作一艘可以浮在水面的小船，感受廢物再造的樂趣。

（二）分步示範，講解製作重點
1. 物料選擇講解：完整乾淨的塑膠瓶做船身，穩固又容易浮起；紙盒質地輕，適合做船帆或船的裝飾。
2. 分步示範製作：
① 把塑膠瓶平放，作為穩固的船身；
② 使用雙面膠把瓶蓋貼在船身兩側作裝飾；
③ 貼上吸管當作船槳；
④ 輕輕按壓貼合位置，確保貼得牢固。
3. 重點提醒：船身要放平，貼合要穩固，如果重心不穩，放到水裡就容易傾斜甚至下沉；剪刀屬於危險工具，只由教師使用，幼兒不可以碰觸。

（三）幼兒自主創作，分層支援
幼兒自由挑選廢棄物料，進行組合、貼合與裝飾小船。
教師按幼兒不同能力給予支援：
- 能力稍弱的幼兒：提供半成品船身，主要進行裝飾、貼貼紙的工作；
- 能力中等及較強的幼兒：使用完整物料自主組合，鼓勵發揮意念，做出造型獨特的小船。
教師協助處理較難的黏貼固定步驟，讓每位幼兒都可以完成屬於自己的作品。

（四）水上測試，驗證創作成果
幼兒輪流輕輕把自己製作的小船放入水盆，測試小船能否平穩浮在水面。
引導幼兒觀察：「你的小船有沒有浮起來？會不會傾斜呢？」讓幼兒親眼看見自己的創作成果，感受動手製作的滿足感，同時鞏固浮的科學經驗。

（五）活動總結

教師小結：廢舊物品不一定是垃圾，善用就可以變成有意思的作品。我們親手做的小船可以浮在水面，既好玩又符合環保。我們要學會珍惜物料，發揮創意把廢物再利用。

活動反思

活動結合視覺藝術創作、科學探索與環保教育，學習內容多元。「廢物再造」的主題能有效激發幼兒的創作意欲；水上測試環節讓幼兒看見自己作品的實際效果，帶來很大的成功感，亦鞏固浮起的相關經驗。

可改善地方：幼兒小肌肉能力差異大；能力較弱的幼兒較依賴成人協助，自主創作空間有限；部分小船因為重心、黏貼問題入水後傾斜下沉，令幼兒產生挫敗感；部分幼兒隨意拼貼，造型較雜亂。

改善方向：物料採用分層投放，設有半成品與全套物料，照顧不同能力的幼兒；製作前加強示範穩固造船、貼合的技巧；面對作品下沉的幼兒給予情緒支援，引導一起觀察問題、嘗試調整，培養幼兒不怕失敗、樂於探究的態度。

活動延伸

1. 藝術區：持續投放各式乾淨廢棄物料，供幼兒自由進行廢物再造手工。
2. 戶外水區：把幼兒製作的小船放到戲水區，持續進行小船遊戲。
3. 家校合作：鼓勵家長和幼兒在家一起嘗試簡單廢物再造小手工。

Arts Boat-Making with Recycled Materials

Activity format: Whole-group activity

Learning Objectives

1. Cognitive: Understand the idea of re-using clean waste materials. Learn to make simple boats using recycled boxes and plastic bottles.

2. Skills: Practise sticking and assembling simple boats. Develop fine-motor skills and creative thinking. (Teacher handles all sharp cutting tools.)

3. Affective: Enjoy hand-making and water-testing activities. Experience the joy of up-cycling and build basic environmental-protection attitudes.

Preparation

Materials: Clean plastic bottles, cardboard boxes, bottle caps, drinking straws, double-sided tape, teacher-only scissors, large water basins.

Prior experience: Children have explored floating and sinking and seen pictures of different boats.

Activity Procedure

1. Introduction: Turn waste into toys

Show clean used plastic bottles, boxes and caps. Ask children: “Must we throw these away after use? Can they have new purposes?”

Invite guesses. Introduce theme: We can turn waste into fun toys. Today we make floating boats from recycled materials.

2. Demonstration & key points

（1） Material selection: Clean intact plastic bottles make stable boat-hulls which float well. Light cardboard can be used for sails and decorations.

（2） Step-by-step demo:

① Lay plastic bottle flat as boat-hull.

② Stick bottle caps to both sides for decoration using double-sided tape.

③ Attach straws to serve as oars.

④ Press joints firmly to secure parts.

（3）Safety reminder: Keep boat balanced and well-stuck, otherwise it may tip or sink in water. Scissors are sharp and only used by teachers; children must not touch them.

3. Children’s creation with differentiated support

Children select recycled materials to assemble, stick and decorate boats.

- For less-able children: Provide pre-made half-finished hulls for simple decoration.
- For mid- and higher-ability children: Offer full materials for open-ended creative design.

Teacher helps with difficult sticking work so every child can finish their own boat.

4. Water-testing experience

Children take turns to place their boats gently onto water. Observe: Does your boat float? Does it tip over? Children experience achievement from self-made artwork and reinforce floating concepts.

5. Conclusion

Used items are not always rubbish. We can reuse materials creatively. Our handmade boats float well and support environmental-friendly ideas. We should value materials and enjoy up-cycling.

Reflection

This lesson combines visual-art creation, science exploration and environmental education. The up-cycling theme highly motivates children. Water-testing gives children a strong sense of achievement and reinforces floating knowledge.

Points for improvement: Wide differences in fine-motor ability; some children rely heavily on adult help. Some boats tip or sink leading to frustration. A few works appear messy due to unguided material combination.

Suggestions: Provide both half-finished and raw materials for differentiated learning. Demonstrate stable boat-building techniques in advance. Give emotional support when works fail. Guide children to observe problems and try adjustments to foster resilience and inquiry attitudes.

Extension Activities

1. Art corner: Continue providing clean recycled materials for up-cycling craft.
2. Outdoor water-play area: Use children’s handmade boats for ongoing water games.
3. Home-school cooperation: Encourage simple parent-child up-cycling craft at home.