教案一：科學與科技《水的沉浮》

活動形式：集體活動

活動目標

1. 認知目標：感知物體在水中沉、浮兩種現象，辨認常見可以浮起、會下沉的物品。
2. 情感目標：樂意動手投放物件進行探索，大膽猜測實驗結果，感受水科學實驗的樂趣。
3. 能力目標：能夠自行把物件放入水中觀察，運用「浮起來」「沉下去」簡單描述實驗所見。

活動準備

1. 物質準備：大塑膠水盆、清水；可浮物件：塑膠瓶蓋、樹葉、泡沫塊、塑膠小鴨；下沉物件：石頭、泥塊、鎖匙、小積木；記錄小卡片、抹布。
2. 經驗準備：幼兒曾參與與水有關的探索活動，已認識石頭、樹葉等物件，有玩水實驗的經驗。

活動過程

（一）情境導入

回顧過往水實驗經驗：泥沙放進水裡會沉到水底，那麼其他東西放進水裡，是否都會沉下去？教師拿出塑膠小鴨放進水盆，看見小鴨浮在水面，引發幼兒猜想，帶出《水的沉浮》活動主題。

（二）展開：猜想預測＋分組實驗

1. 猜想環節：依次出示樹葉、石頭、泡沫塊、鎖匙，邀請幼兒發表想法，猜測物件放進水裡會浮起還是下沉。
2. 分組沉浮小實驗

幼兒輪流輕輕把物件放進水盆，細心觀察現象：

質地較輕的塑膠、樹葉、泡沫會飄在水面，就是「浮起來」；

石頭、泥塊、金屬鎖匙會落到盆底，就是「沉下去」。

教師巡迴引導幼兒嘗試說出完整短句：「XX 浮起來」 /「XX 沉下去」。

3. 分類整理：實驗完畢，將物件分為「浮起來」、「沉下去」兩組擺放，鞏固沉浮概念。
4. 聯繫生活經驗：談談公園湖邊，樹葉、小鴨玩具會浮在水面，小石頭、泥沙則會沉到水底。

（三）完結總結

有些物件放進水裡會飄在水面，稱為浮起來；有些物件會落到水底，稱為沉下去。水有奇妙的力量，可以托住部分物件。活動完結，幼兒擦乾雙手，一起整理所有實驗材料。

活動反思

沉浮實驗趣味性高，幼兒積極猜測、親手操作，能夠直觀分辨沉與浮兩種現象，大部分幼兒可以說出物件的沉浮狀態。

可改善地方：部分幼兒投放物件力度太大，濺起水花；少數幼兒未能區分物件輕重和沉浮現象的關係，猜測容易出現錯誤。

改善方向：實驗前示範輕放物件的動作；增加對比示範，協助幼兒觀察；科學與科技區恆常投放不同物料，讓幼兒持續探索。

活動延伸

1. 科學與科技區：持續投放各式小物件及水盆，供幼兒自由進行沉浮探索。
2. 戶外觀察：散步時觀察水面飄浮的落葉、水底小石頭，鞏固沉浮的生活經驗。

Science and Technology — Sink and Float in Water

Activity format: Whole-group activity

Learning Objectives

1. Cognitive: Observe sinking and floating phenomena. Identify common objects that float or sink in water.
2. Affective: Enjoy hands-on scientific exploration. Make predictions bravely and find joy in water experiments.
3. Skills: Place objects into water for observation. Use simple verbal descriptions “floats” / “sinks” to report findings.

Preparation

Materials: Large plastic basin, clean water; floating items: plastic bottle caps, leaves, foam blocks, plastic duck; sinking items: stones, mud lumps, keys, small building blocks; observation cards, cleaning cloths.

Prior experience: Children have taken part in water-related exploratory activities and are familiar with stones and leaves.

Activity Procedure

1. Introduction

Recall previous water-exploration experience: Mud sinks to the bottom. Will all objects sink? Teacher puts a plastic duck into water. Children observe it floating and generate guesses. Introduce the theme Sink and Float in Water.

2. Prediction & group experiment

（1） Prediction: Show leaves, stones, foam blocks and keys. Invite children to guess whether each item will float or sink.

（2） Hands-on experiment: Children take turns placing items gently into water.

Light plastic, leaves and foam float on water. Stones, mud and metal keys sink to the bottom.

Teacher guides children to use simple sentences: “XX floats.” / “XX sinks.”

（3）Sorting activity: Sort tested objects into two piles: things that float, things that sink, to reinforce concepts.

（4） Link to daily life: Talk about leaves and toy ducks floating on pond surfaces while pebbles and mud sink underneath.

3. Conclusion

Some objects float on water and some sink to the bottom. Water can support certain lightweight items. Children dry hands and tidy all experimental materials.

Reflection

The experiment is highly engaging. Most children can tell whether items sink or float.

Points for improvement: Some children drop objects too hard and cause splashes. A few confuse weight with sinking / floating.

Suggestions: Demonstrate gentle placing before experiment. Add comparative demonstrations.

Keep exploratory materials in the Science and Technology corner.

Extension Activities

1. Science and Technology corner: Provide assorted small objects and basins for free sink-float exploration.
2. Outdoor observation: Watch floating leaves and submerged pebbles during outdoor walks.