**基隆市武崙國民小學112學年度觀課前會談紀錄表**

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| **觀課者** | 黃俊儒老師 | **教學者** | 白玉如 | **會談日期** | 112.12.07(四)13：20 |
| **授課年班** | 五年三班 | **教學領域** | 彈性(數學) | **教學主題** | 正方體展開圖 |
| **會談項目** | **內容記要** | | | | |
| 課程內容 | 1. 以操作體驗平面圖形關係與空間感為目標，啟發學生探討與發現之興趣。 2. 體驗如何將立體形體的外圍分解成平面的展開圖，反過來體驗如何將展開圖組合成立體圖形。 | | | | |
| 教學目標 | 1. S-3-4 幾何形體之操作：以操作活動為主。平面圖形的分割與重組。初步體驗展   開圖如何黏合成立體形體。知道不同之展開圖可能黏合成同一形狀之立體形體。   1. S-5-6 空間中面與面的關係：以操作活動為主。生活中面與面平行或垂直的現象。正方體（長方體）中面與面的平行或垂直關係。用正方體（長方體）檢查面與面的平行與垂直。 | | | | |
| 教材脈絡 | 人類生活於三維空間中，因此理應熟悉空間概念。但是空間幾何若嚴格數學化，其題材比平面圖形困難抽象許多，因此小學的空間幾何活動首重實體操作活動與技巧，從活動與常識去認識概念的合理性，建立由操作中得來的經驗，並以容易使用的輔具協助學生掌握概念。  教材地位：  先備：S-3-4。  連結：S-5-5、S-5-7。  後續：S-6-4。 | | | | |
| 教學活動 | 教具準備：   1. 正方體一組2個。 2. 幾何智慧片每生一組。(每組6面+12條扣組的邊) 3. 學習單一人一張。   教學流程：   1. 教師先操作將正方體的一些邊剪開，讓這個形體的面仍然連在一起，而且可以攤平在桌面上，稱為正方體的展開圖。 2. 學生分組將正方體沿著某些邊剪開後攤平，成為正方體展開圖；但要求各組所呈現的展開圖**不要跟老師或其他組的一樣。** 3. 觀察各組所剪開的正方體展開圖，知道一個立體形體的展開圖可能有許多種；並進一步討論哪些連方塊的組合方式是無法拼成立體圖形的。 4. 完成學習單習寫。 | | | | |
| 評量方式 | 1. 能將正方體分解成平面的展開圖。 2. 能利用幾何智慧片操作將展開圖拼組成正方體。 3. 能判斷哪些連方塊的組合方式是無法拼組成立體圖形的。 | | | | |
| 觀察焦點 | 1. 學生是否能理解教師說明事項。  2. 學生在進行小組操作時是否能合作、順暢；討論時是否能理性、專注、聆聽。  3. 學生在個別操作幾何智慧片拼組成立體圖形時，是否落實一一檢視。 | | | | |
| 其他 | 正方體展開的 11 種展開圖。 | | | | |

**預計觀課後回饋會談的時間與地點：112.12.21(四)13：20於503教室**

**觀課者簽章： 教學者簽章：**

**基隆市武崙國民小學112學年度觀課紀錄表(觀)**

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| **觀課者** | 黃俊儒老師 | **教學者** | 白玉如 | **觀課**  **日期與時間** | 112.12.20(三)  10：30～11：10 |
| **授課年班** | 五年三班 | **教學領域** | 彈性(數學) | **教學主題** | 正方體展開圖 |

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| 層  面 | 觀課重點建議 | 觀察現象(✔) | | | | 簡要註記 |
| 優良 | 符合 | 待改進 | 未觀察到(或不適用) |
| 課程、教學與評量 | 正確掌握教材內容，協助學生習得重要概念、原則或技能。 |  |  |  |  |  |
| 運用適切(或多樣)的教學方法，引導學生思考、討論或實作。 |  |  |  |  |
| 融入學習策略的指導。 |  |  |  |  |
| 運用口語、非口語、走動或發問等技巧，幫助學生學習。 |  |  |  |  |
| 適時歸納學習重點。 |  |  |  |  |
| 教學時，能運用適當(或多元)評量，了解學生學習情形。 |  |  |  |  |
| 分析評量結果，提供學生適切的學習回饋或調整教學。 |  |  |  |  |
| 運用評量結果，規劃實施充實或補強性課程。 |  |  |  |  |
| 時間掌控恰當。 |  |  |  |  |
| 班級  經營 | 建立有助於學生學習的課堂規範。 |  |  |  |  |  |
| 適切引導或回應學生的行為表現。 |  |  |  |  |
| 教學環境與設施的安排，有助於師生互動。 |  |  |  |  |
| 營造溫暖的學習氣氛，有助於師生之間的合作。 |  |  |  |  |
| 學生  行為 | 專心聆聽。 |  |  |  |  |  |
| 積極參與。 |  |  |  |  |
| 其他(例如，觀察焦點或上表未提及處，請補充說明於下列) | | | | | | |
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註：修改至教師專業發展評鑑精緻版表格

**觀課者簽章： 教學者簽章：**

**基隆市武崙國民小學112學年度觀課後會談紀錄表(觀)**

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| **觀課者** | 黃俊儒老師 | **教學者** | 白玉如 | **會談日期** | 112.12.21 |
| **授課年班** | 五年三班 | **教學領域** | 彈性(數學) | **教學主題** | 正方體展開圖 |

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| **教學者的優點或特色** |
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| **教學者可調整或改變之處** |
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| **對教學者的具體建議** |
|  |
| **其他** |
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**觀課者簽章： 教學者簽章：**

**基隆市武崙國民小學112學年度公開授課暨觀課教師自我省思檢核表(授)**

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| **教學者** | 白玉如 | **任教領域** | 彈性(數學) | **教學主題** | 正方體展開圖 |

**教師可就課程、教學、評量、班級經營等層面進行有關信念、優點或可調整及成長等向度進行思考並撰寫。**

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| 層面 | 檢核重點 | 優良 | 符合 | 待改進 | 未觀察到(或不適用) |
| 課程、教學與評量 | 正確掌握教材內容，協助學生習得重要概念、原則或技能。 |  |  |  |  |
| 運用適切(或多樣)的教學方法，引導學生思考、討論或實作。 |  |  |  |  |
| 融入學習策略的指導。 |  |  |  |  |
| 運用口語、非口語、走動或發問等技巧，幫助學生學習。 |  |  |  |  |
| 適時歸納學習重點。 |  |  |  |  |
| 教學時，能運用適當(或多元)評量，了解學生學習情形。 |  |  |  |  |
| 分析評量結果，提供學生適切的學習回饋或調整教學。 |  |  |  |  |
| 運用評量結果，規劃實施充實或補強性課程。 |  |  |  |  |
| 時間掌控恰當。 |  |  |  |  |
| 班級  經營 | 建立有助於學生學習的課堂規範。 |  |  |  |  |
| 適切引導或回應學生的行為表現。 |  |  |  |  |
| 教學環境與設施的安排，有助於師生互動。 |  |  |  |  |
| 營造溫暖的學習氣氛，有助於師生之間的合作。 |  |  |  |  |
| 學生  行為 | 專心聆聽。 |  |  |  |  |
| 積極參與。 |  |  |  |  |

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**教學者簽章：**

基隆市武崙國民小學112學年度第一學期－正方體展開圖

503班

**請一一檢視下面各個展開圖，將能拼組成正方體的展開圖塗上顏色－相對的面請塗上同色。**

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| **6.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  | | **7.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  | | |  |  |  |  | |  |  | | **8.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  |  | | **9.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  | | **10.**     |  |  |  |  | | --- | --- | --- | --- | |  |  |  | | |  |  |  |  | |  |  | | |
| **11.**   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |  |  |  | | | | **12.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  | |  |  | |  |  | | **13.**   |  |  |  |  | | --- | --- | --- | --- | |  |  | | | |  |  |  |  | |  | | |  | | **14.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  | | |  |  |  |  | |  |  | | | | **15.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  | |  | |
| **16.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  |  |  | | **17.**   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | | **18.**   |  |  |  |  | | --- | --- | --- | --- | |  |  | | | |  |  |  |  | |  |  | | | | **19.**   |  |  |  | | --- | --- | --- | |  | |  | |  |  |  | |  |  | |  |  | | **20.**   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |  | |  |  | | |
| **21.**   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  | | | |  |  |  |  |  | | **22.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  | | |  |  |  |  | |  |  |  | | **23.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  | |  | | **24.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  |  | | **25.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  | | |  |  |  |  | |  | |  |  | |
| **26.**   |  |  |  |  | | --- | --- | --- | --- | |  | |  |  | |  |  |  |  | |  | |  |  | | **27.**   |  |  |  | | --- | --- | --- | |  | |  | |  | |  | |  | |  | |  |  |  | | **28.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  |  |  | | **29.**   |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  | |  |  | | | | | **30.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  | |  | |
| **31.**   |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | |  |  | | **32.**   |  |  | | --- | --- | |  |  | |  |  | |  |  | |  |  | | **33.**   |  |  |  |  | | --- | --- | --- | --- | |  |  |  |  | |  |  |  | | | **34.**     |  |  |  | | --- | --- | --- | |  |  |  | |  |  |  | | **35.**   |  |  |  |  | | --- | --- | --- | --- | |  |  | | | |  |  |  |  | |  | |  |  | |