**UFTeach – PBI - Writing a Project Rubric**

There are 2-types of rubrics, *Performance List* and *Holistic/Analytical*. Neither is merely an abstract numbering systems but is a taxonomic system that provides specific assessment guidelines for both the teacher and student. Rubrics should be available to students before they begin the assignment in order to help them know how to perform, receive feedback, and revise their work.

Each rubric begins with the writer identifying exactly what needs to be assessed. This will normally include the content of the benchmarks, the ability of the student to answer the driving question, and the means by which they present that answer. Not all items should be of equal weight in a math or science class but all should be recognized. The majority of the grade should come from the portion of the project that reflects mastery of the benchmarks.

**I. Identify the Components of your PBI unit**

|  |  |
| --- | --- |
| **CTS:** | 2 dimensional Geometry |
| **Project Theme:** | Area of Plane Figures |
| **Driving Question:** | What are the important factors when judging cake submissions to be used for Homecoming? |
| **Student Project:** | Students will create a rubric to judge the student body cake submissions. |

**II. Develop a Concept Checklist for the Student Project**

* Determine the concepts to be taught & the essential learning objectives.

1. Start with each Big Idea you identified (what do the students have to know) and write them down in statements that are measurable
2. Checklist contains no judgment of quality, items are either present or not
3. List all of those in a long checklist
4. Review list and combine what naturally goes together (if you demonstrate one thing it naturally shows you know the other)
5. You may and should include items that are specific to the project even if they go beyond the benchmarks.
6. No more than one concept can address quality of presentation (i.e. neatness, spelling, speaking voice)

*List your concepts here…*

* Explain what is meant by area of a polygon
* Derive and calculate the area of rectangles
* Derive and calculate the area of parallelograms
* Derive and calculate the area of triangles
* Derive and calculate the area of rhombuses
* Derive and calculate the area of trapezoids
* Derive and calculate the area of regular polygons
* Devise a rubric by which to judge the cake and justify why you chose those criterion
* Unanimously (among groups) choose a winner
* Present findings and explain why you picked a certain cake to win in a clear and concise manner

**III. Determine the Categories for the Concepts**

* Categories – Determine the main themes from the checklist.

1. Organize your checklist under several overarching themes

* **Mathematical computation of Area**
  + Explain what is meant by area of a polygon
  + Derive and calculate the area of rectangles
  + Derive and calculate the area of parallelograms
  + Derive and calculate the area of triangles
  + Derive and calculate the area of rhombuses
  + Derive and calculate the area of trapezoids
  + Derive and calculate the area of regular polygons
* **Group Work**
  + Devise a rubric by which to judge the cake and justify why you chose those criterion
  + Unanimously (among groups) choose a winner
* **Presentation**
  + Present findings and explain why you picked a certain cake to win in a clear and concise manner

**IV. Place the Categories and Concepts into a Table and Write the Criteria for the Highest Level of Performance**

1. Must be measurable and demonstrate a perfect product that does not go beyond the scope of the project.
2. Circle the words that can vary as these are the ones that will change as students produce less than a top performance
   1. Write descriptors that show 3-levels of performance.

**PBI Rubric**

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| --- | --- | --- | --- |
|  | **Criteria** | | |
| **Concept & Category** | **Highest Level of Performance** | **Middle Level of Performance** | **Lowest Level of Performance** |
| Mathematical Computation of area | Groups successfully compute the areas of all 7 given cakes | Groups successfully compute the areas of 5 - 6 of the cakes | Groups successfully compute the areas of 1 – 4 of the cakes |
| Group work | Groups create a rubric that includes at least 4 criterion  and  applies the rubric appropriately to determine their winning cake | Groups create a rubric that includes at least 3 criterion  and  applies the rubric appropriately to determine their winning cake | Groups create a rubric that includes at least 2 criterion  and  applies the rubric appropriately to determine their winning cake |
| Presentation | Groups clearly and accurately present their work and finding, explain all of their work. | Groups clearly and accurately present their work and finding, with minimal explanation. | Groups clearly and accurately present their work and finding, with no explanation. |