**Aesthetic Aspect of Math**

As you are coming to realize mathematics occurs in many forms in many parts of our world. The objective of this assignment is to dig into the aesthetic beauty associated with math in various forms that we may encounter around us. There are four areas of which I can think of where aesthetic beauty may be illustrated with mathematics playing a decisive role in its beauty. They are:

1. Nature
2. Art
3. Music
4. Poetry

There may be others that I have not thought of. Feel free to explore any you think of by reflecting upon the rubric attached to this assignment.

For this assignment you are going to create a collection of items that illustrate mathematics through at least three of the four areas above. These illustrations may be an integral part of an activity. An illustration can be an image, a drawing, a photo, a written description, or some other form of exemplification. The idea is that you will produce items that you will be able to use as illustrations in your future classrooms.

These illustrations need to address mathematical properties or concepts in a way accessible to grade-specific students. Targeting a range of grades may work well for some illustrations of a General Curriculum Outcome (GCO) that crosses multiple grades. Others may be better suited to Specific Curricular Outcomes (SCO). Either way these illustrations need to address curricular outcomes.

Finally, you need to include a formative assessment plan that shows how you may be able to use each of your illustrations to assist in understanding student learning.

**Rubric for the Aesthetic Aspects of Math Assignment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **0** | **1** | **2** | **3** | **Total** |
| Variety of Exemplars | No clear examples given. | Only one example given. | Two examples from different aspects (nature, art, music, poetry) or three or more examples from one aspect. | Three or more examples from at least three of nature, art, music or poetry. |  |
| Connection to mathematics GCO’s | No clear connection to any mathematics. | Math present but not an inherent property of the examples given (*e.g. simply counting fish in a pond*). | Some examples show the inherent property of math (*e.g. calculating the number of fins in a pond as a multiple of the number of fish*) but not all. | All examples show an inherent property of mathematics to the example. |  |
| Quality of mathematical connection | Does not illustrate the mathematical concept desired. | Illustrates the math concept poorly and/or inaccurately. | Some examples illustrate a desired mathematical concept well. | All examples illustrate desired mathematical concept well. |  |
| Accessibility of exemplars | Exemplars beyond the expected comprehension of target grade. |  | Exemplars within the expected comprehension of target grade. |  |  |
| Aesthetic quality of exemplars | Illustration of poor quality making mathematical concept difficult to perceive. | Quality of illustration acceptable but exemplar inappropriate for age group (*e.g. a piece of art work promoting alcohol consumption*). | Quality of illustration acceptable and appropriate. | Same as previous with illustrations that would clearly be of interest to target students |  |
| Assessment plan | No assessment plan included | Assessment plan present but inadequate | Formative assessment plans included for some of the illustrations showing how your illustrations may be used to help assess student learning. | Formative assessment plans included for all of the illustrations showing how your illustrations may be used to help assess student learning. |  |
| Your own evaluation of your assignment |  |  | <please describe> |  |  |
|  |  |  |  |  | /19 |