**Math 9: Play Structure Rubric**

REQUIREMENTS:

For this project, you must create a:

* Structure that is kid-friendly
* Structure show complexity and creativity

CRITERIA:

* Use a minimum of 6 3-D shapes, including at least one right rectangular prism, one right triangular prism and one cylinder in the play structure
* Include dimensions in your model/sketch (units)
* Calculate the total surface area of each 3-D object.
* Calculate the composite area of the entire 3-D object (Play Structure)
  + Considering door, openings and overlaps

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| --- | --- | --- | --- |
| **4** | **3** | **2** | **1** |
| * All elements of a “3” are present, and the student increased the complexity of the project beyond the expected criteria. * Explores the surface area of composite 3-D objects different from those studied. | * Used a minimum of 6 3-D shapes, including at least one right rectangular prism, one right triangular prism and one cylinder in the play structure. * Included dimensions in the model/sketch (units) * Accurately calculated the total surface area of each 3D object. * Accurately calculated the composite area of the entire 3D object (Play Structure) * Applies understanding of overlapping when calculating surface areas | * Missing some elements of a “3”. * Used a minimum of 6 3-D shapes, including at least one right rectangular prism, one right triangular prism and one cylinder in the play structure. * Makes minimal errors when calculating surface area of each 3D object and the total area of the composite object * Product is not easily understood and connection to the criteria is not always evident. * Makes minimal errors when incorporating doors, openings, and overlaps | * Missing many elements of a “3”. * Included less than 6 3D shapes, and missing a right triangular prism, right rectangular prism, and/or cylinder * Make multiple errors when calculating the surface area of 3-D objects and composite objects * Product is very difficult to understand and lacks connection to the criteria. * Makes multiple errors/ doesn’t show evidence of knowledge of doors, openings and overlaps |

Summary:

I created this assessment rubric for my grade 9 math class during my internship and I believe that it reflects a 21st century teaching style. This assessment allows students to present their knowledge through a real world application. It also allowed students to be creative and imaginative when presenting the content learning. Students were able to construct a project that was of interest to them for example a water park and paintball course were some of the projects created. After correcting students assignments one change that I would make to the rubric is requiring students to show the formula that they used so that it makes their work easier to follow and correct. Also, although I had communicated to my students the curricular outcome being covered in this unit, I feel that it would have had more impacted if it was stated again on the rubric sheet.

Upon completion of this assignment student learning can related directly to the 7C’s including developing creative, innovation, and entrepreneurship, developing critical thinking, and developing character. It develops creatively because it encourages students to develop their own play ground using different shapes. It develops critical thinking because it encourages students to explore the surface area of new and different shapes to include into their project. Finally it develops characters because it encourages life-long learner through the connection to the real world application, responsibility, and personal productivity.