**I can sort 2-D and 3-D shapes based on at least 2 attributes and explain my sorting rule**

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| **Lesson Plan Title**  I can sort 2-D and 3-D shapes based on at least 2 attributes and explain my sorting rule. |
| **Lesson Summary**  Students are expected to sort 2-D shapes and 3-D objects using two attributes and explain their sorting rule.  **Background**  In grade one students were expected to sort 2-D shapes and 3-D objects using one attribute and explain the sorting rule, now they are expected to extend their knowledge to sorting using 2 attributes. |
| **Curriculum Outcomes**  G01- Students will be expected to sort 2-D shapes and 3-D objects using two attributes and explain the sorting rule. |
| **Assessment Of Learning or Assessment For Learning**  Observation, Conversation, Product  Observations   * Can students work independently at sorting stations?   Conversations   * Can students identify your sorting rule and explain it?   Product   * Can students complete the activities at each math station-to help extend their knowledge of sorting shapes and objects? |
| **Communication/Vocabulary**   * 2-D shapes * 3-D objects * attribute * sides/edges * Corner/vertices * Sorting rule * Straight, curved, large, small, points, roll, stack etc. (sorting rule words) |
| **Technology**   * iPad’s (if required) * Smart Note book software |
| **Materials**   * 3-D objects * iPads * Pattern Blocks * [2D Attributes page](#TwoDAttribute) * [Roll and Slide sheet](#Roll) from <http://www.mathworksheets4kids.com> * [Sort 3D objects from real life](#Real) from <http://www.mathworksheets4kids.com> * [Oral Assessment Sheet](#Assessment) * Math Journals: My math journals are the hilroy scribblers where half the page is for writing and half is for drawing. It looks something like this.   http://images.earlyyearsresources.co.uk/images/products/zoom/1390481469-14118600.jpg |
| **Mental Mathematics**  Have students subtract using 0. Count forwards and backwards by 1’s, 2’s, 5’s and 10’s. |
| **Development**  Students will be expected to understand how to sort shapes and objects using 2 attributes. Through math stations they will develop and extend their knowledge of patterns with a focus on sorting shapes and objects.  **Time To Teach**  Activate prior knowledge by asking students to find objects that are shapes in the classroom (ie: a white board is square). Have students work in groups of 10 (I have 20 students in my class) to sort the shape that they have found. When finished have each group share their sorting rule. Explain to students that now they will be working at sorting stations to practice identifying attributes and sorting them.  **Time to Practice**  *Stations- I usually only have 2 Students per station-if you have to have more, don’t go higher then 3*  1. 3-D objects- at this station either have a bin of 3-D objects OR have a collection of 3-D objects from the real world. Ask the students to choose 2 attributes and sort these shapes based on their attributes.  2. iPad Station 1- Shape Sorting Free App (free)- 2iPads  http://a4.mzstatic.com/us/r30/Purple5/v4/ce/07/25/ce0725ad-ef15-09b5-4110-f7acb559b536/icon320x320.jpeg  For more information: <http://apps.microsoft.com/windows/en-ca/app/shape-sorting-prof/8d357e7e-3d8c-48ce-956d-5d21d318acf7>  At this station students will create a pattern on the app  -Students will play the App working on sorting shapes  3. Attribute Blocks station  Have privacy folders at this station you can easily make these by stapling 3 manila folders together  http://ecx.images-amazon.com/images/I/61eyzW3XC1L._SX425_.jpg  -At this station have one student sort 6 shapes behind the folder. Have the partner look at the sort and determine what two attributes their partner sorted with.  4. Pattern Block Station  -Have each partner choose 5 random pattern blocks then have them sort the pattern blocks based on two attributes  5. Math Journal Station  Have math journals available at this station  -Using the [2-D shapes attributes page](#TwoDAttribute) have students colour, cut and glue the shapes and proper attribute labels into their math journals  6. Worksheet station-  [Roll Slide and Stack Sheet](#Roll)  [3-D shapes real life](#Real)  7.Teacher Station  Oral Assessment at the teacher station  -Show students a set of shapes that are already sorted have students tell you which two attributes you used to sort the shapes  -Record information on the [oral assessment sheet](#Assessment)  8.Smartboard station (I will explain how to set this up)-Please note that my students use a finger pointer to use the smartboard  http://i.ebayimg.com/images/i/281206632133-0-1/s-l1000.jpg  -Go into the gallery and search “pattern blocks” and “3D Shapes”  -Put a variety of shapes and objects on the screen have students use the finger pointers to sort the shapes based on two attributes and name their pattern rule, then drag all over the page again and resort.  \*I would have two pages one for 2-D shapes and one for 3-D objects for them to sort.  9.iPad station 2- Frantic Find App- 1 iPad  Thaw Space:ssrsb:Desktop:index.jpg  For more information: <https://itunes.apple.com/ca/app/tvokids-frantic-find/id883305466?mt=8>  At this station students will use one App and play the game together  **Time to Share**  Students will share one of the stations they completed and explain how they identified the core of the pattern. |
| **Differentiation**   * For students who struggle with sorting have them start at the sorting station |

**2-D Shape Attributes**

**Oral Assessment Sheet**

**Show students a sort of shapes and have them identify what your pattern rule is.**

**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Expectations** | **Students could identify the secret sorting rule** | **Anecdotal Notes** |
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**Thaw Space:ssrsb:Downloads:movement-coloring1.pdf**