### Arts Integration Lesson Plan

**“Mix & Match”**

**Subject:** Math  
**Grade:** 4th

| Objective | Design masks and outfits to manipulate in order to discover all possible combinations.  
| | Predict and record possible outcomes using a combination diagram.  
| | Use problem solving strategies to discover different combinations.  

| TAKS # | 5: Probability and Statistics  
| | 6: Underlying Processes and Mathematical Tools  

| TEKS | 4.13 Probability and statistics. The student solves problems by collecting, organizing, displaying, and interpreting sets of data. A) The student is expected to list all possible outcomes of a probability experiment such as tossing a coin.  
| | 4.14 Underlying processes and mathematical tools. The student applies Grade 4 mathematics to solve problems connected to everyday experiences and activities in and outside of school. A) The student is expected to identify the mathematics in everyday situations; C) The student is expected to select or develop an appropriate problem-solving strategy, including drawing a picture, looking for a pattern, systematic guessing and checking, acting it out, making a table, working a simpler problem, or working backwards to solve a problem; D) The student is expected to use tools such as real objects, manipulatives, and technology to solve problems.  

| Materials/Technology | White paper plates  
| | Sequins, ribbons, felt or fabric, beads, wallpaper, feathers, glitter, pompoms  
| | Glue  
| | Hole punch  
| | Yarn  
| | Masking tape  
| | Construction paper  
| | Popsicle sticks  
| | Scissors  
| | Crayons/markers/colored pencils  
| | Shirt/Pant patterns  

| Procedure | 1. Distribute plain white paper plates. Have students cut out shapes for the eyes.  
2. Attach a popsicle stick to one side of the mask.  
3. Display materials that may be used for decorating.  
4. Have students plan their finished mask and which materials they will use to decorate it.  
5. Have students decorate their plates using the available materials. Use glue, masking tape, and paper clips to keep materials on the mask.  
6. Divide students into groups of four or five. Each group will use shirt and pant patterns to trace and cut out three different colored shirts and two different colored pants.  
7. Using the shirts, pants, and masks, students will determine the total number of possible combinations of shirt/pant costumes and record on a combination diagram. |
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<tbody>
<tr>
<td>Vocabulary</td>
<td>Combinations, arrangements, display, organize, predict, combination diagram, possible outcomes</td>
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<td>Evaluation</td>
<td>The teacher will review each student’s work to be sure that the students have met the lesson requirements. The grade will be determined by a teacher-made grading rubric.</td>
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<td>Resources</td>
<td>Artsedge.kennedy-center.org/content/2112</td>
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<td>Teacher Notes</td>
<td>This is a group activity with 4-5 students per group. To create masks that tie around the head, holes may be punched on the left and right sides of the mask. Tie a ribbon through each hole. Lesson may be extended by adding another item to the combination such as necklaces, hats, or ties.</td>
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