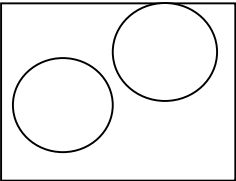


<b>Analytical Thinking</b>  <b>First Grade</b>	K-2 Enrichment ~ Javits Grant Research Project		
	<h1>Button Sort</h1>		
<b>Objectives</b>  Identify attributes Create classification systems that work	<b>Materials</b>  Activity 2 – Buttons, string, mats	<b>Time</b> 30 to 40 minutes	
<b>Intro ~ Whole group (5 minutes)</b>  Show a group of buttons with a distinct set of attributes (e.g. small, large) to the group. Allow them to pass the buttons around to look at them up close. Talk about attributes, and what the word means. Ask for one way to sort the buttons into two groups. Give them time to discuss other attributes they might sort for.			
<b>Lesson ~ Small group, grouped by readiness (20-25 minutes)</b>  Organize students into groups of 3-5 people. Lay mats out on desks, tables or floor. Give each group several strings and a bin of buttons. Ask the groups to sort the buttons by attribute, but do not tell them which attributes to sort by. Tell them the strings are for containing the groups – they can create circles or some other method to define the different groups.  This is open-ended—they may sort for one, two or three attributes. Overlapping the string loops is allowed, but not offered as an idea.  Circulate and ask each group about their work. Replicate the sorting of each group on the board while students clean up.			
<b>Closure - Whole Group (5-10 minutes)</b> Talk about the observations the kids made, and the classifications they came up with. Where else in your world do you see things sorted or grouped by attribute? How is the grocery store organized, and why? What about the classroom? Scientists sort things by attributes all the time. Why? Why do scientists sort animals into groups? Key thoughts—organization by attribute allows for more efficient thinking, and also helps scientists make educated guesses when information is missing.			
<b>Vocabulary~</b>  <b>Attribute: n. Quality, characteristic, or property</b> <b>Category: n. Division or class</b> <b>Characteristic: n. Distinguishing feature or quality</b> <b>Classification: n. Group, set, class or category</b> <b>Venn diagram: n. A diagram that uses circle to represent sets and their relationships</b>  <b>(Note—many words have other uses and definitions. These definitions are for this activity only. This should be very clearly stated for the kids, so they understand the wonderful flexibility of language.)</b>			