**Popcorn Picker Activity**

*1) Create a “vertical” container and a “horizontal” container using your paper.*

*2) Which cylinder will hold more popcorn? Justify your answer.*

**STOP TO DISCUSS**

*3) What information do you need to figure out which container will hold more popcorn?*

*4) Pull up the paper to see which container held more popcorn.*

*5) Calculate the volume of each container*

*6) Tape 2 pieces of paper together and then make another cylinder; does this double the circumference? (4 pieces total)*

*7) Which way should you tape it to maximize the volume? Why do you think it will hold more?*

*8) Does taping the two pieces together for your container double the radius as well?*

*9) Will it double the volume as well?*

*10) What is the relationship between the ratio of the radii of two cylinders and their volumes?*

*11) Then what would happen to the volume if you taped a third piece of tape to the container?*

*Extension: What are three questions more questions you would ask when it comes to this activity? What else would you like to know or learn?*