Canning Methods Not Recommended

 *"My mom turns the jars upside down after filling them and no one got sick."*	**Open kettle canning** is when you fill sterilized jars almost to the top with hot jam or jelly, put the lid on, then turn the jars upside down to force out the air and create a vacuum seal. When we boil jam and jelly in a cooking pot, we still don't reach a high enough temperature to destroy ***all*** spoilage and food poisoning organisms. Plus, the air is filled with floating microorganisms trapped in the jar when we add a lid. When we process a jar of jam or jelly in a boiling water or steam canner, there's enough of an increase in the temperature to destroy the pathogens and enough of a pressure increase to force the air out of the jar. When we remove the jars from the canner, the pressure equalizes and the vacuum seal forms over pathogen-free food.
 *"My daughter showed me tic toc videos of canning in the oven at high temperatures; the people in the videos are experienced."*	**Oven canning** is deceptive. You'd think that if you can jars in an oven at a temperature of 250° or more that you'd kill all of the pathogens, right? But heat moves differently through air than it does through water. You put your hand in a hot oven to take the temperature of meat or to poke a toothpick in a cake, but would you put your hand into a pot of boiling water, which is at a lower temperature? Of course not! You don't get the same heat penetration in an oven as a canner.
 *"My grandma always sealed her jars of jam with paraffin wax; they still sell it in stores with the canning supplies, so that's what she taught me to use."*	People used **paraffin wax** to create a barrier between the jam or jelly and the rest of the world. That was fairly effective as long as the product was stored in a consistently cool place, such as a root cellar. Not many of us have the luxury of a root cellar. Storage temperatures in many houses fluctuate. The wax contracts with cold temperature (letting in pathogens and in my house – ants) and then expands with warm temperatures to trap undesirables in the product beneath the wax. If there was mold under the wax, it was a common practice to scrape it off since it only appeared to be on the surface. We know better now. Molds don't just grow on the surface, they create carcinogenic toxins (mycotoxins) that remain in the food, invisible to the human eye. And just like open kettle canning, the increase in temperature assures that all microorganisms have been destroyed after boiling.

Remember – the goal of processing jars is to ensure there are no pathogens in the sealed jar. The only way you do that is to process the jars in a canner.