Gummy Candy Background Information

Adapted from Gourmet Lab: The Scientific Principles Behind your Favorite Foods by Sarah Reeves Young (2011)

When you walk into a candy store you see lollipops, chocolate bars, peppermints, and demineralized bone. Wait, what? That is correct; between the taffy and licorice you can find a variety of candies that contain gelatin. Gelatin, a product most often associated with JELL-O, is made from animal products that contain collagen. Gelatin can be obtained from pigskin, cow bones, and connective tissues, and can be used in the creation of everything from strawberry jelly to your favorite gummy creatures.

So how does animal skin end up in your favorite gummy worm? Gelatin is obtained from the breakdown of collagen proteins. The proteins exist in large helical structures kind of like jump ropes that have been braided together. When the gelatin is heated, these ropes break down, allowing water to seep in between them. As they cool, they reform the braid, trapping the water between the proteins. This is what allows the gummy worms to be squishy and chewy. These proteins, when combined with water, have a melting temperature that is below normal body temperature (less than 35**°**C). This allows gelatin candies such as gummy worms to go from solid to liquid when placed in your mouth. Other thickening chemicals that come from plants such as starch or pectin do not have the melt-in-your-mouth properties of gelatin.