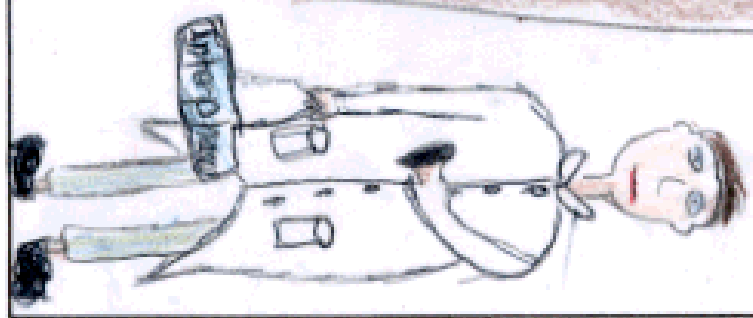
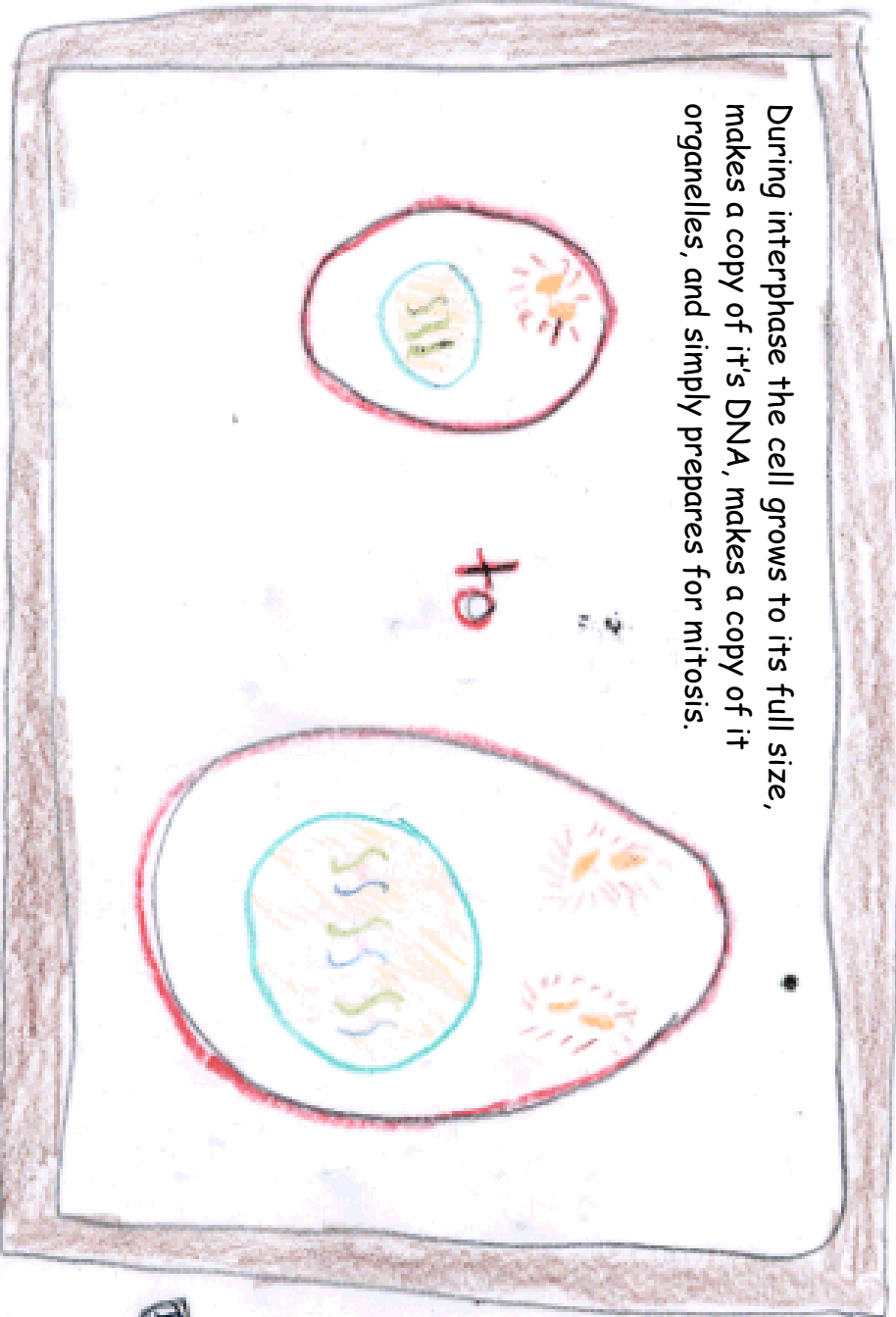


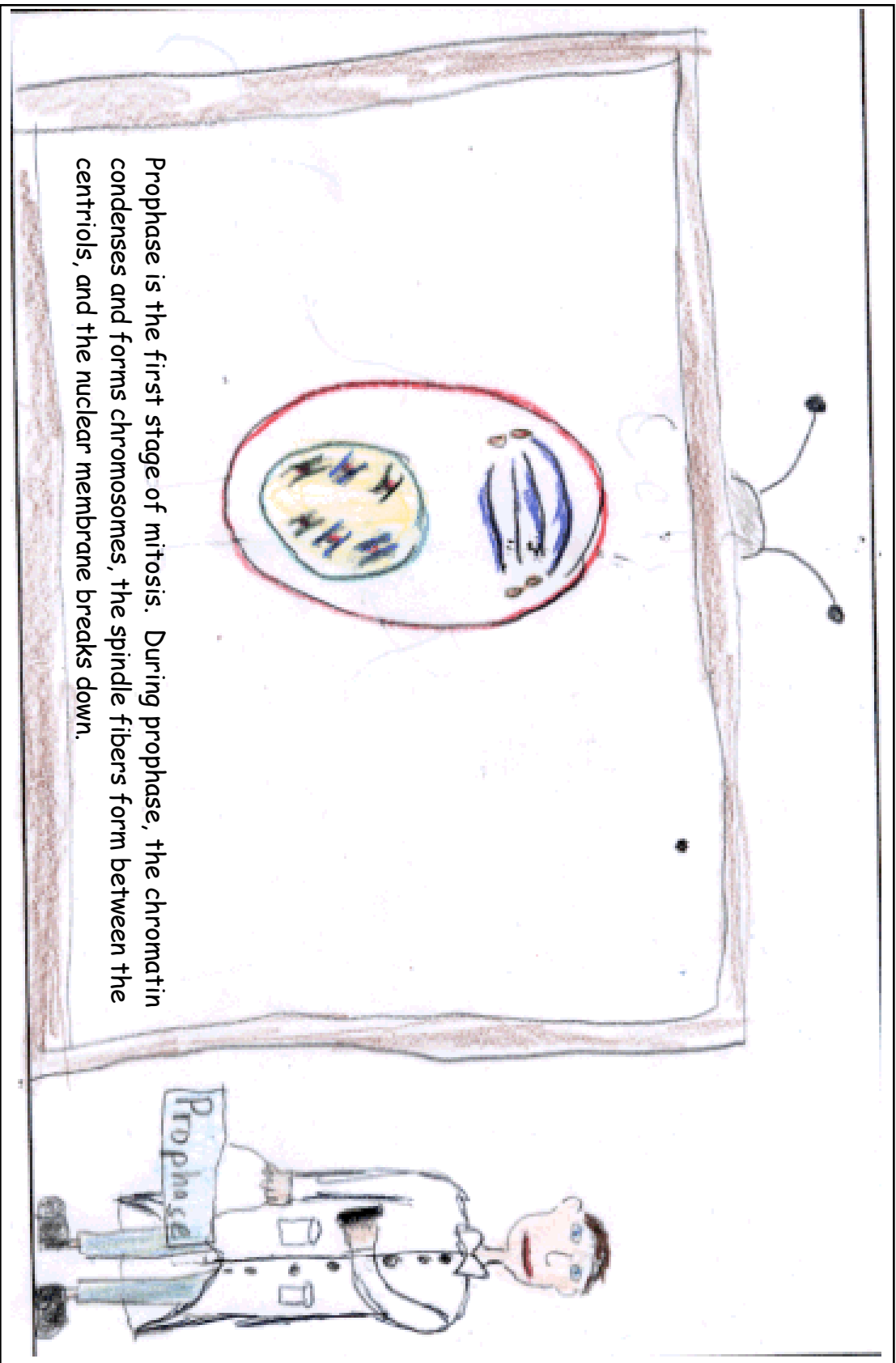
Dr. Mitocell

By Alexa and Corinne

The students of PS 18 took a field trip to Dr. Mitocell's cell farm. Before they go see the cells themselves, they have to see a movie on cell division made by Dr. Mitocell. Come watch it with them!

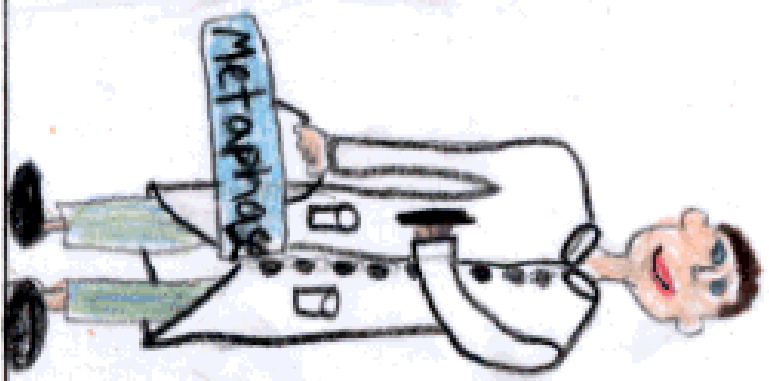
During interphase the cell grows to its full size, makes a copy of its DNA, makes a copy of its organelles, and simply prepares for mitosis.

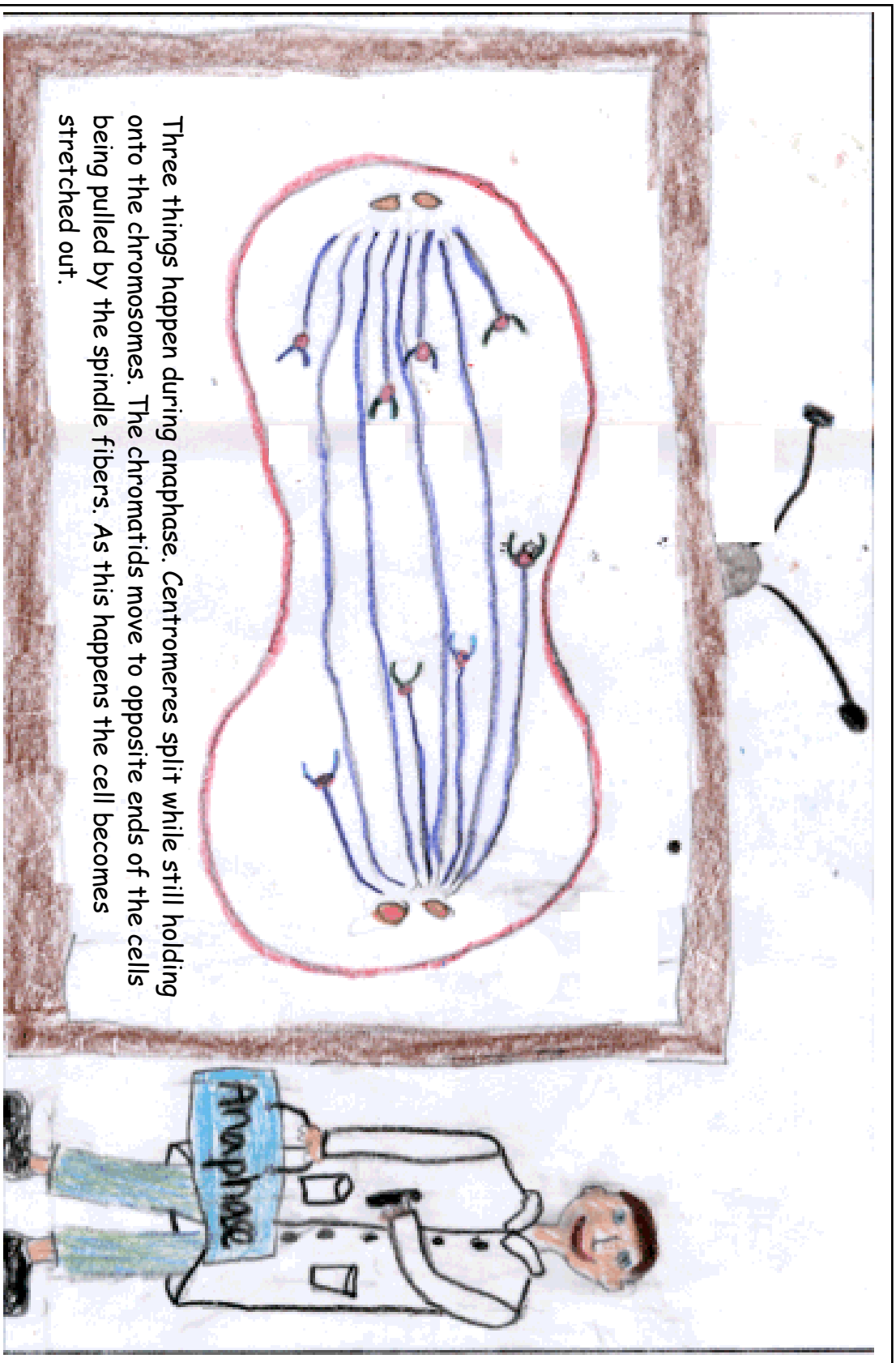




Prophase is the first stage of mitosis. During prophase, the chromatin condenses and forms chromosomes, the spindle fibers form between the centrioles, and the nuclear membrane breaks down.

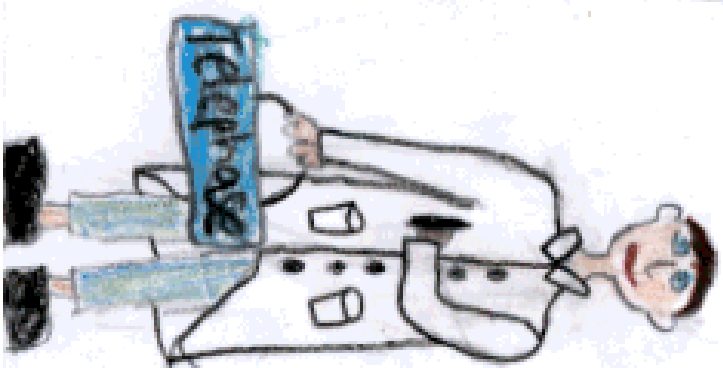
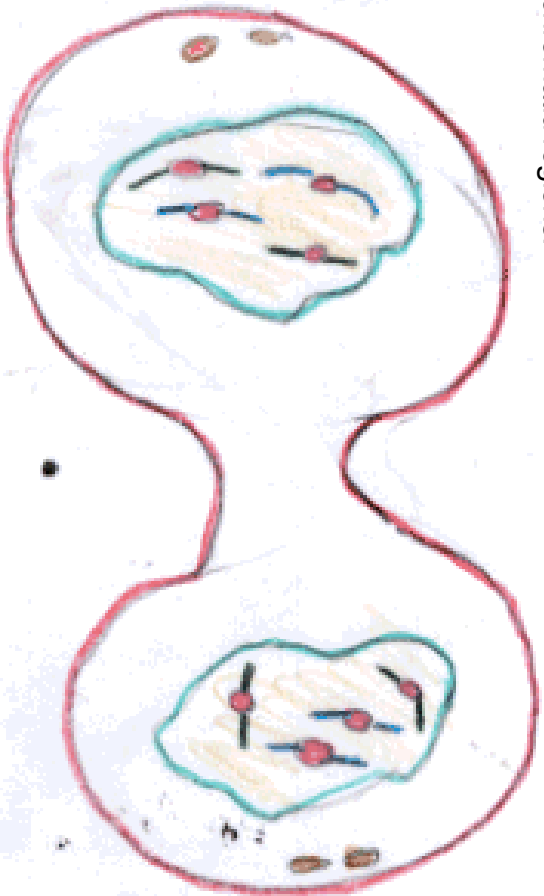
Metaphase starts when the chromosomes line up across the center of the cell. The chromosomes then attach to the spindle fibers at their centromeres which still hold them together.

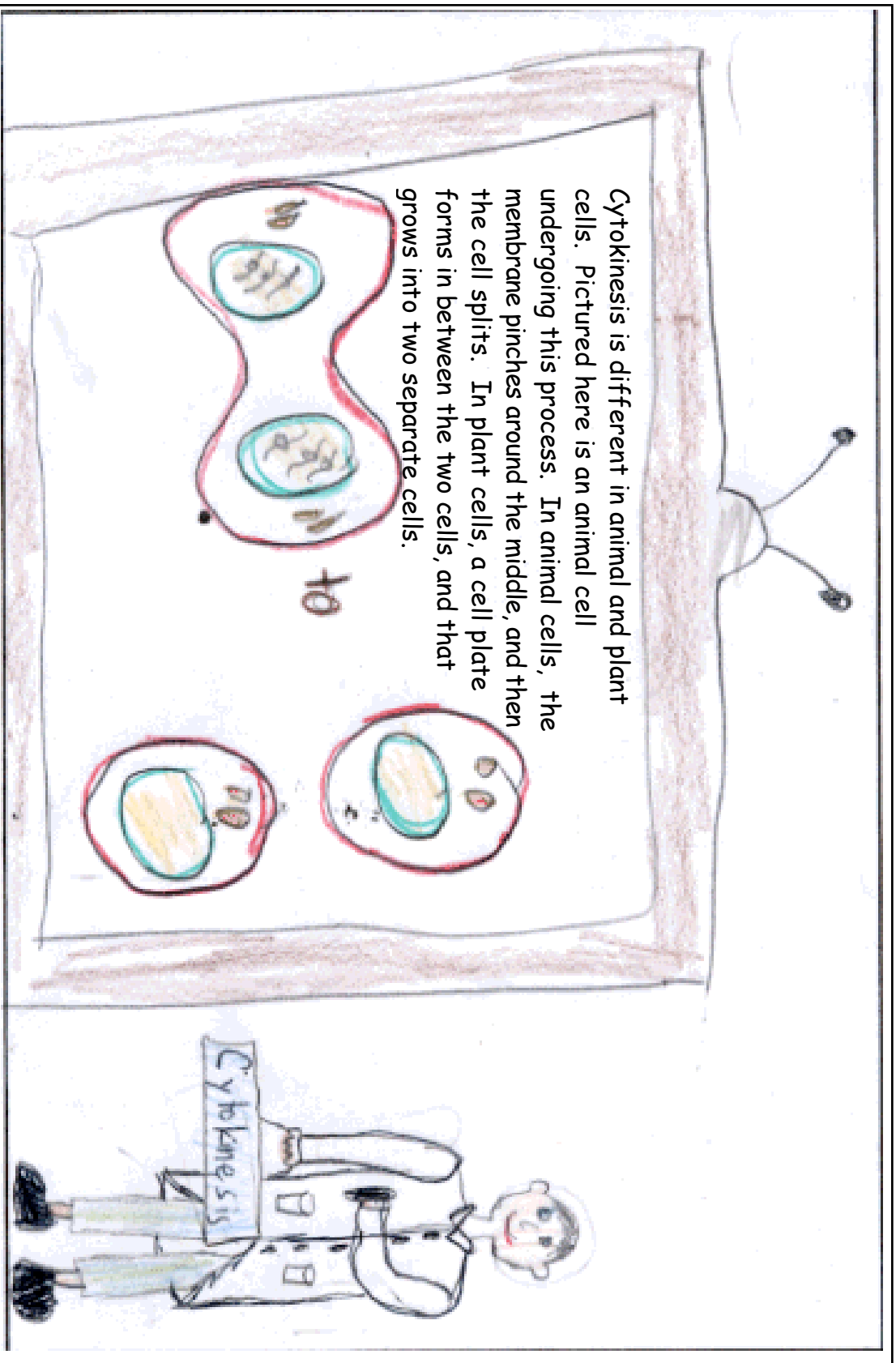




Three things happen during anaphase. Centromeres split while still holding onto the chromosomes. The chromatids move to opposite ends of the cells being pulled by the spindle fibers. As this happens the cell becomes stretched out.

Telephase starts when the chromatids stretch out and lose their rod like appearance. A nuclear membrane then forms around each of the chromatid regions.





Cytokinesis is different in animal and plant cells. Pictured here is an animal cell undergoing this process. In animal cells, the membrane pinches around the middle, and then the cell splits. In plant cells, a cell plate forms in between the two cells, and that grows into two separate cells.