The process of papermaking uses raw materials including water, energy, chemicals and wood chips (1), that contain cellulose. Cellulose is the fiber component of wood, and exists naturally in most plant life.

Wood fiber often comes from lumber mills to paper mills as chips, (4) or as logs, (5) which are debarked (6) and then sent into a digester. (7) Chips and chemicals go into a digester (8) which is a big pressure cooker. After cooking with chemicals and steam, the wood chips are separated into wood fiber and lignin, the chemical binding the cellulose together. Then, the mixture is blown out of the pressurized digester into a non-pressurized blow tank (9). Washers (10) clean the mixture by removing the cooking chemicals and lignin, turning it into pulp. The cooking chemicals and lignin, called black liquor, is pumped to evaporators (11), which remove water. The concentrated black liquor is pumped to a recovery boiler where (12) its bio-based content is burned to generate the majority of steam and electricity needed to power the facility. The organic material in the liquor forms and provides energy, while any inorganic material becomes a molten stream that is drained from the boiler, dissolved in water and prepared for reuse in the digester. Lime (13) is added to the causticizer (14) from a lime kiln (15), and the chemicals are pumped to a causticizer (16) to allow the solids to settle. Clean cooking chemicals are sent to the digester for re-use, and residuals are washed and sent to the lime kiln to be turned into lime.

The naturally brown pulp is made white through a bleaching process (16). Bleached paper is used for books and magazines, food packaging, tissues, and hundreds of other uses. Some unbleached pulp is used to make grocery bags, and corrugated shipping containers (cardboard boxes). The pulp fibers are then prepared for the paper machine in refiners (17). Recovered paper (18) is often used for additional fiber, or instead of wood fiber from trees. This fiber is pulped (19) and cleaned, (20) just like the fiber from the digester and the pulp (21) to ensure a uniform sheet of paper.

To make paper, a pulp mixture of 1 percent fiber and 99 percent water flows from the headbox (22) onto a moving former (23), a wire screen that drains some of the water into a wire pit (24). The sheet that is formed is carried into a press section (25) where more water is removed. The paper passes over dryers (26) enclosed in a hood (27). Some specialty papers get coated with liquid clay or chemicals in a coating machine (28) to improve the surface and printability of the paper.

The calender (29) smooths the paper, which is then wound on a roll (30). The roll is either cut into smaller rolls on a slitter (31) or made into sheets of paper on a sheeter (32). The finished product is then shipped to our customers around the world.
The production of most paper begins with virgin fiber or recovered fiber as the primary raw material. Virgin fiber comes from responsibly managed forests. That fiber is processed into pulp and made into paper, which is then transformed into everything from packaging to phone books, copier paper to coffee cups. That’s where you come in. At home, at the office or in your school, you can collect your used paper for recycling. Then contact us at (253) 288-4776 to pick up your used paper and deliver it to a recycling center, where it will be sorted, cleaned and processed. Once prepared, that paper is tied into large bales and transported to a paper mill where it can once again be made into paper for new uses. Because of you and nature, paper is one of the most sustainable, renewable and versatile products ever invented.

Do your part to help sustain our world for future generations.