Simple Machines

During this activity your students will construct a machine, made of simple machines, which will perform a specific task. They will also learn about the Queen Bee Mill which was located at Falls Park, Sioux Falls.

Citizens of Sioux Falls, including R.F. Pettigrew and others, realized that building a flour mill at the Falls of the Big Sioux River might provide a ready market for the region's wheat. Pettigrew convinced Colonel James H. Drake of St. Paul to build the mill. Pettigrew and a consortium purchased 40 acres of land for the site for $40,000 from W. W. Brooking. A New York investor, George Seney, traveled to Sioux Falls and decided to invest money for the mill.

In August, 1879 work began on the construction of the Queen Bee Mill. The mill was really a complex of buildings which included the mill structure, grain elevator, warehouse, cooper’s shop and railroad siding. The mill was designed by J. W. McKeen of Minneapolis, who supervised the construction of the buildings.

The frame elevator adjoining and connected to the mill was 50 feet by 142 feet, four stories in height, with a storage capacity of 100,000 bushels of wheat - 10,000 barrels. The nearby frame warehouse had a storage capacity of 10,000 flour barrels which were made in the cooper shop. The shop had room for 40 coopers to work. The mill was completed and commenced operation on October 25, 1881. Learn more about the mill and view additional photos at the Images of the Past site.

Activity:
- The following is a capstone activity that should be completed in conjunction with a unit on simple machines. The students should use three different types (more is fine) of simple machines, working together, to perform a specific task. Introduce the activity by visiting a local manufacturing plant that uses multiple machines to perform a task or by looking at the information about the Queen Bee Mill. The students will decide the task they would like their machine to perform. This project would work well as a group project or as an individual activity. Provide time to work on the project at school and at home. Provide time for each group to demonstrate their machine to the rest of the class.

Contact EdServices@sdpb.org for more information about SDPB’s educational resources.