With the expansion of Seattle city limits north to 145th Street in 1953 came the problem of how to provide classroom space for students living in the Maple Leaf neighborhood between Bothell Way and 15th Avenue NE, and NE 85th Street and NE 105th Street. That fall, almost 200 children from that area, called Victory Heights, were transported to University Heights in the University District.

Thus, in 1954, the district began looking for property in the neighborhood. After some difficulty in securing title, site preparation began in summer 1955. However, the installation of nine portables was postponed because of problems connecting to the Lake City Sewer District. In the meantime, a footbridge was constructed over Thornton Creek to provide access to children coming from the north.

When the school was not ready in September 1955, older children attended half-day sessions at Maple Leaf, while kindergartners delayed starting school. Finally, a month late, the school opened with 204 students in eight classroom portables. The school was officially named in honor of the Shoshone Indian woman who helped to guide the Lewis and Clark Expedition over a portion of their route to the Pacific Coast. It is one of three district schools honoring Native Americans (see Leschi and Sealth) and the only one named for a Native American woman.

Plans for a permanent building were completed but construction was delayed, this time because of difficulties vacating NE 96th Street. This problem was solved when a bypass road was built on the north side of the school site. When the new Sacajawea School opened in 1959, its attendance boundary was extended to 12th Avenue NE to bring in some students from Pinehurst and Olympic View, raising the total to 364. The building was constructed on two levels to take advantage of the sloping site.

In September 1961, two portables were added to handle increased
enrollment, which had passed the 500 mark. However, the student population declined over the next decade. By 1972–73, enrollment was 320 with only 40 children in the kindergarten. The addition of students of ethnic minorities “added new dimensions to the composition of the school.” That school year 15 percent of the student body was from minority groups, half from the neighborhood and half voluntary transfers from the Central Area. Portable buildings were no longer needed, and four classrooms became centers for individualized instruction in math and reading.

The physical education program at Sacajawea became a model for the city and the region, because the school was the first elementary building in the area with Southampton and Essex frames in the gym. This equipment, together with the assignment of a highly qualified PE specialist, provided improved instruction, which included a program of movement exploration.

Enrollment dropped to 204 in 1975–76 but rose to 250 the next year with the addition of special education classes from Pinehurst. In 1979, enrollment at Sacajawea was down to just 202 students while Sand Point had only 176. The schools were deemed reasonably close in distance, so the Sacajawea principal was assigned a dual-principalship.

Under the district’s desegregation plan, Sacajawea became a K–3 school in 1981–82, in a triad with Madrona (K, 4–6) and Rogers (K–3).

Sacajawea launched an artist-in-residence program in the late 1980s. This program has developed into an examination of art around the world, with an annual rotation to a new continent.

When Harry Nelson arrived as principal in the mid-1990s, the school adopted a committee system for determining how the annual budget should be spent, in hopes of finding innovative ways to attract new students. The various committees are composed of parents, faculty, and the principal.