This study aims to assess the distinctive characteristics of WWW-based learning environment through students' perceptions and observations. The study design included a total of seventeen 9th grade high school biology students in Ankara, Turkey, and lasted 15 hours. The study concluded that the material promoted a feeling of empowerment. The freedom of choice and individualized learning environment resulted in increased student motivation. Screen design, text size, graphics, videos and color used in the program were very convenient. The learners were navigating in the program according to their own learning pace and choice. Initial interest to the units did not effect their attitude toward WWW-based learning environment used during the experiment. Students' attitudes toward the units and the course did not change after the experiment due to the teacher effect. Learners suggested that WWW-based learning environment should be used together with traditional learning environment and with the teacher.