UNIVERSITY OF MINNESOTA
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Three Dimensional Dental Anatomy Software Program for Dentistry Students

Teaching Oral Anatomy using Digital Interactive Dental Models

Tooth Explorer™ is a three dimensional dental software program designed to teach oral anatomy in a highly efficient digital environment. This program provides dentistry students with an interactive, three-dimensional dental library of 32 individual adult teeth. Students are able to engage in self-paced learning by rotating and identifying significant features of individual, anatomically correct teeth. The 3D dental software program was created in response to student's frustrations visualizing three-dimensional teeth when working from two dimensional drawings. Tooth Explorer can also be used during dentistry lectures and demonstrations, providing all students with the opportunity to see and work firsthand with anatomical landmarks. Dentistry students can use the program outside of the laboratory setting to focus on individualized areas of weakness and improve their performance. This 3D dental software delivers a highly efficient teaching environment with motivational features that make the discipline fun to learn and engaging for students.

Oral Anatomy Software

Tooth Explorer is designed to provide students with their own 3D library of dentistry models. Standard multiple-choice evaluations are provided for the anterior teeth, molars, and premolars. Dentistry students can also identify different areas of dental anatomy by viewing specific tooth images. This interactive software eliminates the need for using extracted or synthetic teeth to teach dental anatomy, tooth position, and variations. Tooth Explorer also removes the dependence on many laboratory materials and saves time for both instructors and students. Instructors can add teaching plug-ins to the program. This feature would test the students? understanding of basic dental anatomy. A future version of the Tooth Explorer software will provide the addition of online functions. These features increase the program's efficiency by enabling students to share their assessment results, performance, and receive feedback from instructors. Other future software enhancements include: creating a second library of common variation on dental anatomy, highlighting features for each tooth surface, external anatomy of each tooth using MRI data, and extending the program content so it is applicable to graduate programs.

BENEFITS AND FEATURES OF TOOTH EXPLORER:

- Self-Paced Learning - Students are able to pace themselves and center their focus on areas of weakness.
- Engaging - Revolutionizes the traditional teaching method of oral anatomy by providing students with a hands-on interactive dental software program.
- Affordable - Less expensive than synthetic tooth models and tooth extracts.
- Robust - First teaching tool that offers digital three dimensional dental models, other teaching tools rely on two dimensional drawings.
- Advancing - Future version of Tooth Explorer software includes online functions.

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