



Prize Winner

Programming, Apps & Robotics Year 9-10

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Sci-Roots Written Report

My OSA submission is an iOS app called 'Sci-Roots'. It's an educational app aimed at school/university students designed to teach users the meanings of a variety of scientific root words, prefixes and suffixes.

I've made this because knowing the meanings of root words can help you work out the meaning of many new scientific words. For example, Bio means Life, and Logy means The study of, so Biology means The study of life (or living organisms). The app works similarly to Duolingo (a popular language learning app) in the sense that it splits a long list of root words into many lessons that each contain about 6 questions. Answering a question correctly increases the user's knowledge level for that word while incorrectly answering decreases it. The lesson main algorithm uses these knowledge levels to construct new lessons.

This submission is an upgraded version of my submission from 2022, which was a similar concept but on a much smaller scale with about 60 root words and in the form of a computer software. I decided to remake it as a full app with 120 words because I'd noticed the benefit of knowing these words on many occasions since making the first app.

My intention in remaking my project as a larger app was to make it publicly available and to gamify it by implementing new features like coins and streaks. The gamification makes the learning more enjoyable and increases the likelihood that users will keep using it and ultimately finish the course.

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Bibliography for root words

- Bastrop ISD (n.d.) Scientific Root Words, Prefixes, And Suffixes, BISDTX, accessed 10 June 2025. <https://www.bisdtx.org/cms/lib/TX02218757/Centricity/Domain/2450/Scientific%20Root%20Words.pdf>
- Biology Junction (n.d.) Scientific Root Words, Prefixes, And Suffixes, Biology Junction, accessed 10 June 2025. <https://biologyjunction.com/images/misc/Scientific-rootwords-prefixes-and-suffixes.pdf>