Fun cryptography app pleases students and teachers

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Up on Google Play this week is Cryptoy...something that you might want to check out if you or someone you know wishes entry into the world of cryptography via an educational and fun app. You learn more about ciphers and keys; you learn techniques, including their history, of Shift, Substitution, Vigenère and Enigma. You learn to create encrypted messages to share with friends.

Who created Cryptoy? Not one person but Science, Technology, Engineering and Mathematics (STEM) [students](#) sponsored by GCHQ, which stands for Government Communication Headquarters, the UK intelligence agency. The app was tested on versions 4.1.2 through 4.4.2 of Android and was trialled at a number of science fairs. The video shows how the app works, complete with letter sliders and bars showing original message and encrypted message. The BBC said the app marks the agency's first computer tablet app. The BBC said the students are three "industrial placement" students. Specifically, the students who designed the app were on an industrial-year placement at GCHQ. They created the app as part of a project to show encryption techniques at the Cheltenham Science Festival, and then the app was used at other outreach events. According to GCHQ, "The app was a hit, and GCHQ received interest from teachers who wanted to use it as a teaching aid. Therefore it was decided to make it publicly available."

The announcement from the agency said it was "critical that the UK builds a knowledge base of cyber security skills." The app was designed in such a way that it also offers an interactive experience, for students and their teachers, to explore [cryptography](#).

According to the BBC, a GCHQ spokesperson said the app was a "fun teaching [aid](#)" to help students ages 14 to 16 "studying at the Key Stage 4 level" to learn about code making and code breaking.(The National Curriculum is divided into four Key Stages that children are taken through during their school life. Key Stage 4 refers to the two years of school education when pupils are between 14 and 16.)

Robert Hannigan, GCHQ's director, said, "Building maths and cyber skills in the younger generation is essential for maintaining the [cyber security](#) of the UK and growing a vibrant digital economy."

Ever wondered how to send a secret message? Although Cryptoy is

mainly directed at Key Stage 4 student, the app can be used by anyone with an interest in learning about or teaching cryptography, said the agency.

"The Cryptoy app is currently available for download free-of-charge to Android tablets only," said the GCHQ. "It is hoped that an iOS version for iPads will be available in 2015."

  More information: — www.gchq.gov.uk/press_and_medi … oy-app-released.aspx

— play.google.com/store/apps/det … s?id=com.hmg.cryptoy

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