

**ZMATH 2016f.01196**

**Padula, Janice**

**Graphs and networks for years 7 to 10: reasons for and ways of using digital technologies to teach algebra and the standard normal curve.**

Aust. Math. Teach. 70, No. 3, 16-24 (2014).

Summary: If educators want to interest students in mathematics (and science), they must engage them in the lower forms of high school or even earlier. So, teachers should always consider a topic's ability to interest students in the early years of instruction in high school and its topicality. Networks have come into prominence recently with an episode of Four Corners on ABC and the popular film, The Social Network so discussion of the program or the film and even a viewing of one or two scenes, along with discussion of aspects of social networking such as Facebook and Twitter, are a good way to introduce the topic. Graphs are representations of networks and it makes sense to teach them together. Also, teaching them together can be an interesting example of applied mathematics and how mathematicians and scientists work together collaboratively when applying mathematics and developing a new scientific theory. It is a good way of teaching mathematics in context. The topic is also relevant to the new Australian curriculum re graphs and graph theory and it provides an excellent opportunity to "embed digital technologies so that they are not seen as optional tools". This article shows how graphs and networks can be introduced in Years 7 to 10 in a variety of ways depending on: students' interests, their preoccupation with the Internet, game playing and social networking sites such as Facebook, and teachers' co-operation with physics, science, or even, drama teachers. It shows how a good documentary on the subject with an intriguing title – "How Kevin Bacon Cured Cancer" – can also be extremely useful. (ERIC)

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*Keywords:* graphs; networks; real-life problems