

# JuLe-Tagung in Berlin 2019

## Biologie Workshop in englischer Sprache

**WB\_03**

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Mobile phone microscopy:  
Turning mobile phones into  
microscopes

Most laboratory equipment required for science classes can be bulky, expensive, and require specialist technicians to set-up and maintain. These include specialist microscopy, spectroscopy and imaging systems for fundamental biology and physics classes. We have previously shown that mobile telephone based microscopy/spectroscopy/imaging systems can potentially be used for science studies with students. As almost everyone has a mobile phone, almost any interested person can learn aspects of fundamental science without the restrictions imposed by laboratory equipment. Also this tends to raise the engagement level of the students as they are invested in the equipment being used in their studies.

In this workshop, we will construct and use mobile phone based microscopes to study common microscopic samples used in science classes. Also, examples of how mobile phones can be used as spectrometers and for imaging in shadowgraphy systems will be presented at the end.