

(vidumath approach - first model, 30/06/2016)

Goals of the vidumath project

Mathematics education has received a lot of attention across Europe in recent years by looking into new teaching methods that challenge, especially, the lack of motivation for learning.

Vidumath is contributing to this discussion with innovative teaching methods that are taken from the ideas within the rich technology ecosystem that surrounds video production. Today video is a very common form of communication that most young people enjoy. Video is a very motivating tool and brings in many different facets compared to a conventional textbook. The moving image can help to illustrate more complex structures and can more easily connect with the real world.

The core idea of vidumath is that children themselves become the active part of the video production process. In this process, using systematic but creative thinking, mathematical content will be re-worked and visualised. Mathematics is a science that is defined by rules, patterns, abstractions, and proofs that can be applied in a large number of settings including ones that are practical, philosophical or playful. In this approach:

- Children will playfully discover learning for mathematics
- Children will document this process themselves on video
- Other children will be more engaged as learners and viewers of the videos
- Children will be given ample opportunities for self-reflection from this, 'learning-by-teaching' approach
- Teachers will support the children appropriately; in particular provide ideas and examples
- The ideas will be developed further with other EU teachers

Teachers will be the interface to reach the learners and the project will take great care to address and include them appropriately.

Getting into vidumath

Although classroom time and resources are limited, vidumath can help teachers as difficult Maths concepts will be more easily absorbed. vidumath will provide task sheets, video examples and video tutorials to give a clear picture of how you can use the project inside and outside the classroom.

It is important to start with very simple exercises, especially when there is little experience with video education. This can include simple photos or video clips connected with maths content. Basic exercises can be implemented in one class lesson, or they can be a first homework, especially for older students who can easily work themselves. [You can see our Matrix document for examples.](#)

The key idea is to use video as a help to support math learning – the quality of the video is not important, they don't need to produce professionally-looking videos, as it is the process that matters. Available technology which records video such as a smart phone or tablets, camcorder, a digital camera with a video function can be used. There is no need to buy technology especially for the project.

Assessment, privacy and copyright

vidumath is based on the teamwork of the students. Media work is teamwork and collaborating leads to important discussions about the approach to the math content and also to a reflection on the images created.

The assessment of video maths projects will need to look into these project processes. It is not enough to just grade a final video outcome. Students need to present a plan / sketch / storyboard of what they plan to do before start recording and they will need to report about the challenges they have facing during the whole project.

Before any video projects start teachers have to get a written permission that children are allowed to be seen and / or heard, in a video. If this is an issue there are ways around by concentrating on just showing the hands or only objects and not including any sound. Many examples of such an approach can be seen with the vidumath pilot videos.

And finally: Copyright needs to be observed. Commercial images, video clips or music which is copied or downloaded cannot be included in the student's work.