Lesson plan session 2

Mathematical problem solving and iMovie

General aspects:

1. *Learning Goals:*

Design, implement, film and cut your own math problems.

2. *General strategy:*

Working in groups or individually in making high-quality educational videos.
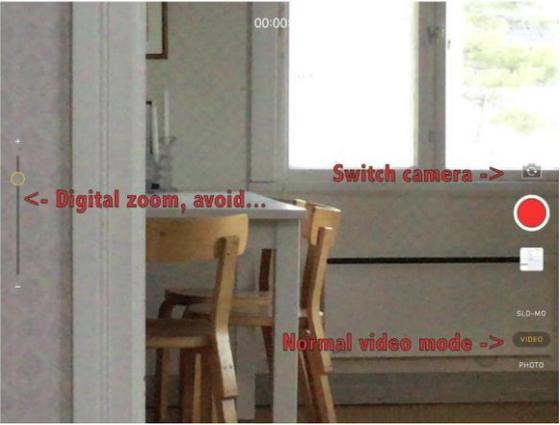
3. *Structure*

Introduction of using iMovie. Practice using iMovie and make your first video. Making your own mathematical problem solving video.

4. *Resources:*

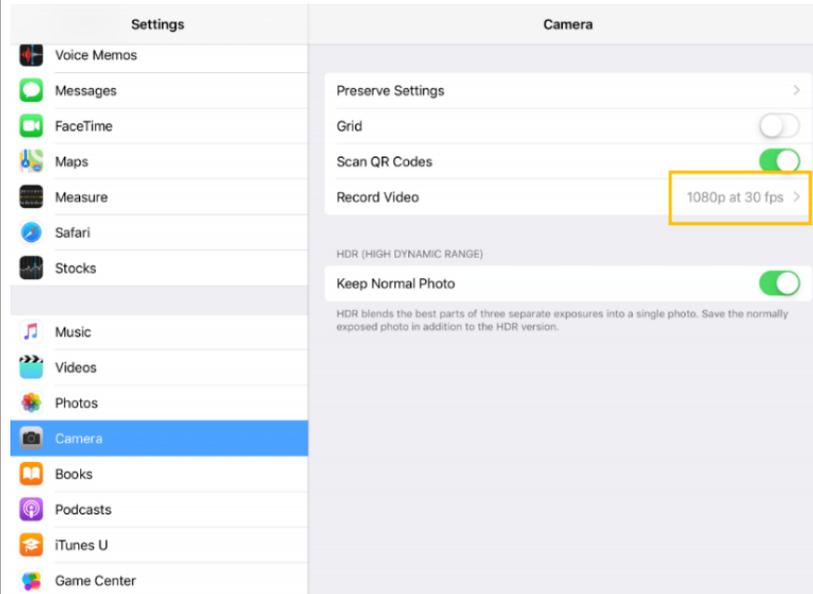PowerPoint presentation and example video.

Development of the Lesson:

Task and Learning Activities	Expected Duration	Class Activity (potential difficulties)	Instructor Support	Goal and Assessment
Introduction	5 min	Ask if anyone knows the program, and if they do, what have they been working with?		*Goal:* As teacher to know the level among the students *Assessment:* Class response
iPad Before making the video, you should know how to record a video with using an iPad or other device. You can also take pictures and use them in your video.	10 min		If you are going to edit, start recording several second before action begins. Tell participants that the iMovie is just for editing videos not to film.	

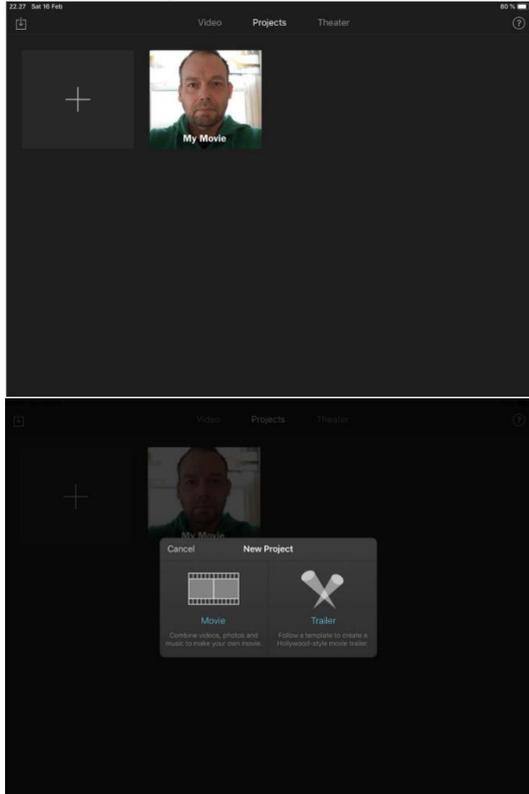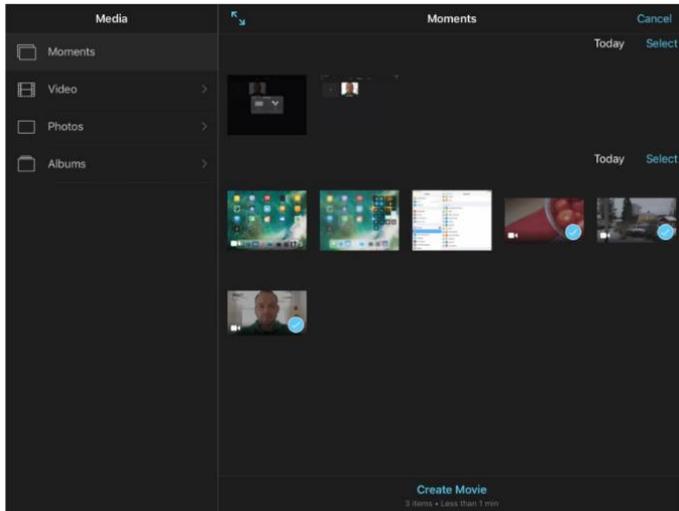| Video quality	10 min			
Before you start to record the video. You can affect to the quality by changing the frames per minute from the settings. Choose the 30 fpm. When the video is done and you want to download it, for example to Youtube, you can choose what the resolution of the video is.				

iMovie instructions	60 min			*Goal: Learn to use iMovie.*
- Downloading the video to iMovie			Choose Movie not Trailer.	
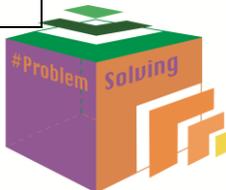
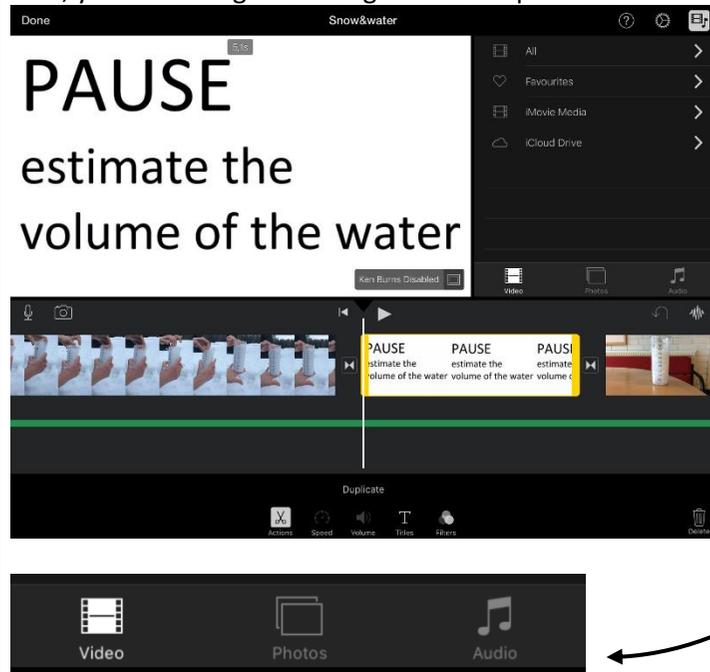| - Choosing the videos and pictures you want to use | | | You can add more videos or pictures later.

Clips are automatically placed in order. You can change the order by dragging the object. | |
| - Cutting the movie and detaching the sound from the video | | | To split the video, choose the video and point from the video you want to split. Use the action tool.

From the same tool, you can detach the audio from the video. | |

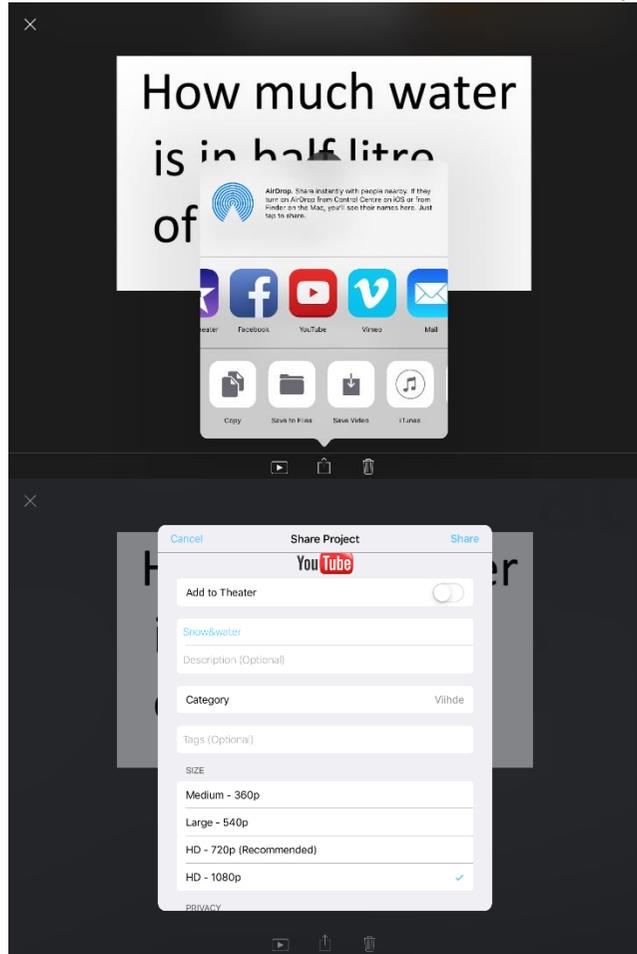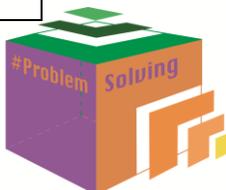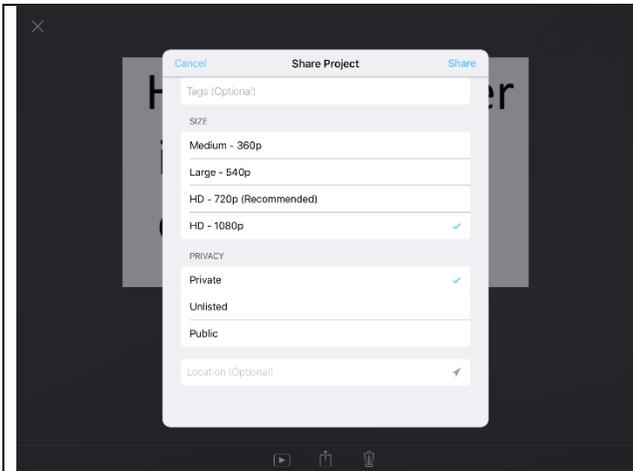|				Ken Burns is automatically enabled in the picture. If you don't want that the picture moves, you should disable it. You can also add audio.	
- Adding text and sound You can only add titles to the videos with iMovie. If you want to add question or other text to the video, you have to add it as a picture. From the yellow bars, you can change how long time is the picture shown. 					
Task: Your first movie Record your first video using iPad. Import the video to iMovie. Use tools to practice 　- Split the video 　- Detach the audio from the video 　- Add text using a picture 　- Add audio 　- Test what else you can do with iMovie	45 min				*Goal: Practice to make movies and build your confidence in using iMovie.*
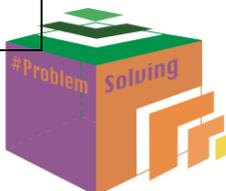
Downloading the video to Youtube

You can download the video to Youtube directly from iMovie.

Choose the highest quality for the video.

			You have to have an existing Youtube account to do this. You can also choose if the video is private or public.	
Problem solving video Design and plan what kind of problem solving video you want to make. - What is your aim? - Keep in mind, what is the target audience. - How would you execute it? - Peer reviewing is a good way to get perspective - How would you like to improve it?	60-120min		Provide creative kits for participants to use in videos.	*Goal: Produce high-quality videos that you can use in teaching.*