

TITLE: I'm developing my own mobile app

LEARNING SCENARIO	
School:	Duration (minutes): 180
Teacher:	Students age: 15

Essential Idea:	I'm developing my own mobile app
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Topics:

- Pupils have a broad understanding of programming, programs and their role in the modern society. In addition, they understand the importance of programming in influencing and expressing themselves.

Aims:

- Pupils design and implement various automation solutions as well as analyze automation solutions for various hardware and software applications.
- Pupils will explore opportunities to develop mobile operating systems via practical examples.

Outcomes:

- Pupils become familiar with blockchain technology and its applications, they understand the working principles of solutions that simulate block chains and they get acquainted with simple cryptographic principles.
- Pupils get familiar with mobile devices and their operating systems working principles.

Work forms:

- individual work
- work in pairs
- group work

Methods:

- presentation
- discussion

- interactive exercise

ARTICULATION

Course of action (duration, minutes)

INTRODUCTION

Teacher starts discussion with pupils:

Today everyone has a smartphone (or two), and each of these smartphones has a couple dozen applications.

If you have an iPhone then you can use the App Store to look for new apps, out of 2,2 million apps in the store.

If you have a smartphone with Android OS you can do the same thing on the Play Store, and choose from 2,8 million apps.

But how can you develop your own app?

MAIN PART

Topics for discussion:

In order to do that you don't just need to know how to code, but you also need to think of a couple of more steps. Some of them are:

1. Sketch an idea for your app

The first step is to decide what your app should do, and then write that down. Try to make your idea as simple as possible, so that anybody who reads it instantly understand what they could use your app for.

Think about what features your app has to have, and which features would be nice to have. Ususally it's a good idea to make the first version as simple as possible, and then later upgrade it.

Think about whethere something like your app is already available on the market, and why people would want your app?

2. Explore the market

Maybe you have a great idea, but an app like the one you want to develop already exists? What you need to know is what the users will want, how much they would pay for that, and is there already something like that on the market.

Even if an app like yours already exists, maybe you can develop a new app that will be better than any of the currently available ones?

Maybe your app will have a unique feature that none of the competing apps have?

3. Draw a user interface sketch

You can do this in a simple program like MS Paint, or you can use a specialized program like Balsamiq.

The idea is just to sketch what the interface of your app will look like. Think about how to make it easy to use, as well as how different parts of the app will make sense together.

You can also think about the colors which would make your app easier to use.

4. Make the graphical elements

At this stage it would be really useful if you know how to work in a program like Photoshop, but it's not mandatory.

You can also design the graphical elements using an existing template. Some of the more popular ones are NOW, TETHR, Start UI kit, iOS iPhone GUI, Stitch, Phoenix etc. You can use those to build the graphical elements you will later compose into a sketch you've previously made.

5. Make a website for your app

Every app needs to have good marketing. You can build a nice website to promote your app using one of the more popular free tools like Wordpress, Site Builder, or Wix. Each of them has dozens of templates to choose from that were made specifically to promote apps.

Just choose the one you like and start building.

6. Program

Now we come to the hard part. To make an app you'll have to learn how to program in some of the programming interfaces commonly used to build apps. You'll also need to build two parts of your app:

- **Front end:** the part of the app that the users will see, meaning the whole user interface with all the graphical elements and the connections between them
- **Back end:** the part of the app the users will not see, where you will store your database, files etc.

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n order to really be able to build an app you should go to Youtube and watch some of the beginner tutorials for some programming interfaces.

If you want to make an app for an Android phone you'll need to learn how to work in Android Studio, and if you're building an app for iOS you'll need to learn how to code in Swift.

After all of this you just need to publish your app in App Store or the Play Store, and of course promote it to everyone you know.

EXERCISE

Pupils work in small groups.

Each group will design, develop and present their own idea about a new mobile app through the above six phases.

CONCLUSION

Pupils and teacher discuss and evaluate the presented solutions.

Methods

presentation
discussion
work on the text
graphic work
interactive exercise /simulation on the computer

Work forms

interview
demonstration
role playing

individual work
work in pairs
group work
frontal work

Material:

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Literature

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PERSONAL OBSERVATIONS, COMMENTS AND NOTES

