

Learning Design for: Despoina Pavlidou: Hour of Code

CONTEXT

Topic: Teaching Computational thinking

Total learning time: 175 min.

Number of students: 14

Description: We have to incorporate some form of computational thinking and bring together the subjects of EFL and ICT at school.

AIMS

CLIL is a trend in education. How can we approach a discipline in a language other than the mother tongue of our students? Luckily, both disciplines, EFL and ICT are alike in terminology. We will employ the one to aid the other, both ways!

OUTCOMES

Knowledge: They will use grammar rules to construct scenarios.

Analysis: They will analyze the task before them and form teams to deal with each component

Comprehension: ICT is a broad field of investigation but they get to use a limited set of tools. It's important to choose the most appropriate

Synthesis: They will move to the creation of a project. Each project will complement the other.

Psychomotor skills: They will move around and use various ways to approach their goal. One of the ways is to play and interact.

Evaluation: There will be peer evaluation and further revising if necessary.

Affective learning outcomes: We will consider the project activities successful when all teams complete each task and all view each other's work.

TEACHING-LEARNING ACTIVITIES

Knowledge - Analysis

Read Watch Listen // 15 minutes // 14 students // Tutor is available

Students are presented with a situation based on an existing, real-life problem. They will be presented with aspects of the problem from various sources. They have to understand the use, advantages and risks of on-line shopping.



Discuss // 15 minutes // 14 students // Tutor is available

In order to solve the problem effectively, they need to think about it from various angles. We decide on a series of steps that lead to effective solutions. Then they will form groups. Each group focuses on a single aspect.

Collaborate // 15 minutes // 2 students // Tutor is not available

Groups get together and agree on the tasks they have to complete. All the info they need, the way they will put their ideas into practice and present them.

We will be using a group of students 14 year old and use the language lab. 2 teachers will co-ordinate all stages of the project.

Comprehension-Synthesis-Psychomotor skills

Investigate // 15 minutes // 2 students // Tutor is available

Many sites offer on-line transactions. Some involve shopping goods, services or even gaming. Students should present at least a site offering such transactions.

Produce // 20 minutes // 2 students // Tutor is available

They will produce a short presentation in PowToon to attract customers. In doing so, they will mimic ads of course.

Practice // 15 minutes // 2 students // Tutor is available

Now, they will try to interact with each seller and agree on safety issues and how these can be achieved. We'll be using some strategies from the unplugged shows to clarify keys and safety.

Students must become aware of their role in the world of consumerism. The technics employed and the effective ways to protect themselves.

Evaluation-Affective learning outcomes

Discuss // 10 minutes // 14 students // Tutor is available

We will start the session by suggesting them to behave like entrepreneurs this time. Our aim is to point out the necessity of digital literacy in the future.



Investigate // 15 minutes // 2 students // Tutor is not available

They will spend a brief time looking into the world of socioeconomics. Which companies make a lot of money and the importance of actually catering for other people's needs? (Microsoft/Google...) So, why not create their own company...

Collaborate // 10 minutes // 2 students // Tutor is not available

Each group decides on the type of company they would like to set up. Their products, services, staff, advertisement and talk about the importance of branding and labels.

Students will swiftly move on to a new way of thinking. The importance of computational thinking and problem solving.

Psychomotor skills, production and outcomes

Read Watch Listen // 5 minutes // 2 students // Tutor is not available

They have a limited time to look up the meaning of words like: marketing, management, copyright.

Collaborate // 5 minutes // 2 students // Tutor is not available

They need to quickly come up with an idea for an app that their classmates, friends or family will use. Their idea must be simple, effective and marketable.

Produce // 35 minutes // 2 students // Tutor is available

Now, it's time to actually try creating their first app. Both teachers will be aiding here the teams. Any tool can be used. I'd rather we do not all use the same.

The app creating tools need to vary. This will give each team the opportunity to talk about the advantages and disadvantages. It will also clarify concepts like ease of use, adaptability, aesthetics...

Evaluation

Read Watch Listen // 10 minutes // 2 students // Tutor is available

Let's see what apps the teams have come up with and evaluate them. We must set up our standards.

Practice // 10 minutes // 2 students // Tutor is available



Let's use the apps, make suggestions to the makers and swap ideas.

Our students have started their activity as consumers but they will finish it as bussiness people who understand basic concepts and ideas. That's what effective teaching should be about.

[View this lesson plan online.](#)

This lesson plan was created as part of the online course [‘How to Teach Computing: An Introduction to Concepts, Tools and Resources for Secondary Teachers’](#), funding for which was provided by the Grand Coalition for Digital Jobs.



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