E-Facilitators

Codinc curriculum

CodeMob: E-Facilitators Codinc currículum.
October 2017. http://codemob.eu/. Authors:

Co-funded by the
Erasmus+ Programme
of the European Union

This publication has been co-funded by the European Commission's Ersamus+ Programme.

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Índex de continguts

Learning Design for: CODEmob - Introduction

Context

Topic: Web technologies
Total learning time: 45
Number of students: 8 - 20
Description: In this lesson learners will learn how WWW works and get some basic information about Web technologies - Servers, protocol, domain, www address, basic World Wide Web terminology- Learners learn : What is hypertext markup language, how can we use html, structure of web pages using markup

Aims

Learners are getting familiar with website layout definition (website components), different web languages (differences between programing languages, markup languages and style languages)In this lesson learners will learn how WWW works and get some basic information about Web technologies - Servers, protocol, domain, www address, basic World Wide Web terminology- Learners learn : What is hypertext markup language, how can we use html, structure of web pages using markup

Outcomes

Define (Knowledge): Basic web technologies.
Identify (Knowledge): Differences - between web languages
Define (Knowledge): Basic World Wide Web terminology.
Identify (Knowledge): Online threats
Name (Knowledge): differences between programing languages, markup languages and style languages.
Define (Knowledge): Website layout.
Identify (Knowledge): HTML code
Name (Knowledge):

Teaching-Learning activities

1. In this lesson learners will learn how WWW works and get some basic information about Web technologies - Servers, protocol, domain, www addres, basic World Wide

Web terminology- Learners learn : What is hypertext markup language, how can we use html, structure of web pages using markup

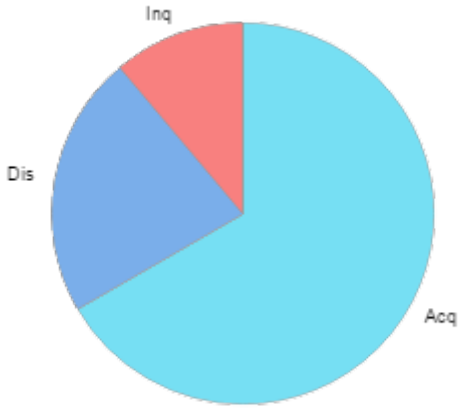
Read Watch Listen 30 minutes 24 students Tutor is available
Basic information about Web technologies - Servers, protocol, domain, www addres, basic World Wide Web Learners learn : What is hypertext markup language, how can we use html, structure of web pages using markup

Investigate 5 minutes 24 students Tutor is available
Search for your favourite web portal

Investigate 5 minutes 24 students Tutor is available
In browser use right click and open "View page source" - use "find" to search for document "title".

Discuss 10 minutes 24 students Tutor is available
Discuss what do you like about it.

- Information and data literacy - (DigComp 2.0 - 1.1 Browsing, searching and filtering data, information and digital content)



Learning Design for: CODEmob - Algorithmics

Context

Topic: Algorithmics
Total learning time: 90
Number of students: 8 - 20
Description: Introduction to algorithmics using online tools (Mind Mapping tools)

Aims

Learners will learn what is algorithm, how to define instructions, inputs, outputs. Learners learn how to use MindMup tool for making step-by-step planing (making instructions)

Outcomes

Clarify (Comprehension): (web) project ideas.
Estimate (Comprehension): the time for project.
Define (Knowledge): project needs.
Explain (Comprehension): project workflow.

Teaching-Learning activities

1. Step-by-step instructions - In this lesson learners will learn what is algorithm, how to define instructions, inputs, outputs

Read Watch Listen ***10 minutes*** ***24 students*** ***Tutor is available***
What is algorithm, how to define instructions, inputs, outputs.

Practice ***20 minutes*** ***24 students*** ***Tutor is available***
Make a step by step instructions for website (from input to output)
Discuss ***15 minutes*** ***students*** ***Tutor is available***
Present task results.

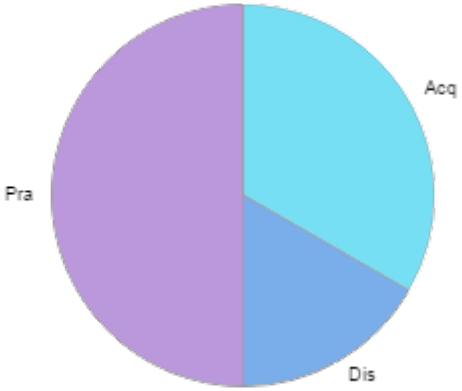
1. Information and data literacy - (DigComp 1.2 Evaluating data, information and digital content)

Step-by-step instructions, Mind mapping - In this lesson learners will learn what is algorithm, how to define instructions, inputs, outputs
Read Watch Listen *20 minutes* *24 students* *Tutor is available*

Learners learn how to use MindMup tool for making step-by-step planing (making instructions)

Practice 25 minutes 24 students Tutor is available
Using MindMup tool create clear diagram for web project. Discuss about presented projects

1. Information and data literacy - (DigComp 1.2 Evaluating data, information and digital content)



Learning Design for: CODEmob - Introduction to HTML

Context

Topic: HTML - HyperText Markup Language
Total learning time: 180
Number of students: 8 - 20
Description: learners will learn how to create html file, basic HTML tags, HTML syntax, using html editor, creating and using basic html tags (body,paragraph,head,title...) using links in html, inserting pictures in html, using comments, previewing html document in browser

Aims

In this lesson learners will learn how and when to use HTML tags, root of HTML document, document type,hyperlink,clickable button,section,footer,headings,paragraph, Learners will learn how to use html syntax - start tag, attribute, value, content, end tag. Learners will get familiar with types of html editors (online and offline), how to editi, modify and run HTML files. Working with tags: <!DOCTYPE> , <a>, <body>, <button>, , <embed>, <footer>, <h1> to <h6>, <head>, <header>, <html>, <iframe>,<input> , <img>, <link>, <p>, <script> Learners will learn how and when to use HTML elements - Iframe, working with ID , url, src

Outcomes

Define (Knowledge): basic HTML tags.
Reproduce (Knowledge): basic html structure.
List component parts of (Analysis): parts of html code.

Recognise (Knowledge): working HTML code.
Clarify (Comprehension): html structure.
Describe reasons for (Comprehension): reasons for using editors.
Specify (Knowledge): basic html elements
Produce (Application): working html document.
Describe reasons for (Comprehension): using inline frames.
Specify (Knowledge): url and src elements.
Produce (Application): working html document.. Identify error in Html.

Teaching-Learning activities

1. Basic markup tags, HTML syntax,HTML elements, Editors

Read Watch Listen 20 minutes 24 students Tutor is available
In this lesson learners will learn how and when to use HTML tags, root of HTML document, document type,hyperlink,clickable button,section,footer,headings,paragraph.

Produce 25 minutes 24 students Tutor is available
Using MindMup tool create clear diagram of web page with HTML syntax.

1. Information and data literacy - (DigComp 1.3 Managing data, information and digital content)

2. Basic markup tags, HTML syntax,HTML elements, Editors

Read Watch Listen 20 minutes 24 students Tutor is available
Learners will learn how to use html syntax - start tag, attribute, value, content, end tag. Learners will get familiar with types of html editors (online and offline), how to editi, modify and run HTML files.

Produce 25 minutes 24 students Tutor is available
Using Notepad ++ (other HTML editor) create simple web page with: title, headings, two and paragraphs.

1. Information and data literacy - (DigComp 1.3 Managing data, information and digital content)

3. Basic markup tags, HTML syntax,HTML elements, Editors

Read Watch Listen 20 minutes 24 students Tutor is available
Working with tags: <!DOCTYPE> , <a>, <body>, <button>, , <embed>, <footer>, <h1> to <h6>, <head>, <header>, <html>, <iframe>,<input> , <img>, <link>, <p>, <script> Learners will learn how and when to use HTML elements - Iframe, working with ID , url, src

Produce 25 minutes 24 students Tutor is available
Using previous HTML document add: image and inline frame.

1. Information and data literacy - (DigComp 1.3 Managing data, information and digital content)

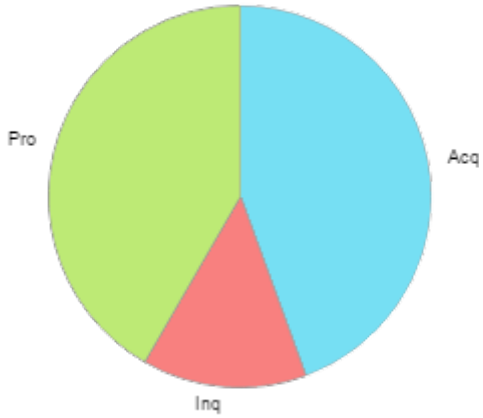
4. Basic markup tags, HTML syntax,HTML elements, Editors

Read Watch Listen 20 minutes 24 students Tutor is available
Working with tags: <!DOCTYPE> , <a>, <body>, <button>, , <embed>, <footer>, <h1> to <h6>, <head>, <header>, <html>, <iframe>,<input> , <img>,

<link>, <p>, <script> Learners will learn how and when to use HTML elements - Iframe, working with ID , url, src

Investigate ***25 minutes*** ***24 students*** ***Tutor is available***
Try to fix HTML code (provided by facilitator)

1. Information and data literacy - (DigComp 1.3 Managing data, information and digital content)



Learning Design for: CODEmob - Introduction to CSS

Context

Topic: Introduction to CSS - Cascading Style Sheets
Total learning time: 180
Number of students: 8 - 20
Description: In this lesson learners will learn what is cascading style sheets and why to use it. Learners learn how CSS is working and rules for using style sheets . Selector, Declaration, Property, Value.

Aims

Learners will learn how to apply CSS style inline, HTML document and using external .css document. In this lesson learners will learn what is selector and how to work with selectors id.

Outcomes

Describe reasons for(Comprehension): using forms.
Name (Knowledge): submit purpose (Information flow) recognise potential security threats.
Demonstrate(Application): advantages of responsive design.

Teaching-Learning activities

1. Stands for Cascading Style Sheets - CSS syntax, Adding style, CSS Selectors

Read Watch Listen 20 minutes 24 students Tutor is available
In this lesson learners will learn what is cascading style sheets and why to use it. Learners learn how CSS is working and rules for using style sheets

Investigate 10 minutes 24 students Tutor is available
In browser use right click and open "View page source" - use "find" to search for document "style type="text/css". (use some popular web pages for this task)

Produce 15 minutes 24 students Tutor is available
Create CSS document using html editor (Notepad++) and linking with HTML doc.

3. Digital content creation - (DigComp 3.1 Developing digital content)

2. Stands for Cascading Style Sheets - CSS syntax, Adding style, CSS Selectors

Read Watch Listen 15 minutes students Tutor is available
Selector, Declaration, Property, Value. Learners will learn how to apply CSS style inline, HTML document and using external .css document. In this lesson learners will learn what is selector and how to work with selectors id.

Practice 15 minutes 24 students Tutor is available
In HTML document apply CSS by using ilnile CSS code - change headings color and font size.

Practice 15 minutes 24 students Tutor is available
In html document define paragraph element by adding unique id. Us external css file and change color and font size of paragraph by using ID name.

3. Digital content creation - (DigComp 3.1 Developing digital content)

3. CSS Forms, Image Gallery

Read Watch Listen 25 minutes 24 students Tutor is available
Learners will learn how to create input forms using CSS.

Practice 20 minutes 24 students Tutor is available
Using CSS in Html document create simple input form: First Name, Last Name,Age. - arrange colors and padding using inline style.

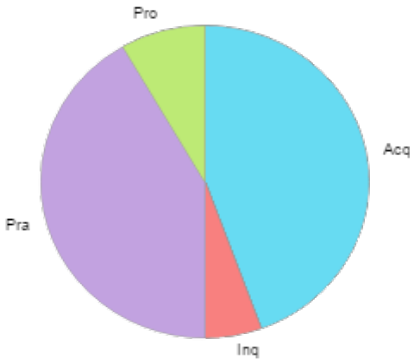
3. Digital content creation - (DigComp 3.1 Developing digital content)

4. CSS Forms, Image Gallery

Read Watch Listen 20 minutes 24 students Tutor is available
Learners learn how to make simple image gallery and apply .responsive design element.

Practice 25 minutes 24 students Tutor is available
Using W3Schools (Example area) try using responsive image gallerys - http://www.w3schools.com/css/tryit.asp?filename=trycss_image_gallery_responsive add your photos and save galleri on Google Drive

3. Digital content creation - (DigComp 3.1 Developing digital content)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Learning Design for: CODEmob - Introduction to JavaScript

Context

Topic: Introduction to JavaScript programming language
Total learning time: 540 min
Number of students: 8 - 20
Description: Introduction to JavaScript programming language,JS syntax, creating external JS file, JS scripts in HTML document, JS functions, using comments, JavaScript events, JavaScript variables, linking JS document and HTML,

Aims

Learners will learn difference between static and dynamic programing languages. In this lesson learners will learn how to write "instructions" for JavaScript. Learners learn how to use JS : script type (Html) , <head> or <body> and external document. Learning storing data values - Variables in Javascript. Learners learn how to declar (Create) JavaScript variables. Learners will learn how to use JS code, In HTML, External JavaScript . Learners learn how to use comments in JS. Learners will learn how to use loops, types of loops : for, for/in, while,do/while. Learners will learn how to use aritmetic operators in js. code: Addition, Subtraction, Multiplication, Division, Modulus, Increment, Decrement. In this lesson learners will learn basic javascript functions. How function is defined (keyword,name,parentheses). Learners will be introduced how to use events that occur when the user or the browser interact on page: onclick, onmouseover, onmouseout, onkeydown, onload. Learners will be introduced to JS. data type: Strings (character strings), numbers (Integer and floating-point numbers) , booleans. String methods: search(), valueOf(), search(), match(), replace(). Learners will learn how/why to activate and use debuggers in editor and web browser. Learners will get familiar with content management system, commonly used cms,benefits of cms - easy to use,multiple users... Learners learn : what is a website template, when not to use web template, what does it mean free templates? Learners learn : what is a website template, when not to use web template, what does it mean free templates? Learners will be introduced to online platforms and mobile apps for learning CSS. Learners will be introduced to online platforms and mobile apps for learning JavaScript, CSS and HTML.

Outcomes

Define (Knowledge): programming language.
Identify (Knowledge): JS code.
Name (Knowledge): difference between programing and markup language.
Recognise (Knowledge): working JS code.
Clarify (Comprehension): JS basic structure.
Name (Knowledge): JavaScript extension.

Name (Knowledge): difference between inline and external JS code.
Identify (Knowledge): benefits of using mobile app for learning.
Find out/discover (Knowledge): types, methods and usage of CMS systems

Teaching-Learning activities

1. Dynamic programming languag, JavaScript syntax, JavaScript Where To

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will learn difference between static and dynamic programing languages. In this lesson learners will learn how to write "instructions" for JavaScript. Learners learn how to use JS : script type (Html) , <head> or <body> and external document.

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
In browser use right click and open "View page source" - use "find" to search for "type="text/javascript". Create JS document using html editor (Notepad++) Create an alert message box.

3. Digital content creation - (DigComp 3.4 Programming)

2. JavaScript variables,statements

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learning storing data values - Variables in Javascript. Learners learn how to declar (Create) JavaScript variables. Learners will learn how to use JS code, In HTML, External JavaScript . Learners learn how to use comments in JS.

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
Using W3Schools (Example area) try using JS functionos (HTML line and External JS. doc)

3. Digital content creation - (DigComp 3.4 Programming)

3. JavaScript variables,statements

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learning storing data values - Variables in Javascript. Learners learn how to declar (Create) JavaScript variables. Learners will learn how to use JS code, In HTML, External JavaScript . Learners learn how to use comments in JS.

Produce ***25 minutes*** ***24 students*** ***Tutor is available***
In external JS document make statment which will print text : "My name is ...." in HTML element paragraph

3. Digital content creation - (DigComp 3.4 Programming)

4. JavaScript Loops

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will learn how to use loops, types of loops : for, for/in, while,do/while.

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
Using W3Schools (Example area) try using loops by changing values of Var. (eg. http://www.w3schools.com/js/exercise.asp?filename=exercise_for1)

3. Digital content creation - (DigComp 3.4 Programming)

5. Learners will learn how to use loops, types of loops : for, for/in, while,do/while.

Read Watch Listen *25 minutes* *24 students* *Tutor is available*
Using W3Schools (Example area) try using JS variables (External JS. doc) comment tags in javascript describe variable purpose in code.

Investigate ***25 minutes*** ***24 students*** ***Tutor is available***
Using W3Schools (Example area) try using JS variables (External JS. doc) comment tags in javascript describe variable purpose in code.

3. Digital content creation - (DigComp 3.4 Programming)

6. JavaScript Arithmetic Operators

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will learn how to use aritmetic operators in js. code: Addition, Subtraction, Multiplication, Division,Modulus, Increment, Decrement

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
In external JS. file : define three variables - x,y,z - z variable will show new number - sum of x and y. Z is displayed in paragraph (HTML)

3. Digital content creation - (DigComp 3.4 Programming)

7. JavaScript functions, JavaScript events

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
In this lesson learners will learn basic javascript functions. How function is defined (keyword,name,parentheses)

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
In external JS document using comment tag describe function elements (function keyword, fname, parentheses ()) and purpose on HTML page.

3. Digital content creation - (DigComp 3.4 Programming)

8. JavaScript functions, JavaScript events

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will be introduced how to use events that occur when the user or the browser interact on page: onclick, onmouseover, onmouseout, onkeydown, onload.

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
In HTML document create simple button. In external JS document make onclick event - show date and time on web page (date and time is displayed in html paragraph element)

3. Digital content creation - (DigComp 3.4 Programming)

9. JS. Data type

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will be introduced to JS. data type: Strings (character strings), numbers (Integer and floating-point numbers) , booleans. String methods: search(), valueOf(), search(), match(), replace()

Practice ***25 minutes*** ***24 students*** ***Tutor is available***
In external JS. document try using booleans (representing value either false or true).
Digital content creation - (DigComp 3.4 Programming)

10. JS. Data type

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will be introduced to JS. data type: Strings (character strings), numbers (Integer and floating-point numbers) , booleans. String methods: search(), valueOf(), search(), match(), replace()
Practice ***25 minutes*** ***24 students*** ***Tutor is available***
Using string method replace() replace word in paragraph (on button click)
3. Digital content creation - (DigComp 3.4 Programming)

11. Introduction to (CMS), Working with templates, Debuggers

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will learn how/why to activate and use debuggers in editor and web browser. Learners will get familiar with content management system, commonly used cms,benefits of cms - easy to use,multiple users... Learners learn : what is a website template, when not to use web template, what does it mean free templates? Learners learn : what is a website template, when not to use web template, what does it mean free templates? Learners will be introduced to online platforms and mobile apps for learning CSS
Practice ***25 minutes*** ***24 students*** ***Tutor is available***
Open user acount on wordpress.com. Search HTML templates by the topic you like (eg. Photography)

3. Digital content creation - (DigComp 3.4 Programming)

11. Introduction to (CMS), Working with templates, Debuggers

Read Watch Listen *20 minutes* *24 students* *Tutor is available*
Learners will learn how/why to activate and use debuggers in editor and web browser. Learners will get familiar with content management system, commonly used

cms,benefits of cms - easy to use,multiple users... Learners learn : what is a website template, when not to use web template, what does it mean free templates? Learners learn : what is a website template, when not to use web template, what does it mean free templates? Learners will be introduced to online platforms and mobile apps for learning CSS

Practice 25 minutes 24 students Tutor is available

Using F12 open debugger panel in browser (Chrome) and inspect elements using HTML document from previous exercise (JS events)

3. Digital content creation - (DigComp 3.4 Programming)

12. Learning JS, HTML, CSS - Websites/Apps

Read Watch Listen 20 minutes 24 students Tutor is available

Learners will be introduced to online platforms and mobile apps for learning JavaScript, CSS and HTML

Practice 25 minutes 24 students Tutor is available

Instal and try: https://play.google.com/store/apps/details?id=com.sololearn.javascript&hl=en Instal and try: https://play.google.com/store/apps/details?id=com.sololearn.htmltrial&hl=en app Instal and try: https://play.google.com/store/apps/details?id=com.sololearn.csstrial&hl=en

3. Digital content creation - (DigComp 3.4 Programming)