



France Educational Curriculum Alignment

The presentations offered by The Educated Choices Program provide support for teaching and learning of the following standards:

Moral & Civic Education, High School		Environment and Modern Agriculture	Healthful Eating
Axis 1: Foundations and weaknesses of the social bond	<p>Question: How are the foundations of social ties found today? How are they weakened?</p> <p>-This questioning is considered through the study of at least two areas among the following areas:</p> <p>Students will determine:</p> <ul style="list-style-type: none"> • Weaknesses linked to social transformations: living environment (metropolisation, residential assignment, neighborhood phenomenon), family unit, institutions of socialization (School, State, religion, trade unions). • Weaknesses linked to economic changes: regions in crisis, unemployment, transformation of the world of work, inequalities and expression of the feeling of downgrading. <p>-The rise of withdrawal into oneself and the tightening of the physical or virtual.</p> <p>-The expression of distrust vis-à-vis political and social representation, and vis-à-vis institutions.</p>	✓	✓

-Distrust of information and science (of the criticism of journalists and experts at spreading fake news and building alleged alternative “truths”).
-The new forms of expression of violence and delinquency (incivility, cyber-harassment, physical attacks, gang phenomena, etc.).



Students will be able to determine:

-Notions to acquire / to mobilize: The relationship between general interest and particular interest.

- Commitment – abstention.
- Integration – exclusion – downgrading.
- Equality – equity.

Students will determine, practice, and define:

- Social networks and the production of information: confirmation bias, bubbles filter; over-information and sorting; reliability and validation.
- Phenomena and mechanisms of untruths: conspiracy and revisionism, “fake news”.
- Virtual communities and the real community: individualism, self-image, trust, mechanism of exclusion and harassment.
- The mechanisms of confinement and endangerment: solitary practices of consumption and isolation (video games, etc.).
- Using the example of a city, a district, a social group, study the mechanisms of exclusion and inequalities: feelings, reality and expression (violence urban, gang phenomena, closed neighborhoods, self-segregation)
- Spatial planning policy: public services and accessibility; hyperreality; city politics.
- Social policies and care systems: calling into question the solidarity or adaptation of care. Possible fields of study: family, health, unemployment reduction, generational policy.

<p>Axis 2: The recompositions of the social bond</p>	<p>Question: How do the methods of recomposing the social link tend to define a new model of society?</p> <p>This questioning is considered through the study of at least two areas among the following areas:</p> <p>Students will determine:</p> <ul style="list-style-type: none"> • The promotion of equality between men and women: guidance, training, work, employment, salary, representation, recognition. • New forms of solidarity and engagement: internet and networks social; the participatory mechanism; from the association to the collective. • New economic forms: the participatory economy; solidarity economy; the collaborative economy; the circular economy, for new jobs and new solidarities. <p>The question of the extension of rights and responsibility individual and collective:</p> <p>Students will define and work through:</p> <ul style="list-style-type: none"> • Environmental issues; health policy; precautionary principle. • Public policies for greater equality and citizenship: the inclusion of people with disabilities at school, at work and in society; them assistance and professional integration policies, social policies. • The search for new social links: clubs, associations, social networks, communities, popular universities, self-help networks and voluntary work. • New unifying causes: defense of the environment, protection of biodiversity, new reflection on the animal cause. • Notions to acquire / to mobilize: 		
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- Respect
- Justice, Equality and Equity
- Social report - solidarity
- Individual and collective responsibility

Students will determine:

- The new modalities of the exercise of citizenship in France and in Europe.
- New methods of mobilization and political involvement: petitions, forums, local and collective referendums.
- New mechanisms for civic engagement: civic service, national service universal.
- Contemporary bioethical problems: the research framework, the laws of bioethics.
- Using examples, the development of the social and solidarity economy.
- Mentoring, tutoring, sponsorship: new implications for social actors and economics.
- Environmental responsibility and human/nature interdependencies.
- The defense of women's rights: renewal of feminism or societal evolution.
- Based on contextualized examples, the study of public policies to promote the social link (social and territorial policy, promotion of equal opportunities, social intergenerational).
- Expected capacities

Students will know how to:

- Exercise judgment and place it in a search for truth; to be able to distance one's own opinions and representations, to understand the meaning of the complexity of things, being able to consider others in

	<p>their diversity and their differences.</p> <ul style="list-style-type: none"> ● Identify different types of documents (life stories, literary texts, works of art, legal documents, administrative texts, etc.), contextualize them, grasp their statutes, identify and appreciate the intentions of the authors. ● Research, collect, analyze and know how to publish texts or testimonies; be rigorous in its research and its processing of information. ● Express yourself in public in a clear, reasoned, nuanced and calm way; to know, listen and learn to debate; respect the diversity of points of view. ● Develop the ability to contribute to cooperative/collaborative group work, engage in teamwork and class projects. 		
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Numerical and Computer Sciences, High School	Environment and Modern Agriculture	Healthful Eating
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<p>History of Computing</p> <p>Data Representation: Basic Types and Values</p>	<p>-Contents -Expected capacities -Comments</p> <p>Students will understand:</p> <ul style="list-style-type: none"> ● Key events of the story of computing ● Situate in time the main events of computer history and their protagonists. ● These historical landmarks will be built over time with a presentation of concepts and techniques. 	✓	✓
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-Contents expected

-Capacities

-Comments

Students will be able to:

- Write an integer positive in a base $b \geq 2$
- Switch from representation from one base to another. Bases 2, 10 and 16 are privileged. Binary representation of a relative integer
- Evaluate the number of bits necessary for writing base 2 of an integer, the sum or product of two whole numbers.
- Use 2's complement. This is to describe the size values of integers (8, 16, 32 or 64 bit). It is possible to mention the representation of integers of size arbitrarily from Python.

Students will:

- Represent approximate real numbers: concept float number
- Calculate on a few examples the representation of real numbers: 0.1, 0.25 or $1/3$. $0.2 + 0.1$ is not equal to 0.3.
- Avoid testing the equality of two floats. No precise knowledge of the IEEE-754 standard is not required. Boolean values: 0,

-Boolean operators: and, or, not.

-Boolean expressions

-Set the table for a boolean expression.

-The exclusive or (xor) is evoked.

-Some direct applications like binary addition are presented.

-Students' attention is drawn on the sequential character of certain Boolean operators.

Representation of a typewritten text.
Examples of ASCII encodings, ISO-8859-1, Unicode
Identify the interests of different encoding systems.
Convert text file to different encoding formats.
No precise knowledge of encoding standards are required.

Students are able to:

- Determine data Representation: Constructed Types

-Contents

-Expected capacities

-Comments

Students will be able to:

- Write a function returning a p-tuple of values.
- Indexed array, array given in understanding'
- Read and edit items of a table thanks to their index.
- Build a table by understanding.
- Use tables of tables to represent matrices: notation a [i] [j].
- Iterate over the elements of a picture.

-Only tables whose elements are of the same type are presented.

-The dynamic aspect of tables in Python is not mentioned.

-Python identifies lists and arrays.

	<p>-There is no reference to library paintings -NumPy. -Dictionaries by keys and values</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> ● Build an entrance dictionary. ● Iterate over the elements of a dictionary. <p>-It is possible to present the EXIF data of an image under the form of a record. -In Python, named p-uplets are implemented by dictionaries.</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> ● Use the keys() methods, values() and items(). 		
Data processing in tables	<p>-Contents -Expected capacities -Comments</p> <p>Table indexing</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> ● Import a table from a tabbed text file or file CSV. A doubling array is used ● Search in a table ● Find the lines of a table checking criteria expressed in logic propositional. The search for duplicates, the table consistency checks are presented. ● Sort a table according to a column. A sorting function integrated into the system or library can be used. 	✓	✓

- Merge tables
- Build a new table by combining data from two tables. The notion of the domain of values is highlighted.

Human-Machine Interactions on the Web

-Contents

-Expected capacities

-Comments

- Modalities of the interaction between man and machine
- Events of a page include graphic components and distinguish what falls under the description of components graphics in HTML of their behavior (reaction to events) programmed by example in JavaScript.
- Interaction with the user in a Web page

Students will be able to:



- Analyze and modify methods executed during a click on a button on a page website.
- Manage Client-server interaction. HTTP requests, server responses
- Distinguish what is being executed on the client or on the server and in which order.
- Distinguish what is remembered in the client and forwarded to the waiter.
- Recognize when and why the transmission is encrypted.

-HTTP protocol.


-One page form website


	<p>Students will be able to:</p> <ul style="list-style-type: none"> Analyze the operation with a simple form. Distinguish transmissions from parameters by queries POST or GET. Discuss the two types of queries according to the type of values to transmit and/or their privacy. 		
<p>Hardware architectures and operating systems</p>	<p>-Contents -Expected capacities -Comments</p> <p>Architecture model - sequential (von Neumann)</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> Distinguish between roles and characteristics of the different components of a machine. Roll out the execution of a simple instruction sequence of the machine language type. <p>-The presentation is limited to general concepts. -We distinguish between uniprocessor and multiprocessor architectures. -Unplugged activities are proposed. -Combinatorial circuits perform functions Booleans. -Transmission of data in a network -Protocols of communication -Network architecture</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> Highlight the interest of splitting of data into packages and their encapsulation. Unfold the operation of a simple protocol loss recovery packets (bit 	<p>✓</p>	<p>✓</p>



	<p>alternate).</p> <ul style="list-style-type: none">● Simulate or implement a network. <p>-The protocol can be explained and simulated in unplugged mode. -The link is made with what has been seen in second class on the TCP/IP protocol. -The role of the different constituents of the establishment's local network is present.</p> <p>Operating systems</p> <p>The students are able to:</p> <ul style="list-style-type: none">● Identify the functions of an operating system.● Use basic commands in the command line.● Manage rights and permissions file access.● Find differences between free systems and owners that are mentioned.● Use a system of free operation. This is not a study of systems theory operating. <p>-Input devices and Release -Human Machine Interface (HMI)</p> <p>The students are able to:</p> <ul style="list-style-type: none">● Identify the role of sensors and actuators.● Perform by programming an HMI responding to a notebook given loads.● Developed activities on objects connected, systems embedded or robots.		
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<p>Languages and programming</p>	<p>-Contents -Expected capacities -Comments</p> <p>Buildings - elementary</p> <p>The students are able to:</p> <ul style="list-style-type: none"> ● Highlight a corpus of elementary constructions: sequences, assignment, conditionals, bounded loops, unbounded loops, calls of function. ● Diversity and unity of languages of programming Spot, in a new programming language, common traits and traits specific to this language. <p>-The ways in which the same simple program written in different languages are compared. -Specification -Prototype a function.</p> <p>The students are able to:</p> <ul style="list-style-type: none"> ● Describe the preconditions on arguments. ● Describe postconditions on the results; assertions can be used to ensure preconditions or postconditions. ● Develop programs ● Use test sets. <p>-The importance of quality and number of tests is put into evidence. -The success of a set of tests does not guarantee the correction of a program. -The use of libraries</p> <ul style="list-style-type: none"> ● Use the documentation of a library. No comprehensive knowledge from a private library is required. 		
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	<p>Algorithmic</p> <ul style="list-style-type: none"> -Contents -Expected capacities -Comments <p>Sequential course of a picture</p> <p>The students are able to:</p> <ul style="list-style-type: none"> ● Write an algorithm of search for an occurrence on type values Sorts by insertion, by selection ● Write a sorting algorithm. ● Describe a loop invariant which proves the correctness of the sorts by insertion, by selection. ● Justify the termination of these algorithms. ● Show that their cost is quadratic in the worst case. ● Write an algorithm that predicts the class of an element according to the majority class of its k nearest neighbors. This is an example of an algorithm of learning. ● Dichotomous search in a sorted array ● Show the end of the binary search using a loop variant. Assertions can be used. <ul style="list-style-type: none"> -Proof of correction can be introduced by the teacher. -Greedy Algorithms -Solve a problem with greedy algorithms. Examples: bag problems back or giving change. -Greedy Algorithms constitute a method algorithmic among others that will be seen in the final. 		
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Physical Education, High School		Environment and Modern Agriculture	Healthful Eating
<p>LEARNING AREA #1: “Achieving Maximum Motor Performance measurable at a given time”</p>	<p>Expected end of high school - Commit to producing maximum performance using effective techniques, managing the necessary muscular and respiratory efforts and making the best compromise between increasing speed of execution and precision.</p> <p>The students are able to:</p> <ul style="list-style-type: none"> ● Train, individually and collectively, to achieve a performance. ● Choose and assume the roles that allow a united collective functioning. Priority elements for achieving these AFLs ● Increase motor efficiency by acquiring effective techniques and coordinating actions ● Identify and use mechanical principles and feelings (muscular, respiratory, emotional, psychological, etc.) to effectively transform motor skills ● Recognize and interpret bodily sensations, link them with external cues to regulate effort ● Prepare for a specific effort, recover ● Repeat and persevere to improve the effectiveness of their actions ● Use different observation and analysis tools to assess services ● Choose, implement and regulate an individual and/or collective 		


	<p>performance project</p> <ul style="list-style-type: none"> ● Assume the roles of organizer, coach and trainer to perform collectively. 		
<p>LEARNING FIELD n° 2: “Adapting one’s movement to varied and/or uncertain environments”</p>	<p>End of high school expectations</p> <p>The students are able to:</p> <ul style="list-style-type: none"> ● Engage with specific motor skills to perform safely and at your best level, a route in an uncertain context. ● Train individually and collectively, to move efficiently and safely. ● Cooperate to carry out a travel project, in complete safety. Priority elements to achieve these LFAs ● Understand and implement, alone and/or with others, the principles and procedures a practice that guarantees the safety of all; ● Develop supports adapted to the chosen route and use mechanical principles effective motor skills; ● Manage their efforts according to the constraints of the environment and their feelings (muscular, respiratory, emotional, psychological...) to carry out the movements; ● Prepare for a specific effort, recover; ● Choose, implement and regulate a travel project; ● Use different observation and analysis tools to assess services; ● Repeat and persevere to improve the effectiveness of their actions; ● Help each other to build trust; ● Select and take into account useful information to define your itinerary 		

<p>LEARNING FIELD n° 3: “Perform a physical service intended to be seen and appreciated”</p>	<p>Expected end of high school student capabilities:</p> <ul style="list-style-type: none"> ● Commit to composing and creating a sequence for aesthetic purposes or acrobatic intended to be judged, by combining codified body forms. ● Get involved in composing and performing a collective choreography according to a project artistic by mobilizing expressive motor skills and compositional processes. ● Prepare and commit, individually and collectively, to speak in front of an audience and arouse emotions. ● Choose and assume roles in the service of collective delivery. Priority elements to achieve these LFAs ● Develop and enrich expressive motor skills using various parameters (space, time, energy) to provoke an emotion; explore and choose composition processes to serve the relationship with its partners; take on different roles (performer, choreographer, spectator, judge, flier, spotter, carrier, leader, etc.); manage risk taking in the choice of actions; choose, implement and regulate, alone and with others, a composition project or chaining; use different observation and analysis tools to assess the services and define areas for improvement; prepare, concentrate to perform in front of an audience; control the individual realization of his service to put it at the service of the collective production; repeat and persevere to improve the effectiveness of their actions 		
<p>LEARNING FIELD 4: “Leading and mastering a collective confrontation or interindividual to win »</p>	<p>Expected end of high school student capabilities:</p> <ul style="list-style-type: none"> ● Commit to winning a match by making technical and tactical choices relevant to the analysis of the balance of power. ● To prepare and train, individually or collectively, to drive and control a 		

	<p>collective or inter-individual confrontation.</p> <ul style="list-style-type: none"> ● Choose and assume the roles that allow a united collective functioning. Priority elements to achieve these LFAs ● Carry out technical attack and defense actions in relation to his project and his tactical choices; ● identify the strengths and weaknesses of his adversary to define, implement and regulate a tactical project; identify the evolution of the characteristics of the balance of power to adapt its actions; adapt his commitment according to the balance of power and his feelings; repeat and persevere to improve the effectiveness of their actions; use different observation and analysis tools to assess the services and the state of the balance of power between two teams or two opponents; accepting defeat, winning with humility; show solidarity with its partners; play different roles (partner, adversary, referee, coach, observer); know, respect and enforce the rules. 		
<p>LEARNING FIELD no. 5: "Carrying out and directing one's physical activity to develop one's resources and maintain one another"</p>	<p>Expected end of high school student capabilities:</p> <ul style="list-style-type: none"> ● Commit to obtaining the desired effects according to your personal project, by making choice of training parameters consistent with the chosen theme. ● Train, individually or collectively, to develop one's resources and talk according to the desired effects. ● Cooperate to advance. Priority elements to achieve these LFAs ● Develop specific motor skills to carry out a work sequence in the respect for his physical integrity; rely on knowledge about the human body and physical exertion to define a training project; know and modulate different training parameters (intensity, duration, repetition, complexity, charges, recovery...) to produce and identify immediate effects in link with a personal project and a chosen training 		

	<p>theme; choose a few parameters and use your feelings (muscular, respiratory, emotional, psychological...) to personalize and regulate a work sequence; get in condition to engage in the chosen effort and recover from it; choose, carry out and regulate a training project defining the resources to be mobilize, in connection with the desired effects; repeat and persevere to improve the effectiveness of their actions; assume different social roles (help, parade, coach, observer) related to the practice;</p> <ul style="list-style-type: none"> • use a training diary to follow and regulate your work plan. 		
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Physical Education & Sports Program- tech path, specialist courses, High School	Environment and Modern Agriculture	Healthful Eating
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Expected end of high school expectations: for optional education	<ul style="list-style-type: none"> • The expected results at the end of high school student capabilities (AFL) are identical to those defined by the field of learning in the common curriculum. In the event that the teaching team d'EPS chooses to program the same APSA several times in the high school curriculum, teachers have the possibility of enriching and/or making these AFL more complex in order to raise the student skill level. These enrichments and/or complexifications must be the subject of a detailed and well-argued formalization in the pedagogical project of optional education. 	
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- Expectations for the end of high school, specific to optional education, are also defined and spread over the three years of training: In second
- A skill relating to the study of a chosen theme: “knowing, implementing and analyzing the links between a theme and one or more APSAs”.

The student must have acquired knowledge on one or more proposed study themes:

- The final production, individual or collective, must include reflection by the student on his physical practice.
- First, A skill relating to the design and implementation of a collective project: “Develop, implement and regulate a collective project relating to the activities, physical, athletic, artistic.
- The evaluation of this collective project relates to the quality of the development, the realization and the regulation of the project, on the individual commitment of the student and on his ability to cooperate within a collective.
- In my last year, A skill relating to the realization of a study associated with an oral defense: "Develop, implement, alone or in a group, a study, linking the sciences and/or technologies with one or more sports and artistic physical activities and support its study file in front of a jury". This study must be based on at least an APSA whether the student has it or not practiced during his high school course.
- The evaluation of this study file is based on the work carried out and on an oral defense in front of two PE teachers, including the one who leads this teaching. Feedback on student performance (attendance, engagement, posture, speech, language register, interaction with interviewers, etc.) must be carried out so that this defense can be, for them, the opportunity to prepare for the final oral test of the

	<p>baccalaureate.</p> <ul style="list-style-type: none">● It is up to the pedagogical team to precisely define the criteria necessary for the evaluation of each of these expectations and to present them in the pedagogical project of optional PE education.		
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