

UE 840 ANGLAIS

SVT

MENTION 2

Semestre 2

2022-2023

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Présentation du cours

L'ENSEIGNANTE

Eva GOURDOUX

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Joignable du lundi au vendredi jusqu'à 19h.

Merci de respecter ces horaires et **de ne pas m'écrire le weekend**. En cas d'absence, vous pourrez rattraper le cours **sur le site** (voir ci-contre). Sinon, contactez en priorité vos camarades.

LE PROGRAMME

1. Remise à niveau en anglais
2. Science in Pop Culture
3. Transhumanism (1)
4. Transhumanism (2)
5. Artificial Intelligence
6. An Apocalyptic Future?
7. Teaching Science

• PRESENTATION DU COURS :

Ce cours vous permettra **d'acquérir ou de consolider le niveau B2**.

Les 8 séances (de 3h) seront réparties comme suit :

26/01	02/02	21/02	13/03	21/03	03/04	14/04	18/04
13H30-16h30	13h30-16h30	13h30-16h30	13h30-16h30	13h30-16h30	13H30-16h30	13h30-16h30	9h00-12h00

• OBJECTIFS :

Ce cours vous fera travailler les 4 grandes activités langagières du niveau B2 en accord avec le CECRL :

1. **Compréhension de l'oral** (visionnage de courtes vidéos, textes à trous et restitutions)
2. **Compréhension de l'écrit** (lecture d'articles)
3. **Interaction orale** (débats)
4. **Expression écrite**

Il faudra, à terme, être capable de restituer le contenu d'un document en français, d'échanger des arguments autour de la thématique en anglais et de les mobiliser à l'écrit.

Les ressources du cours seront mises en ligne à l'adresse suivante : <https://evagourdoux.hypotheses.org/category/SVT>

• ÉVALUATION :

L'évaluation aura lieu lors de la dernière séance, le 18 avril 2023. Elle compilera **deux activités langagières** :

1. **Compréhension orale**, sur 10
2. **Expression écrite** (250-300 mots), sur 10

La note finale sera sur 20. L'épreuve durera **2h**.

Le CECRL

UTILISATEUR EXPÉRIMENTÉ (maîtrise)	C2	Peut comprendre sans effort pratiquement tout ce qu'il/elle lit ou entend. Peut restituer faits et arguments de diverses sources écrites et orales en les résumant de façon cohérente. Peut s'exprimer spontanément, très couramment et de façon précise et peut rendre distinctes de fines nuances de sens en rapport avec des sujets complexes.
UTILISATEUR EXPÉRIMENTÉ (autonome)	C1	Peut comprendre une grande gamme de textes longs et exigeants, ainsi que saisir des significations implicites. Peut s'exprimer spontanément et couramment sans trop apparemment devoir chercher ses mots. Peut utiliser la langue de façon efficace et souple dans sa vie sociale, professionnelle ou académique. Peut s'exprimer sur des sujets complexes de façon claire et bien structurée et manifester son contrôle des outils d'organisation, d'articulation et de cohésion du discours.
UTILISATEUR INDÉPENDANT (indépendant)	B2	Peut comprendre le contenu essentiel de sujets concrets ou abstraits dans un texte complexe, y compris une discussion technique dans sa spécialité. Peut communiquer avec un degré de spontanéité et d'aisance tel qu'une conversation avec un locuteur natif ne comportant de tension ni pour l'un ni pour l'autre. Peut s'exprimer de façon claire et détaillée sur une grande gamme de sujets, émettre un avis sur un sujet d'actualité et exposer les avantages et les inconvénients de différentes possibilités.
UTILISATEUR INDÉPENDANT (seuil)	B1	Peut comprendre les points essentiels quand un langage clair et standard est utilisé et s'il s'agit de choses familières dans le travail, à l'école, dans les loisirs, etc. Peut se débrouiller dans la plupart des situations rencontrées en voyage dans une région où la langue cible est parlée. Peut produire un discours simple et cohérent sur des sujets familiers et dans ses domaines d'intérêt. Peut raconter un événement, une expérience ou un rêve, décrire un espoir ou un but et exposer brièvement des raisons ou explications pour un projet ou une idée.
UTILISATEUR ÉLÉMENTAIRE (survie)	A2	Peut comprendre des phrases isolées et des expressions fréquemment utilisées en relation avec des domaines immédiats de priorité (par exemple, informations personnelles et familiales simples, achats, environnement proche, travail). Peut communiquer lors de tâches simples et habituelles ne demandant qu'un échange d'informations simple et direct sur des sujets familiers et habituels. Peut décrire avec des moyens simples sa formation, son environnement immédiat et évoquer des sujets qui correspondent à des besoins immédiats.
UTILISATEUR ÉLÉMENTAIRE (découverte)	A1	Peut comprendre et utiliser des expressions familières et quotidiennes ainsi que des énoncés très simples qui visent à satisfaire des besoins concrets. Peut se présenter ou présenter quelqu'un et poser à une personne des questions la concernant - par exemple, sur son lieu d'habitation, ses relations, ce qui lui appartient, etc. - et peut répondre au même type de questions. Peut communiquer de façon simple si l'interlocuteur parle lentement et distinctement et se montre coopératif.

L'ARGUMENTATION EN ANGLAIS

Conseils pour les débats en classe

- a) **Analysez le sujet du débat** afin de rester dans le thème.
- b) Préparez vos arguments **directement en anglais** (ne les traduisez pas... !)
- c) Faites preuve de **spontanéité** : le but d'un débat est de *rebondir* sur ce qu'a dit l'adversaire.
- d) **Anticipez les arguments que l'on pourrait vous opposer**, afin d'y répondre efficacement.
- e) Usez et abusez de **connecteurs logiques** lorsque vous déroulez votre argument

Mots et expressions utiles

1. ORDONNER SES IDEES

First / firstly/to begin with / in the first place	En premier / en premier lieu/ tout d'abord/ pour commencer
First of all / first and foremost	Avant toute chose
Secondly / thirdly / then / next	Deuxièmement / en second /troisièmement/ puis/ ensuite
At last / finally	Pour finir / finalement /enfin
To conclude / in conclusion / as a conclusion	Pour conclure / en conclusion

2. INTRODUIRE UN ARGUMENT

At first sight	À première vue
As a matter of fact	En fait
For that matter	D'ailleurs / du reste
Anyway	De toute façon
Actually	Effectivement / en fait
In brief	En bref
In short	En résumé
To put it in a nutshell	Pour faire court/en un mot

3. CONNECTEURS LOGIQUES

Causes	Because Because of Owing to Due to Since As Thanks to That is why / therefore	Parce que A cause de En raison de Du fait de Puisque Étant donné que Grâce à C'est parce que
But	In order to In order not to So as to So as not to So (that)	Pour Pour ne pas Afin de / de façon à Afin de ne pas Pour que / de telle sorte que
Conséquence	Consequently As a consequence Accordingly As a result (of) That is why /therefore So / thus Hence (<i>the idea</i>)	Par conséquent Par conséquent En conséquence Par conséquent C'est pourquoi Ainsi D'où (<i>l'idée</i>)
Ajouter une idée	Furthermore Moreover In addition Besides Also Too / similarly On the contrary Unlike Whereas On the one hand On the other hand	En outre De plus Par ailleurs Qui plus est / d'ailleurs Aussi De même Au contraire À la différence de Alors que D'une part D'autre part
Hypothèse	If Whether In case Suppose / supposing Even if Unless Or else / otherwise	Si Si ... ou bien Au cas où A supposer que Même si À moins que Sinon
Concession	Although / though While Despite In spite of No matter what (how) Yet However Nonetheless / nevertheless	Bien que Quoique Malgré En dépit de Peu importe que (comment) Pourtant Cependant Néanmoins

D'après anglaisfacile.com

How to conduct a debate

In each debate, there are two teams of three speakers. The team which argues *for* the topic is called **the affirmative**. The team arguing *against* the topic is called the **negative**. Each speaker speaks once for a defined period. The order of speakers is: 1) first affirmative, 2) first negative, 3) second affirmative, 4) second negative, 5) third affirmative, 6) third negative.

	<i>Affirmative</i>	<i>Negative</i>
<i>1st speaker</i>	The first affirmative speaker should 1) define the topic and 2) give an argument .	The 1st negative speaker should <i>not</i> define the topic, unless their definition of the topic is different/nuanced. They present a rebuttal or counterargument .
<i>2nd speaker</i>	« The second affirmative should clearly identify the major areas of disagreement with the with the negative case and attack the specific arguments of the first negative . »	Rebuttal
<i>3rd speaker</i>	The 2 nd speaker gives a rebuttal as well. The 3rd speaker delivers a closing statement : they should <i>not</i> give an argument but present a last counterargument and then sum up their teams' case . « The third speaker should <u>rebut all the arguments raised by their opposition across the debate, not just the arguments raised by the speaker before them</u> . They should to present an overview by analysing the main themes of the debate. They should identify the essential issues on which the teams have disagreed, rebut the important arguments of the opposing team and defend any important attacks made against their own team's case. »	Same : rebuttal+ closing statement

Source : dav.com

COMPREHENSION ECRITE

Cours 2 | Science in Pop Culture

“What the public thinks it knows about science”

A. Bowdoin Van Riper, 2003, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1326427/>

Popular culture probably does more than formal science education to shape¹ most people's understanding of science and scientists. It is more pervasive, more eye-catching², and (with rare exceptions) more memorable. No genetics textbook can hope to compete with *Jurassic Park*, and no lecture on biophysics can match the sight of Dr Frankenstein pulling lightning down from the stormy sky to animate his creature. What messages about science, then, is the public likely to draw from popular culture? This essay discusses some of the most common, but there are of course many others. Science is complex and multi-faceted, and so is popular culture's portrayal of it. [...]

Natural laws may be flexible in popular culture, but the relationship between genes and the characteristics for which they code is rigid. Popular culture routinely glosses over³ the complex interactions between genes, and the equally complex interplay of genes and the environment that Richard Lewontin has dubbed the “triple helix”. By treating single genes as if they invariably and inevitably produce specific traits, regardless of other influences or even of transplantation into a different organism, popular culture has deemed that our DNA is our destiny.

Michael Crichton's 1990 novel *Jurassic Park* and its 1992 film adaptation by Steven Spielberg is a classic expression of this idea. Crichton's manufactured dinosaurs are reconstructed using DNA from fossilized dinosaur blood, patched where it is incomplete with DNA from extant species of frogs. Grown in ostrich eggs, hatched⁴ in a laboratory and raised in an environment 100 million years removed from the one in which their ancestors evolved, they grow to adulthood fully functional and lethally well adapted. Despite being raised without older members of their own species to imitate, they duplicate the behaviour of their ancestors as well as their anatomy. Hadrosaurs' tendency to collect into packs and velociraptors' ability to hunt cooperatively are, evidently, fully programmed into their genes. The only exception to this perfect reproduction is the dinosaurs' own reproductive system. Here, the interpolated frog DNA has manifested itself with crisp perfection. The dinosaurs are, like the frogs

¹ To shape : façonner

² Eye-catching : accrocheur, tape-à-l'oeil

³ To gloss over : vite passer sur quelque chose, ne pas s'attarder sur

⁴ To hatch : éclore

from which their DNA patches came, hermaphrodites. The biological implausibility of such a change, like the physical implausibility of FTL travel, is glossed over quickly and casually. [...]

Popular culture's assumption⁵ that specific genes invariably produce specific traits extends beyond the physical appearance of the organism. [...] The 1997 film *Gattaca*, a cautionary tale about a society in which prenatal manipulation is routine, posits⁶ a future in which physical perfection—beauty and athletic ability, as well as freedom from disease—has become the norm. The idea that qualities as complex and culturally dependent as personality, beauty and intelligence can be created by plugging the right genes into the right places in the genome of an individual is, at best, debatable. It is fully consistent, however, with popular culture's vision of genetic engineering as a technology that borders on magic—able to transform any living thing into any other. [...]

Ultimately, we all wish that people had a better grasp⁷ of basic science, and that they could—when they saw it happen—recognize when dramatic license is being taken with the laws of nature. The question, of course, is how to achieve that goal. Simply complaining about the scientific inaccuracies⁸ in popular culture is not a solution. Done privately, it accomplishes nothing; done publicly, it is less likely to open someone's eyes than to reinforce their belief that most scientists are humourless drones.

A better solution is to accept popular culture's treatment of science for what it is—entertainment—and use it as a springboard⁹ for dialogue with the public. Popular culture does occasionally get it right, and every case where it does so provides a 'teachable moment' in which a concept can be vividly reinforced. [...] Popular culture can be a shared frame of reference, within which scientists and the public can discuss both science and its social implications, but it can only serve that role if scientists are willing to take it seriously.

⁵ Assumption : supposition

⁶ To posit : avancer, proposer

⁷ Grasp : compréhension

⁸ Inaccuracy : inexactitude

⁹ Springboard : tremplin

Cours 3 | Defeating Death (Transhumanism 1)

“No death and an enhanced life: Is the future transhuman?”

Robin McKie Science editor - Sun 6 May 2018, *The Guardian*

Transhumanists believe that we should augment our bodies with new technology.

The aims¹⁰ of the transhumanist movement are summed up by Mark O’Connell in his book *To Be a Machine*, which last week won the Wellcome Book prize. “It is their belief that we can and should eradicate ageing as a cause of death; that we can and should use technology to augment our bodies and our minds; that we can and should merge with machines, remaking ourselves, finally, in the image of our own higher ideals.”

The idea of technologically enhancing¹¹ our bodies is not new. But the extent to which transhumanists take the concept is. In the past, we made devices¹² such as wooden legs, hearing aids, spectacles and false teeth. In future, we might use implants to augment our senses so we can detect infrared or ultraviolet radiation directly or boost our cognitive processes by connecting ourselves to memory chips¹³. Ultimately, by merging¹⁴ man and machine, science will produce humans who have vastly increased intelligence, strength, and lifespans¹⁵; a near embodiment¹⁶ of gods.

Is that a desirable goal? Advocates of transhumanism believe there are spectacular rewards to be reaped from going beyond the natural barriers and limitations that constitute an ordinary human being. But to do so would raise a host of ethical problems and dilemmas. [...]

In many cases these technological or medical advances are made to help the injured¹⁷, sick or elderly¹⁸ but are then adopted by the healthy or young to boost their lifestyle or performance. The drug erythropoietin (EPO) increases red blood cell¹⁹ production in patients with severe anaemia²⁰ but has also been taken up as an illicit performance booster by some athletes to improve their bloodstream²¹'s ability to carry oxygen to their muscles. And that is just the start, say experts. [...]

The question is: when the technology reaches this level, will it be ethical to allow surgeons to replace someone’s limbs²² with carbon-fibre blades just so they can win gold medals? Whitby is sure many athletes will seek²³ such surgery. “However, if such an operation came before any ethics

¹⁰ Aim : but

¹¹ To enhance : améliorer

¹² Device : dispositif

¹³ A chip : une puce électronique

¹⁴ To merge : (faire) fusionner

¹⁵ Lifespan : durée de vie

¹⁶ Embodiment : incarnation

¹⁷ Injured : blessé (physiquement)

¹⁸ Eldery : les personnes âgées

¹⁹ Cell : cellule

²⁰ Anaemia : anémie

²¹ Bloodstream : système sanguin

²² Limbs : membres du corps

²³ To seek : rechercher

committee that I was involved with, I would have none of it. It is a repulsive idea – to remove a healthy limb for transient²⁴ gain.”[...]

This last point is a particular issue for those concerned with the transhumanist movement. They believe that modern technology ultimately offers humans the chance to live for aeons²⁵, unshackled²⁶ – as they would be – from the frailties of the human body. Failing²⁷ organs would be replaced by longer-lasting high-tech versions just as carbon-fibre blades could replace the flesh, blood and bone of natural limbs. Thus we would end humanity’s reliance on “our frail version 1.0 human bodies into a far more durable and capable 2.0 counterpart,” as one group has put it. However, the technology needed to achieve these goals relies on as yet unrealised developments in genetic engineering, nanotechnology and many other sciences and may take many decades to reach fruition.

[...] Ultimately, adherents of transhumanism envisage a day when humans will free themselves of all corporeal restraints. Kurzweil and his followers believe this turning point will be reached around the year 2030, when biotechnology will enable a union between humans and genuinely²⁸ intelligent computers and AI systems. The resulting human-machine mind will become free to roam a universe of its own creation, uploading itself at will on to a “suitably powerful computational substrate”.

[...] For their part, transhumanists argue that the costs of enhancement will inevitably plummet²⁹ and point to the example of the mobile phone, which was once so expensive only the very richest could afford one, but which today is a universal gadget owned by virtually every member of society. Such ubiquity will become a feature of technologies for augmenting men and women, advocates insist.

Many of these issues seem remote³⁰, but experts warn that the implications involved need to be debated as a matter of urgency. An example is provided by the artificial hand being developed by Newcastle University. Current prosthetic limbs are limited by their speed of response. But project leader Kianoush Nazarpour believes it will soon be possible to create bionic hands that can assess³¹ an object and instantly decide what kind of grip it should adopt.[...]

The position is summed up by bioethicist professor Andy Miah of Salford University : “Transhumanism is valuable and interesting philosophically because it gets us to think differently about the range³² of things that humans might be able to do – but also because it gets us to think critically about some of those limitations that we think are there but can in fact be overcome,” he says. “We are talking about the future of our species, after all.” [...]

²⁴ Transient : fugace, passager

²⁵ « for aeons » : pendant des lustres

²⁶ Unshackled : libre

²⁷ Failing : défaillant

²⁸ Genuinely : authentiquement

²⁹ To plummet :

³⁰ Remote : isolé

³¹ To assess : évaluer, jauger

³² Range : gamme, éventail, plage

Cours 4 | Cryonics (Transhumanism 2)

“Will Cryonically Frozen Bodies Ever Be Brought Back to Life?”

By Kate Golembiewski | Apr 6, 2021 | *Discover Magazine*

It's said that one of the things that makes us human is our awareness of our own mortality, and for nearly as long as we've known that we'll one day die, we've wondered about the possibility of waking back up. Stories about resurrection and immortality are found in countless religions and myths, and in recent years, many of these stories have hinged on the idea of cryonic preservation: freezing a body and then reanimating it in the future. If it worked for Han Solo, Captain America, and Fry from Futurama, why can't it work for us? [...]

How the Cryonic Process Works

When someone who's made arrangements to have their remains cryonically preserved is declared dead, a medical team cools the body with ice water and keeps the body's tissues oxygenated using CPR and oxygen masks. The ice-cold body is put in a hermetically sealed container and flown to the cryonics **facility**³³. (A note on nomenclature — freezing a cadaver is cryonics, not cryogenics. Cryogenics is the science and engineering of super-low temperatures.)

At the cryonics facility, the team puts the body on a machine similar to a heart-lung bypass, circulating the blood and maintaining oxygenation. They pump in a vitrification solution that works like antifreeze to keep the body's tissues from turning to ice crystals, in hopes of minimizing structural damage. Then, they slowly cool the body to -320 °F in a liquid nitrogen vapor chamber. Once it's cold enough, the body is transferred to a Thermos-like tank of liquid nitrogen, where it'll stay for the **foreseeable**³⁴ future. The patrons' **fees**³⁵ (around \$28,000 per person) maintain the institute's endowment to keep the organization running in perpetuity.

The bodies will wait in these tanks until medical technology (hopefully) is able to revive them. Kowalski says there are three challenges for this future tech to overcome: it'll need to repair the damage done by freezing, cure whatever **ailment**³⁶ originally killed the subject, and reverse the aging process so that the subject has a young, healthy body to enjoy in their second go-round. No one knows

³³ Facility : installation, complexe, établissement

³⁴ Foreseeable : prévisible

³⁵ Fees : frais

³⁶ Ailment : affection, maladie

what that technology might look like; Kowalski's best guess is tissue engineering and molecular nanotechnology that will be able to repair and replace damaged tissues. [...]

What Could Go Wrong

“There is absolutely no current way, no proven scientific way, to actually freeze a whole human down to that temperature without completely destroying — and I mean **obliterating**³⁷ — the tissue,” says Shannon Tessier, a cryobiologist with Harvard University and Massachusetts General Hospital. When scientists attempt to freeze a **sample**³⁸ of living human tissue, like a **slice**³⁹ of **liver**⁴⁰, “the tissue is completely obliterated, the cell membrane is completely destroyed. So there's actually no proof that you're preserving anything, and that's because the science is just not there yet.”

There are animals that can survive being frozen and **thawed**⁴¹, like Canadian wood frogs, but these organisms have evolved specifically to handle the pressures of freezing temperatures in a way that our bodies simply haven't. Tessier says it's hard to imagine how our tissues could even **withstand**⁴² the process of being rewarmed, even with the benefit of a few centuries of scientific advances. [...]

Cryonicists like Kowalski are well-aware of these criticisms. He argues that while these problems are insurmountable to us today, they may well be solvable in the future. [...]

'Nothing to Lose'

Beyond arguments of what's possible, or might be possible in the future, there **lingers**⁴³ another question: even if you could be brought back, would you even want to? After all, you'd be stranded in a strange world, separated from everything that made your life worth living in the first place. [...]

“You have nothing to lose, everything to gain. Other than some life insurance money. And for me, it's worth it. It gives me peace of mind,” says Kowalski, who is signed up for cryonic preservation along with his wife and sons. “Even if it doesn't work, we're still advancing science, figuring out what doesn't work. And if it does work, oh my God, we just **stumbled across**⁴⁴ a cure for death, at least temporarily.”

³⁷ To obliterate : anéantir

³⁸ Sample : échantillon

³⁹ Slice : tranche

⁴⁰ Liver : foie

⁴¹ To thaw : décongeler

⁴² To withstand : résister à

⁴³ To linger : traîner, s'attarder

⁴⁴ To stumble across : tomber sur

Cours 5 | Artificial Intelligence

“Scientists Reveal 9 Ways Dating and Relationships May Look in the Future” - *Bright Side*

1. Devices for augmented reality

Imagine yourself talking to a girl you like. Everything is fine, but all of a sudden she throws a provocation at you, a conversation "curveball!" Sounds familiar? Yeah, girls do this all the time to test men's reactions. She's waiting for an answer that will decide their future. We all want little hints that will help us make any conversation smooth. Google, Apple, and other companies are currently working on developing devices that will bring augmented reality to our life. We will be able to use glasses, contact lenses, or even a brain-machine interface by the year 2040. Different devices will totally change the way we interact and build relationships.

2. Remote kissing

Are you on a business trip and really miss your beloved? Now you can kiss them anytime you want. Well, as long as you don't mind kissing an eyeless Mr. Potato Head. This is real. A special device was developed by researchers to simulate kissing your long-distance lover. It has special pressure sensors and actuators⁴⁵, so the feeling will be almost real. It's only a prototype, but experts say that in the future people will be able to buy special devices not only for kissing but for an intimate stimulation as well.

3. Full sensory virtual dating

Today's researchers are exploring the possibilities of full sensory virtual reality dating in the future. No need to leave your home or even your bed to go on a date. This means that we will be able to digitally simulate our feelings and emotions and transmit them via special VR devices. These developments will save single people time and energy and help find like-minded people in the most efficient way possible. It may sound weird at first, but people from the 19th century would consider our modern dating routine weird as well.

4. Cosplay dating

The huge popularity of modern cosplay will determine the growth of role-playing in relationships. To break out of their ordinary life, people attend cosplay parties and become members of cosplay communities. Only there can they become someone they're not in the real world. So if you're a Superman, who would you want to date: Lois Lane or a cute girl from a coffee house? The answer is simple. A group of programmers has developed a website that is based on pairing people by their interests and the preferable universes they want to live in. The system pairs people by their levels of "geekdom," along with other factors on their profiles. In the future, cosplay role-playing will become even more diverse than it is now.

⁴⁵ Actuator : déclencheur

5. Computer-generated dating

Today you can find all kinds of online dating services on the internet. All you need to do is fill in a form and start looking for a potential candidate. The procedure isn't difficult, but it isn't too personal either. In the near future, special programs will analyze your preferences, photos on social media, and even the people you interact with to create a list of perfect candidates for you. This will make the whole process less tiring and more personalized, taking matchmaking to a whole new level. Some experts even predict that 50% of relationships will start online. Can you believe it?

6. Rent-a-family service

This one will surprise you, but this scenario of the future is already real in Japan. Single men in Japan can rent a wife or a whole family for a certain period of time. You can even rent a friend. Despite the sky-high prices for such services, most of the "families" are already booked. Single men do this to experience something new, like playing with "kids" in a park or going shopping with a "wife," and to feel less lonely. We can only imagine how this service will grow in the future. Different agencies will provide single people with friends, relatives, and wives to portray a perfect life for them. You might even be able to subscribe to the best offers of the year or month.

7. DNA and microbial matchmaking

In the future, medicine will take an important place in family and relationship planning. Not only will people be able to choose different donors from a sperm bank, they will also have full access to the medical history records of a certain person. If you're going on a regular date, you'll be able to see if your partner has been diagnosed with a specific disease. Medical experts might help you find your perfect match with the help of a thorough DNA analysis. You can do it in advance, which is weirdly convenient. It may be considered a violation of human rights today, but who wouldn't want a child with perfectly combined genes in the future?

8. Siri as a dating surrogate

The movie Her perfectly illustrates how the near future might look if intelligent operating systems or even our little helper Siri could fulfill our every wish. People will use them as a dating surrogate or simply as a friend who knows all their needs, preferences, and can be there at any given moment. With all the points mentioned above, this one could happen very soon. Some people are single for a reason: it might be health problems, disability, lack of confidence, or simply fear, and an intelligent operating system will be great company for them. It can even help them build a future relationship with a real person.

9. Life with silicone dolls and robots

There are a lot of single men who are disappointed in their love life and refuse to cope with breakup drama over and over again. They prefer to hide in an imaginary world and live with a lifelike silicone doll. It's a common practice in Japan. While we have all heard about it, a life with robots is something from a sci-fi book. Experts say that in less than 50 years, people will fall in love and live with robots. Besides, the first robot with feelings was recently created and launched. It means that this type of future isn't far off. Some even predict that the majority of single people will prefer a robot partner to a real one. On the other hand, we can easily fall in love with a fictional character or a famous person we don't even know, so it doesn't seem so odd to feel the same toward robots.

Cours 6 | An Apocalyptic Future?

Article 2: “Seeing the Hopeful Side of Post-Apocalyptic Fiction”

Megan Hunter - November 8th, 2017 – *LitHub*

Etymologically, the word *apocalypse* contains the meanings *to uncover*, *to transform*, and *to reveal*, rather than simply denoting the end of things. Its origins in Judeo-Christian religious traditions mean that the endings it originally described always contained a beginning: the destruction of the world heralded the arrival of a new—holy⁴⁶—era. Even in its modern usage, the term post-apocalyptic contains within it an implication that even in the worst of circumstances, some form of life continues. There is, perhaps surprisingly, an afterwards⁴⁷, a world for humans to inhabit, and books to be written about them.

The most recent flourishing⁴⁸ of post-apocalyptic and dystopian fiction—genres that have been popular for a long time—could be associated with the particularly depressing state of our current politics. In the midst of a rise in intolerance and inhumanity, we look for books that will reflect our realities. Such is the degradation of our society, the most realistic fictions are those that speculate about (previously) inconceivable situations. The control of women’s bodies in a world ravaged by toxicity is recognizable enough for women to take to the streets dressed as Offred and Ofglen, for *The Handmaid’s Tale* to come to the fore of literary and televisual culture 30 years after it was published. Prominent post-apocalyptic books of the last decade depict a variety of scenarios, each more detailed and prescient than the most vivid anxiety dream. [...] For its critics, post-apocalyptic fiction amounts to little more than a wail in the darkness, a pessimistic resignation to the worst in human nature. [...]

Just as science fiction television programs set in space can’t help but mimic the fashions and haircuts of their contemporary moment on earth, dystopian fictions say more about the times of their production than a distant date. They are often particularly revelatory of the things that are still deemed to matter after everything else has been destroyed, of the most basic and essential components of human life. Indeed, it could be said the emotional impulse behind much post-apocalyptic fiction is not despair but hope, the will to identify what persists in the face of devastation. Alongside a fear of destruction, there is also a certain longing⁴⁹ for the simplicity and clarity of a life lived without modern comforts and distractions; dystopian fiction both meets this longing and undermines⁵⁰ it, by reminding the reader that such an existence is often a dangerous struggle⁵¹ for survival. [...]

It is often said that we live in an anxious time, both at the personal and political level: rates of anxiety and depression continue to rise, and we find our inner state reflected in the world around us. Our fears can lead us to resist change and long for the status quo, and it is famously easier to imagine the end of the world than the end of capitalism. [...] In the act of writing—and reading—altered worlds into being we transmute anxiety into something more powerful. In these changed places, a radically different future has already arrived, revealing the provocative nature of even the darkest of our daydreams.

⁴⁶ Holy : saint

⁴⁷ An afterwards : un après

⁴⁸ To flourish : prospérer

⁴⁹ Longing : envie, désir

⁵⁰ To undermine : miner, saper

⁵¹ Struggle : lutte

Cours 7 | Teaching Science

Interview with a Biology Teacher

Chad DeVoe, jobshadow.com

What do you do for a living?

I teach NY state-mandated biology to high school students in grades 9 and 10 of a high-needs school saturated with rural poverty. Some of them choose to learn it. I also teach an elective I was allowed to create called “Food, Land, and You” about agriculture, health, and cooking. We are in the process of setting up a student-run farm CSA with real community members. Most students love this class because I try to cover topics that are relevant to their lives through the lens of sustainability with technology woven into the fabric of everyday instruction.

How would you describe what you do?

Well, I’m a teacher. Sadly, my job description hasn’t changed much in the last 100 years and neither have schools in general, which is weird because society certainly has and our jobs are technically to prepare students for the future. I try to teach more 21st Century Skills in class including technology literacy, problem solving, collaboration, and critical thinking. If answers are a mouse-click away, why should we have to memorize many of the things we ask our students to do?

What does your work entail?

I spend a lot of time setting up and taking down labs, cleaning tables, and picking broken test tube glass out of the sinks. My school doesn’t give me any more extra time to do this than other-subject teachers get. Some schools give science teachers an extra free period, some don’t. Some schools even have a designated lab technician that will do all of this for you. Some schools require science teachers to move their labs from class to class on a cart! Science teachers are usually busy with the variety of activities that go along with being a good science teacher and are often perceived as socially-awkward or pompous by their colleagues.

What’s a typical work week like?

The school day starts at 8:05 but I usually come in an hour early to set labs up or clean from the previous day. I can also enjoy a coffee and check science news to share before the halls are flooded by chatty teenagers. We have 9-40 minute periods. I teach 5 periods in addition to a study hall, free period, lunch, and lunch duty. Every other day a class has a double period lab block. The day ends at 2:45. We have alternating “A” and “B” days which allow for changes in the schedule. Occasionally we have an assembly or special event that breaks up a typical week.

How did you get started?

I've always liked science, nature, and teaching. I knew I wanted to be a science teacher since I was in high school. My undergrad was strictly environmental/forest biology and I went right to grad school for my teacher prep work. In New York State all teachers need a Masters degree anyway.

What do you like about what you do?

Teaching science allows you to be creative and to use a variety of approaches for instruction. Students and colleagues always bring in stuff...dead birds, deer hearts, hawk talons, etc. and businesses and colleges like to give things away to science teachers. I feel that science teachers are lucky because it is easy to engage students and you often reach some of those students that many other teachers have a hard time developing rapport with. The BEST part of the job....the clean slate you get at the start of the next year and being able to change things that didn't work.

How do you make money/or how are you compensated?

We're salary...but the range varies widely by state and district's negotiated contract. We have a step system that gives us a roughly 3% raise a year. Eight years in, I'm making about \$44K a year. I think I started at around 38K. I have a colleague that is finally making \$100K this year, but it is his 50th year teaching. You earn extra if you coach, tutor, chaperone, etc. There always seems to be these opportunities available to make more.

What education, schooling, or skills are needed to do this?

This varies by state, drastically. In NY state you need a masters degree within 5 years of teaching and a bachelor's degree to start. There are also all sorts of other requirements like teacher certification exams, child abuse workshops, fingerprinting, 1 year of a foreign language, student observations/teaching, and misc. program requirements at each university. Getting certified in NYS is actually a tedious process. In general, you need to be knowledgeable, patient, flexible, reliable, and have a good personality to be a good teacher.

What is most challenging about what you do?

I could write a lot about this. I teach in a high-needs, rural school that presents obvious challenges of students that lack supplies and parents that don't value education but the most frustrating thing to me is teaching in a broken system that hasn't evolved with the rest of the professions. Its challenging to get colleagues on board with tech literacy and it's hard to implement initiatives if administrators aren't supportive or too bogged down with discipline. I go to a few conferences each year and find them inspiring and rejuvenating but then I have to return to the broken system with 0% chance of changing things so I end up doing the changes in my own classroom instead.

What is most rewarding?

Students that get inspired by your actions.

What advice would you offer someone considering this career?

Anyone can be a teacher but only a small fraction are exceptional teachers...and it takes time. I hope to be one someday. Unfortunately, the pay checks don't distinguish between the exceptional and the bad. It's a fun subject to teach but if you plan on teaching biology or earth science without incorporating evolution into the curriculum, you should probably do the scientific community a favor and teach something else.

How much time off do you get/take?

I get 10 sick days and 3 personal days a year. I never come close to using them all. They roll over and accumulate. We get all major holidays and summers off but a great deal of professional development curriculum work happens then, usually unpaid.

What is a common misconception people have about what you do?

Teachers are targets by everyone for some reason. I've heard we're overpaid, underpaid, lazy, underworked, can't do "real jobs", and even responsible for state and federal deficit problems. I feel they're all caring individuals and are compensated fairly for what they do...I feel the exceptional ones could be compensated more though.

What are your goals/dreams for the future?

I want to plow through the red tape and create the right kind of learning environment that is FOR students. Schools seem to be about board meetings, capital improvement projects, taxes, bus drills, custodian needs, etc. We need to shift it to the students and their needs.

What else would you like people to know about your job/career?

Overall, very rewarding!

COMPREHENSION ORALE

Cours 2 | Science in Pop Culture

« Neil deGrasse Tyson Talks Science », 'Star Talk,' CNBC

NDT : *Startalk* with what we've done is we've _____ science and pop culture. So that's why my gue- I'm the _____, I'm the scientist and my guests are hardly ever scientists, they're people hewn from pop culture. And when you do that then you can they come in with tthe a pop culture _____ and we take science and clad the scaffold with it, and then you go home with a _____ of all the way science touches your life.

Interviewer 1 : The woman from *The Big Bang Theory*, she is a neuroscientist!

NDT : Yes, so Mayim Bialik who's in this current season as she plays, she not only is a neuroscientist, she plays one on television. So that was fun to speak to her about her _____, cuz she went she was an actress before she _____ to school and then got her PhD in neuroscience, so that was fun to speak with her about this.

Interviewer 1 : People want the real story with the science on things. So if you look at all the movies that we've seen recently, whether it's *the Martian*, whether it's something else...

NDT : Or *Interstellar*, or the movie *Gravity*.

Interviewer 1 : Which one of these is is the most _____ in reality ?

NDT : Can I just boast for just a minute? So the author of this story that became the movie *Mars*, his name is Andy Weir. If you speak to him, he's an _____ so he's writing this story about how Mark Watney is gonna survive bringing his scientific and engineering wit to this task, and what he said was when he was writing the story, he was imagining that I was _____! « What would Tyson say? No, no, I gotta get it right 'cause Tyson might tweet about this ». So, I think we're at a time when we can celebrate the urge that creative people have to get things scientifically right, and it's- it's a I think it's a new era in which people are _____ the value and role of science in our lives, but more importantly in our civilization.

Interviewer 2 : Can I just ask you- two Elon Musk questions: any chance we're living in a simulation? As he's described.

NDT : Yeah, I think this idea _____ back in the _____. It was a philosopher - forgive me, I've forgotten his name – who thought it – as computing power grows, we can create worlds in a computer.

Interviewer 1 : Like we're living in the matrix...

NDT : I'm getting there, I got this! So if you have tremendous computing power, you can simulate every possible thing that could _____, including the neurosynaptic firings in the characters that you create. So in that sense, why what's to stop you from thinking that the characters you created are themselves real? Now, if you've created this world, and the world has built into it a kind of _____, maybe those characters will say « I want to create a simulation ». So that they create simulations within the simulations, _____ : « How many total simulations are there? How many total worlds are there out there? ». There's only one real world and everything else is a simulation, which are you more likely to be in?

Interviewer 1 : _____ !

Cours 4 | Cryonics (Transhumanism 2)

TRANSCRIPTION AUTOMATIQUE **« Cryonics Institute », Youtube**

the fascinating science of cryonics could give people a second chance at life the whole idea of cryonics started with physics professor Robert Ettinger he pioneered the movement with his seminal book the prospect for immortality he then went on to launch the cryonics Institute but just one is cryonics and what does the cryonics Institute do cryonics is a procedure that preserves the human body at low temperatures after death in the hope it can be revived in the future the process should begin immediately after a person is declared legally dead even though the heart has stopped beating they're still brain function during this period so a heart-lung resuscitator is used to stabilize the body and keep the brain supplied with blood and oxygen the body is cooled in an ice bath to slow down metabolic demand and to protect both DNA and organ structure then anticoagulants and protective medications are injected into the body to stop the blood clotting during transit the body is then packed and iced and transported to a cryonics facility once there a process called vitrification begins where the blood is replaced with a cryoprotectant antifreeze solution this is done to prevent the cells from freezing and to stop ice crystals from forming around organs at extremely low temperatures the body is then placed in a computerized vapor cooling chamber and cooled to negative 196 degrees Celsius once the body is properly cooled the patient is transferred to a long-term cryo stat storage container thousands of people are signed up for cryonics throughout the world and the numbers are steadily growing the cryonics Institute is the world's largest provider of whole body cryonics they have performed more whole body human and pet cryo suspensions than any other organization

Cours 5 | Artificial Intelligence

Answer the following questions as precisely as you can:

Video 1 : 'A New Dating Service Uses Your DNA to Find Love'

1. What is *Pheramor*?

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2. Where does the word *Pheramor* come from?

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3. Who founded *Pheramor*?

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4. How does *Pheramor* work?

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5. Is this technology reliable?

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6. What else can *Pheramor* do?

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Video 2 : *Black Mirror*, 4x04, "Hang the DJ"

1. According to you, what is the plot about?

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2. Can you guess when and where the action is set?

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Cours 6 | An Apocalyptic Future

VIDEO 1 : *Revolution* (2012) - S1E1 "Pilot", The Blackout

Miles:

Ben:

Miles:

Ben:

Character 3:

Miles:

Ben:

Miles:

Ben:

Miles:

Ben:

Miles:

Ben:

Miles:

Ben:

VIDEO 2 : « Snowpiercer: Welcome to the New World [PROMO] | TNT »

First, the _____ changed. The _____ knew why, but they still _____
with their _____.

_____ made the Earth even hotter. Her ice _____, and all her
_____ crashed. So the men of science tried to cool the Earth to reverse the damage they
had _____, but instead they _____.

Only the _____ Mr. Wilford _____ the future, and he prepared a great ark
train. In the final days of the freeze, the rich, many of them _____, retreated to
Snowpiercer, _____ cars long.

So we, the people, the survivors _____, we _____ their train.

VIDEO 3 : Teenagers Open Up About Climate Change, Money and an Uncertain Future, *Channel 4*

A : I think that people over the age of like 55 shouldn't be in _____ because it's not their _____.

B : As much as I am British and _____, I would say, like, I've got a _____.

C : I think I'm my _____ and I don't think anyone should label me themselves or _____ me. I think I should have my own idea of who I am, _____.

D : Don't live life trying not to get _____, if you do that you're not living, you're just being _____, and what's the point in being careful?

E : Us as humans could be doing better to save our own planet. The little things like _____, like _____... I feel like we could be doing it and we're not doing _____.

F : Climate change is a really big _____ and Parliament doesn't seem to be doing anything about it.

G : I don't know if I can fix _____ or whatever is going on. But if the _____ presents itself, I'll probably try.

H : If climate change doesn't kill us first, it's gonna be _____, you know.

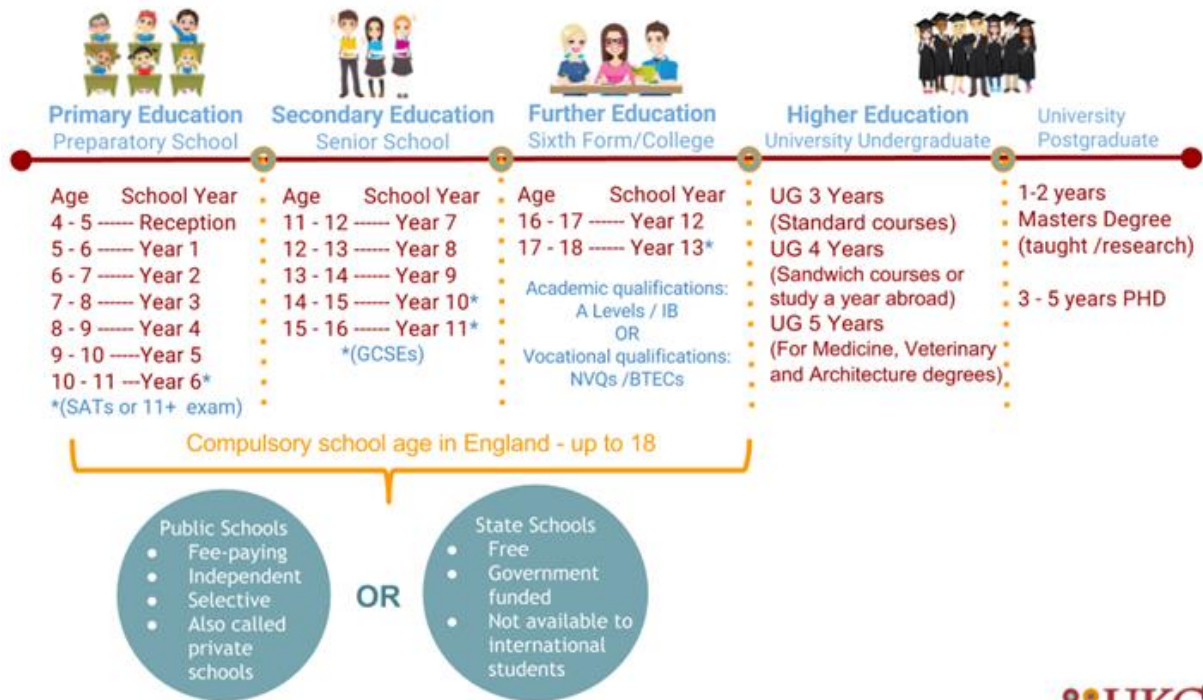
A : We can't keep going at the _____ that we are. It's going to _____ . So we need to do something.

I : I've sort of just lost _____ with this country. I'll just _____ and go. They _____ . When I get to _____, I'll _____.

ANNEXES

Teaching in the U.K.

UK Education System



Please note that Scottish Education System differs from the rest of the UK.

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U.S. Education System

