

Co intervention Classe de 1ère Bac STI2D

AXE 5 : Scientific Innovations and Responsibility/ Tâche finale : Imaginer le futur grâce aux possibilités des nouvelles technologies. Objectif grammatical : la modalité du possible et du probable (modalité épistémique)



Dismounted warfighters often carry heavy combat loads that increase the stress on the body leading to potential injuries. With a HULC exoskeleton, these heavy loads are transferred to the ground through powered titanium legs without loss of mobility.



HULC®

Word Bank:

weight → poids

support → soutien (ici)

strength → force

joints → articulations

to impede → empêcher

range → éventail

Oral comprehension

I- Listen to the following extract and fill in the gaps:

The HULC is an anthropomorphic **exoskeleton** which mimics the 1 _____ form and provides extra support and enables a person to carry more weight than he 2 _____ could. Exoskeleton 3 _____ are considered part of 4 _____ **field**, if you want to think about them as wearable robots, that's pretty **accurate**, they sense what the user 5 _____ to do, where the user wants to go, and then, make the motion. We'd like to call these: maintenance 6 _____. The exoskeleton is primarily 7 _____ of titanium components which are both lightweight and provide the strength needed to 8 _____ **the load**. A microprocessor takes on readings from the sensors that are throughout the 9 _____ and 10 _____ where the user wants to 11 _____ and then 12 _____ the actual 13 _____ system to actuate the joints to provide the 14 _____. You can walk, you can run, you can bend, you can **crawl**, you can leap... it does not impede your range of motion whatsoever. This technology could be a real 15 _____ to the 16 _____, just 17 _____ your soldier operating at 18 _____ feet in the Afghan 19 _____ and been asked to 20 _____ 21 _____ pounds up in that level thin air... how exhausted you would be once you got there! An exoskeleton provides you the ability to carry that weight the same 22 _____ but to have 23 _____ left to execute the 24 _____ once you are there.



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II- Find a title for the document.

III-Say if the following statements are true or false and always justify:

1- This document is an extract from a science-fiction film.



2- You cannot run with the equipment described.

3- This equipment could be used during a war.

4- This equipment is made with heavy components.

5- The HULC could help the soldier to carry out his mission.

6- Jim Ni is the inventor of this machine.

IV- Find the equivalents in the script of the extract for:

Qui imite	
Qui fournit une aide supplémentaire	
Permet à une personne	
Des robots que l'on porte sur soi	
Ils ressentent ce que l'utilisateur veut faire	
Pour porter la charge	
Cela n'empêche pas	
À quel point vous seriez épuisé	



V- Traduire du début à : « motion » (ligne 6)

VI- Match the words with their synonyms / 'sɪnənɪmz/ and translations

Words in the text	Synonyms	Translations	Results: ex:1-b-5
1- exoskeleton	a-(to) move as close as possible to the ground	1-champ/domaine	1-_____
2- field	b-the weight which is carried	2-ramper	2-_____
3- accurate	c-(here) domain	3- exact	3-_____
4- the load	e-precise	4-exosquelette	4-_____
5-(to) crawl	f-an external articulated mechanism	5- la charge	5-_____

VII Exercice d'anglais 'Can, Must et May'

1. The child wants to drive his father's car. He asks his father in a very polite way _ _ _ _ I drive your car?
2. _ _ _ _ I go to the sea next summer? (capacité)
3. Sarah has a flexible body. She _ _ _ _ practice gymnastics very well (consequences logiques).
4. We _ _ _ _ protect the old people.
5. It _ _ _ _ snow; look at the sky.
6. She has worked for many years in a restaurant. She _ _ _ _ cook wonderful meals.
7. The wind _ _ _ _ blow.
8. I never go to the sea. I _ _ _ _ swim.
9. We _ _ _ _ drink and drive.
10. _ _ _ _ she visit her uncle? Is it compulsory?

