Sequence 6: interactions

Fiche de synthèse mobilisée (collection en français) :

- Fiche n°6 : interactions, actions et forces

Sommaire des activités ETLV :

- ACTIVITY 1: Sky diving
- ACTIVITY 2: Analyzing speed during a skydive

ACTIVITY 1: Sky diving

Objective: understanding forces

DOCUMENT 1: Fluid friction or drag

Fluid friction describes the friction between layers of a viscous fluid that are moving relative to each other.

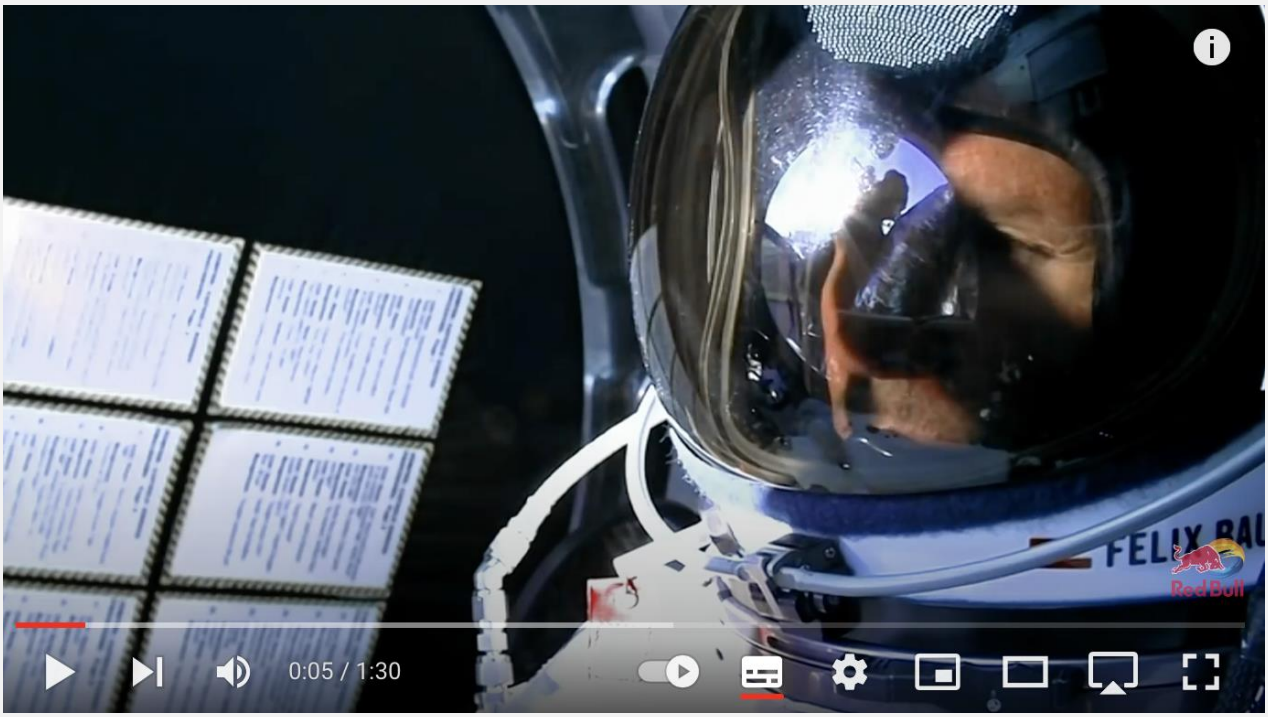
Source: Wikipedia

DOCUMENT 2: Felix Baumgartner

Felix Baumgartner is an Austrian skydiver, daredevil and BASE jumper. He is best known for jumping to Earth from a helium balloon from the stratosphere on 14 October 2012 and landing in New Mexico, United States as part of the Red Bull Stratos project. Doing so, he set world records for skydiving an estimated 39 km, reaching an estimated top speed of 1,357.64 km/h, or Mach 1.25. He became the first person to break the sound barrier relative to the surface without vehicular power on his descent.

Source: Wikipedia (text and pictures)

DOCUMENT 3: The skydive



Source : https://www.youtube.com/watch?v=FHtvDA0W34I&t=85s

Acquiring vocabulary:

Watch the video, read the documents. Find a translation for the following expressions:

English	French
free fall	
world record	
speed	
breaking the sound barrier	

Understanding:

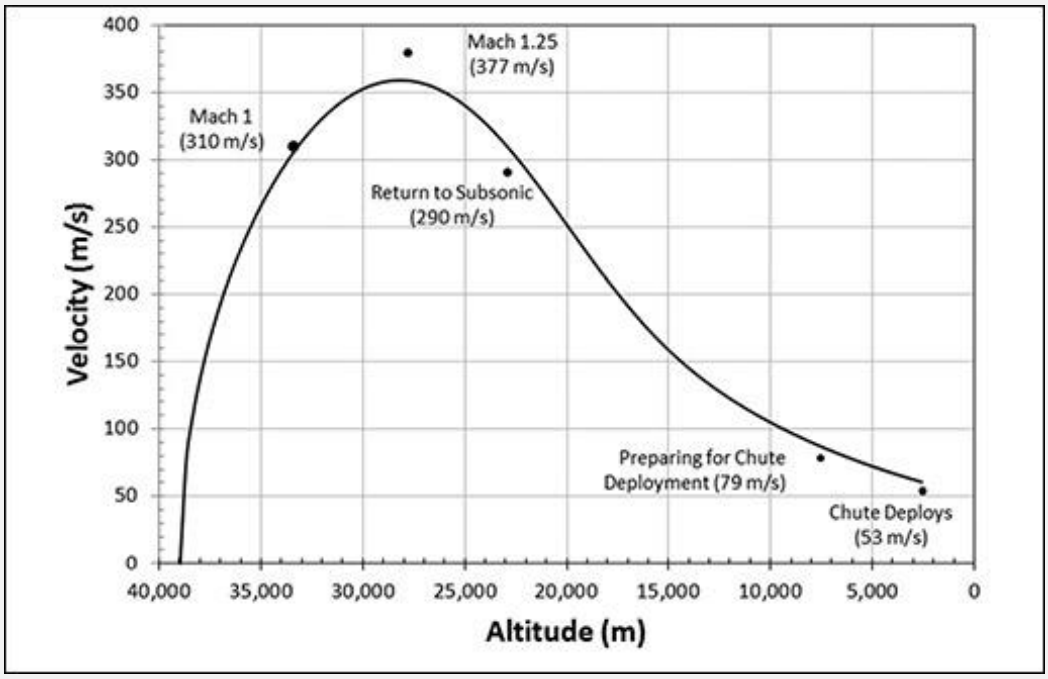
Represent Felix as a cross and draw the force(s) he is subjected to in the stratosphere (in the absence of air).

Represent Felix as a cross and draw the force(s) he is subjected to in the atmosphere (in the presence of air).

ACTIVITY 2: Analyzing speed during a skydive

Objective: understanding changes in speed during a movement

DOCUMENT 1: Speed during the skydive



Source: American Association of Teachers

Presenting:

Prepare a short presentation during which you will explain the changes in speed during the skydive

Activity summary

What you must remember:
- speed
- force
- friction or drag

Skills linked to the curriculum**:**

Compétences	Capacités à maîtriser	Où dans cette séquence ?
APP	• Utiliser du vocabulaire spécifique	Activités 1 et 2
	• Lire et comprendre des documents scientifiques	Activités 1 et 2
COM	• S'exprimer à l'écrit et à l'oral en utilisant le vocabulaire adapté	Activité 2
REA	• Modéliser une action mécanique par une force. • Établir un bilan de forces. • Effectuer un bilan quantitatif de forces pour un système à l'équilibre ou en mouvement rectiligne uniforme.	Activité 1