

HOROLOGY

Cette séquence a pour objectif d'expliquer le fonctionnement d'une montre en anglais à partir d'un schéma explicatif

sommaire

- Slide n°6 : Identify five basic elements
- Slide n°7 : answers
- Slide n°8 : rôle of the different mechanisms
- Slide n°9 : energy
- Slide n°10 : wheels
- Slide n°11: escapement
- Slide n°12 : controller
- Slide n°13 : time indicator

sommaire

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- Slide n°15 : tâche intermédiaire
- Slide n°16 English diagram
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- Slide n°18:French /English vocabulary
- Slide n°19 :French /English vocabulary
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sommaire

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How a mechanical watch works

C:\Users\patricia\Documents\horology\How a mechanical watch works
- YouTube [360p].mp4

<https://www.youtube.com/watch?v=uGcolue1Bs8>

Act n° 1: looking at the video, identify the 5 basic elements used in a mechanical watch

Act n° 1: looking at the video, identify the 5 basic elements used in a mechanical watch

- Energy
- Wheels
- Escapement
- Controller
- Time indicator

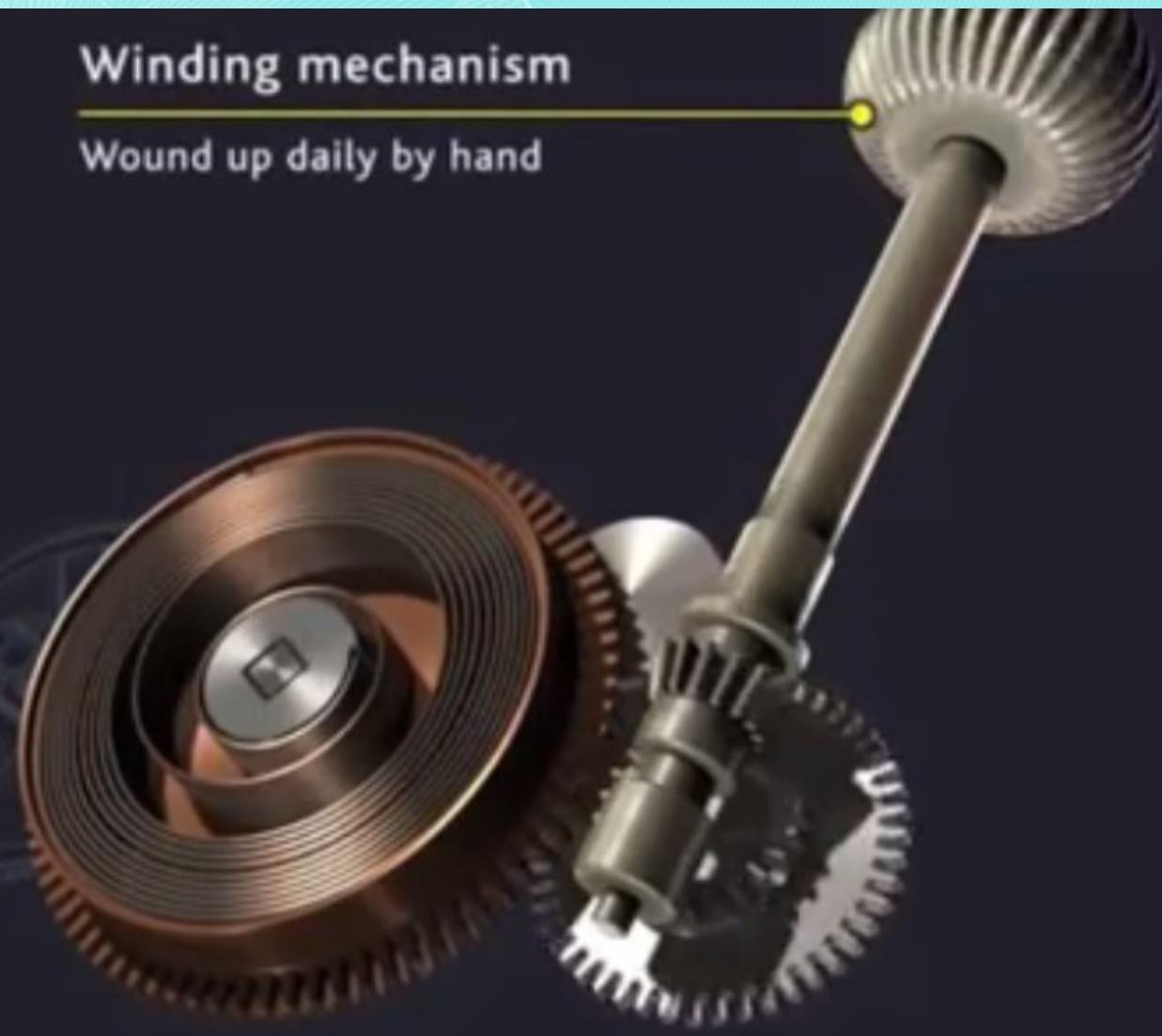
Act 2: for each of them, explain its role in the mechanism

- Energy
- Wheels
- Escapement
- Controller
- Time indicator

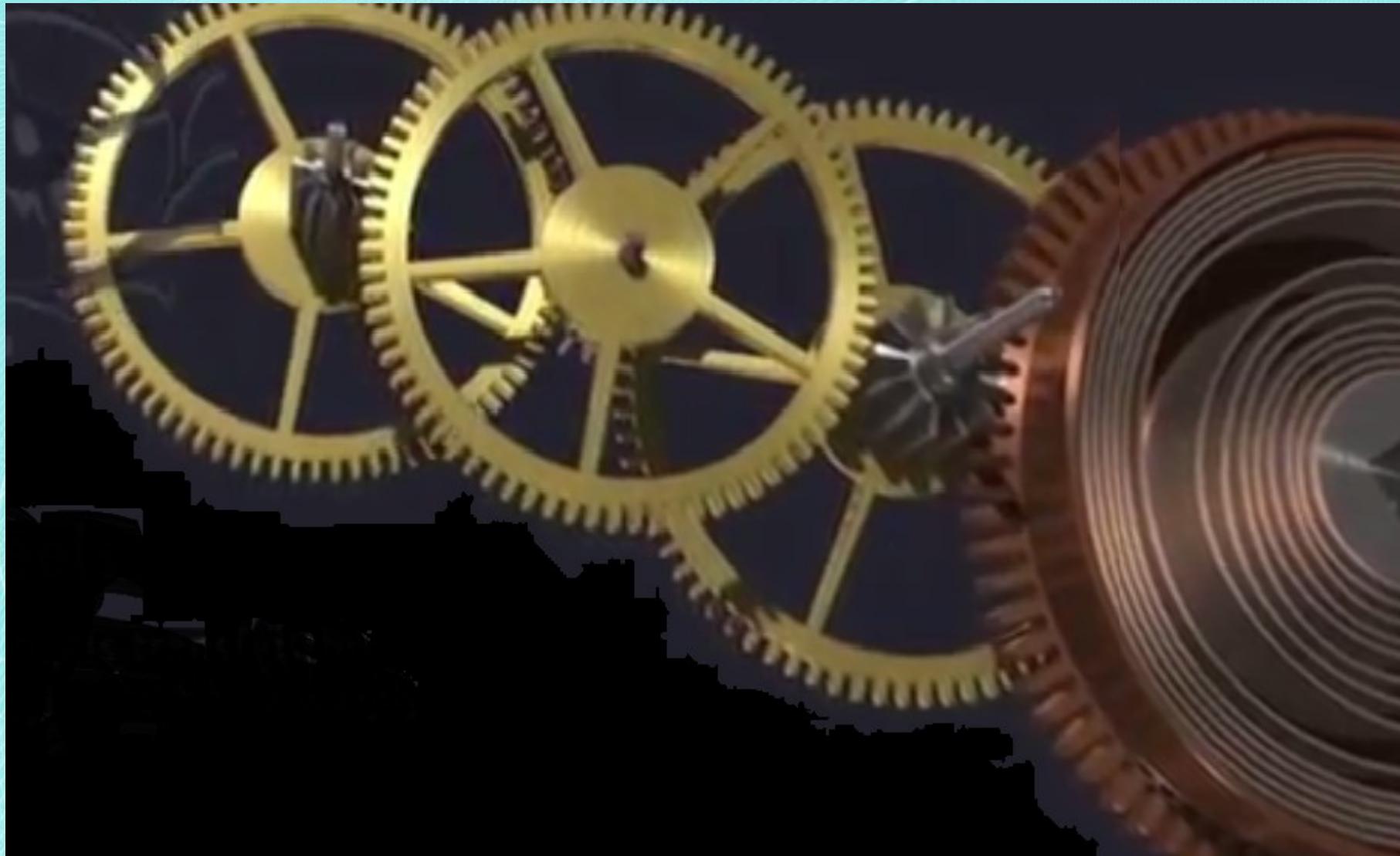
ENERGY

Winding mechanism

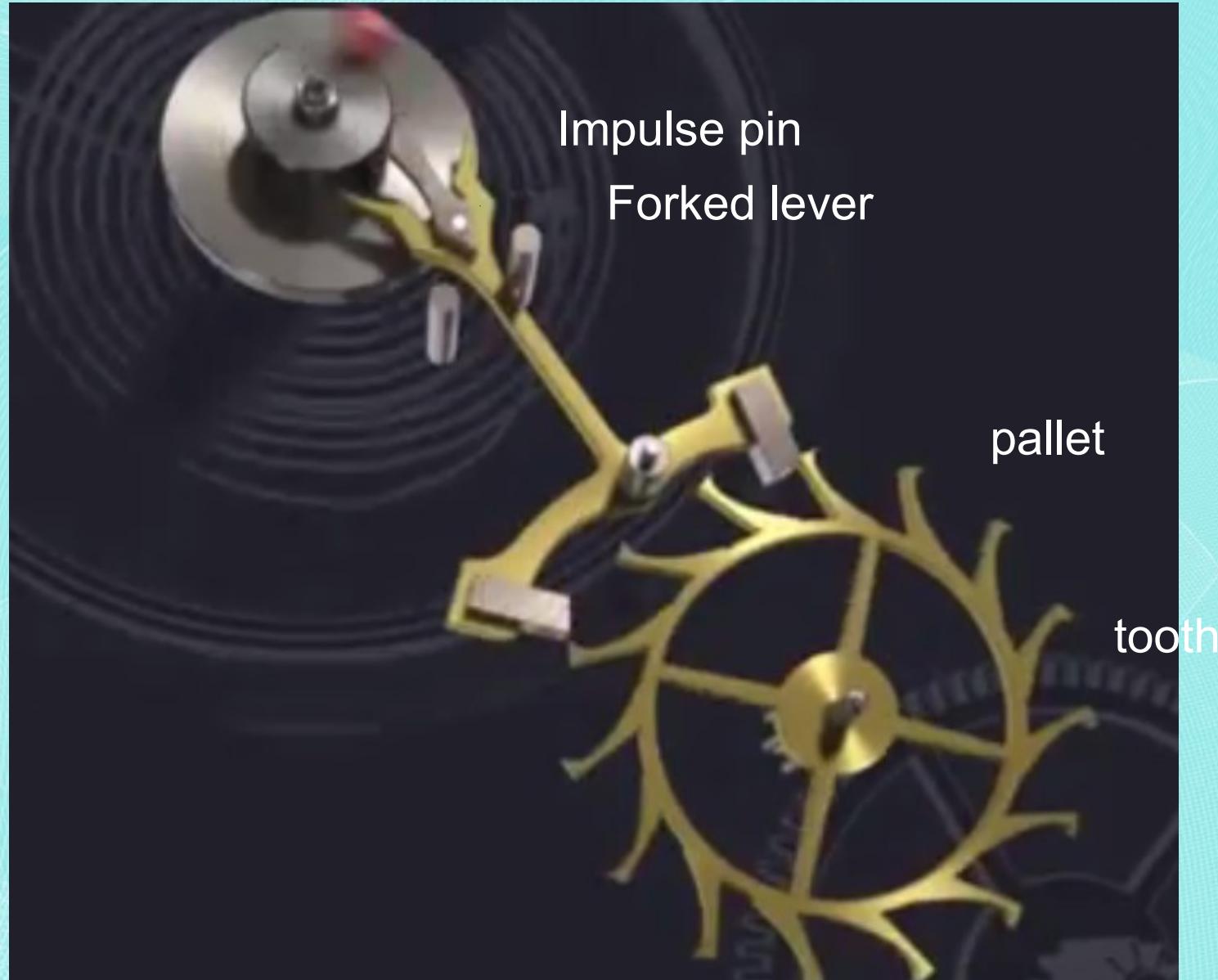
Wound up daily by hand



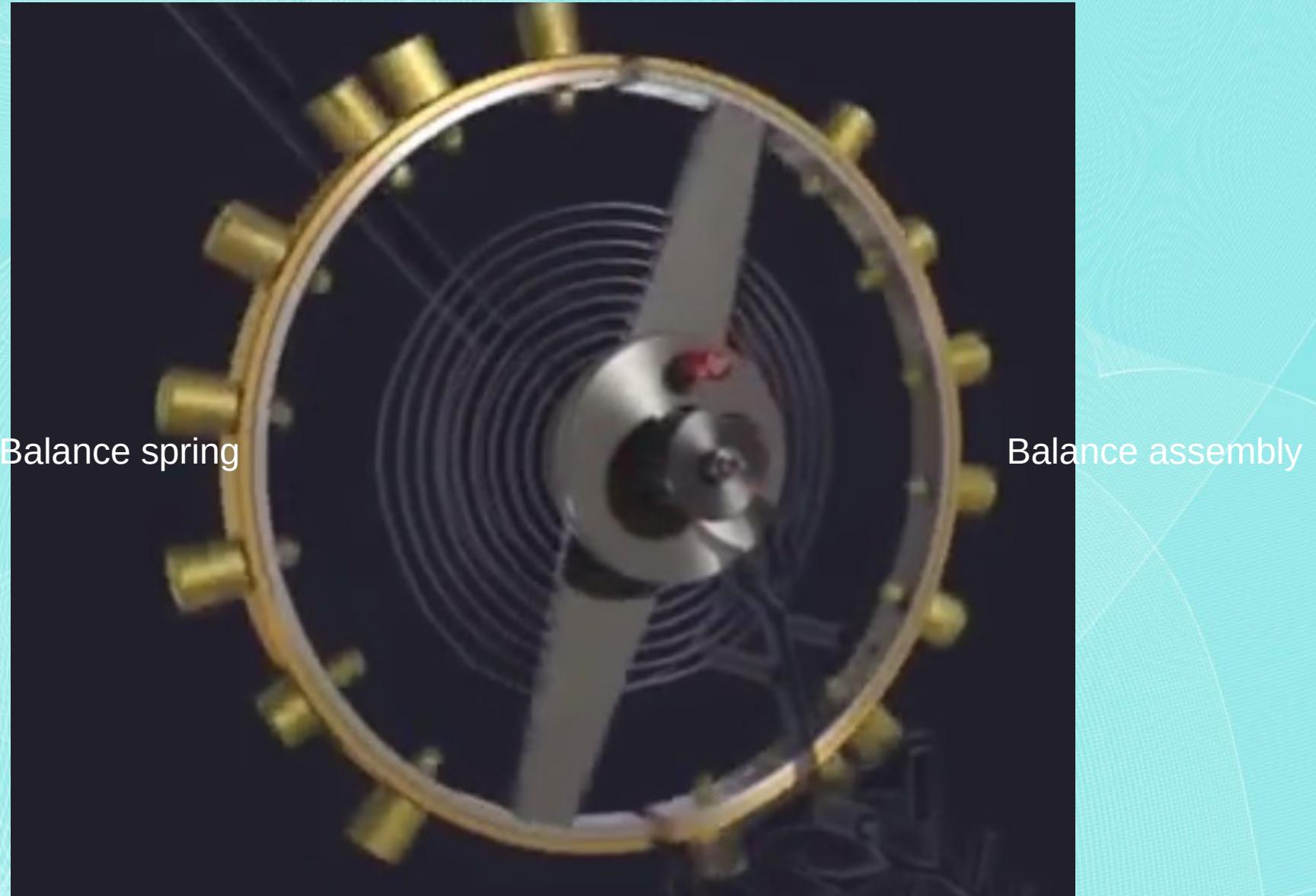
The wheels



The escapement



The controller



Time indicator



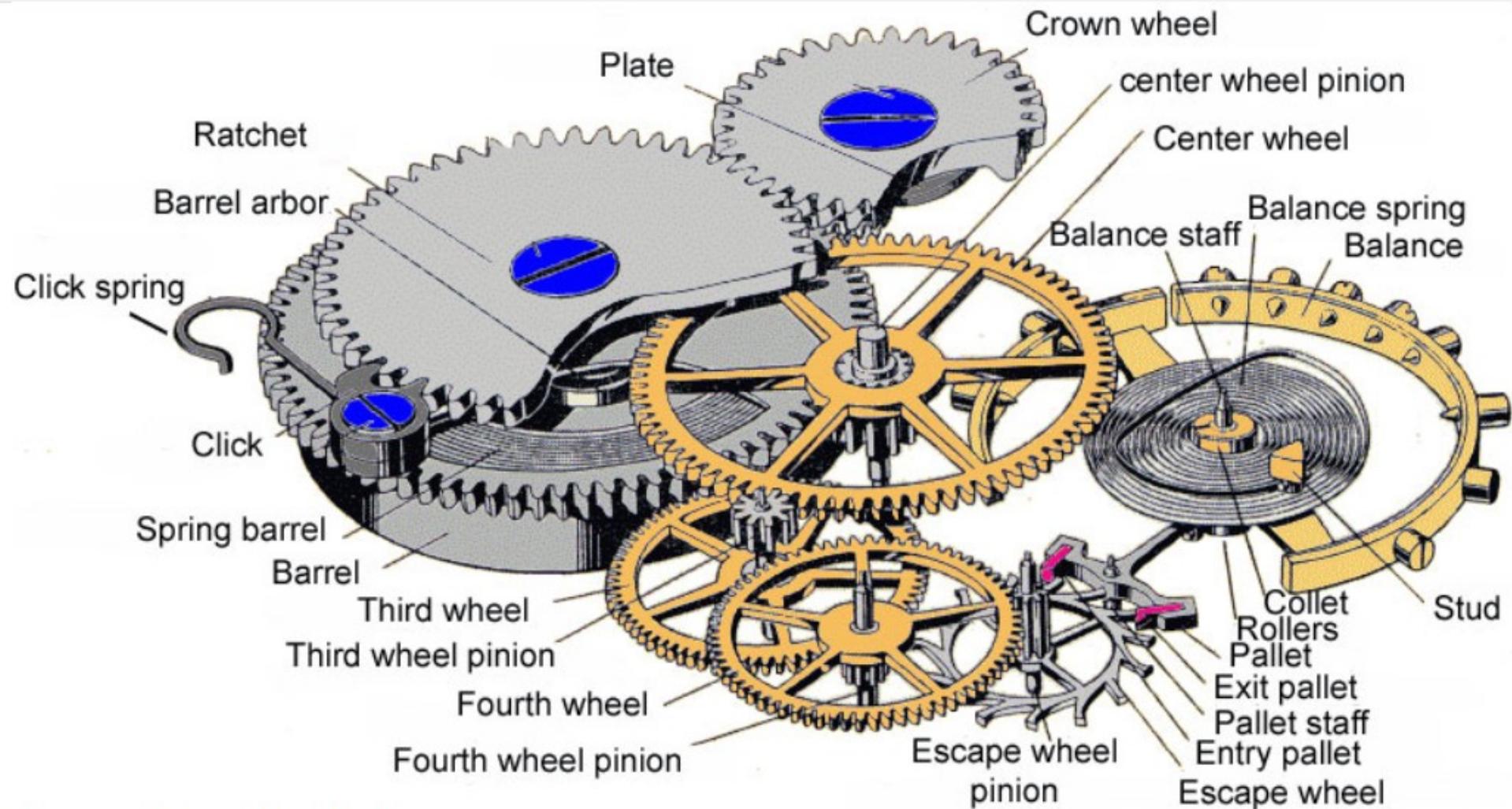
Act 2: for each of them, explain its role in the mechanism (answers)

- Energy: winding energy which is wound up daily by hand; Then a mainspring stores the winding energy. The barrel transfers energy to the wheels
- Wheels : transfer the enrgy through the watch
- Escapement : stops the energy from being out of control. The escape wheel moves in step. The pallets lock and unlock the escape wheel when the latter push its teeth against the pallet. Then, the forked lever pushes against the impulse pin
- Controller : the swing oft the balance assembly controls the escapement while the balance assembly swings back and forth. The balance spring keeps the action regular
- Time indicator : part of the watch which shows time with the help of the canon pinion which takes care of minute hand. By the way the hour wheel carries out the hour hand. A fourth wheel may carry out the seconds

TÂCHE INTERMEDIAIRE

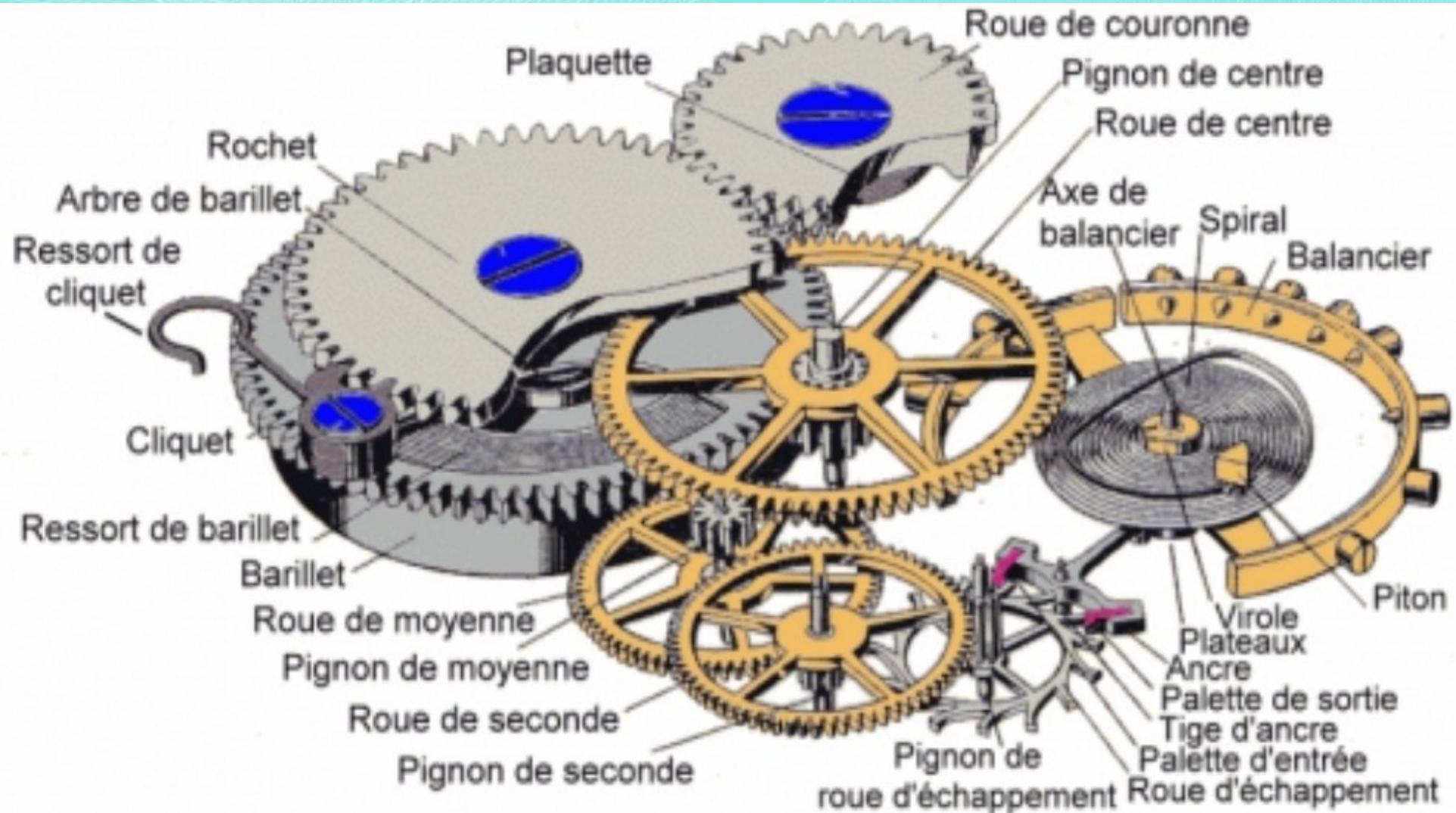
- A l'aide du vocabulaire explicité , décrivez en quelques phrases le fonctionement d'un mechanisme de base
- Thanks to the recent learned words, explain how a basic watch mechanism works

Act n° 3 : Looking at the following schemes create a grid which links French and English technical words



Extracted from horologist.com

Now in French



Fill in the grid

FRENCH WORDS	ENGLISH WORDS
PLAQUETTE	
ROUE DE COURONNE	
PIGNON DE CENTRE	
ROUE DE CENTRE	
AXE DE BALANCIER	
SPIRAL	
BALANCIER	
PITON	
VIROLE	
PLATEAUX	

Answering grid

FRENCH WORDS	ENGLISH WORDS
PLAQUETTE	PLATE
ROUE DE COURONNE	CROWN WHEEL
PIGNON DE CENTRE	CENTER WHEEL PINION
ROUE DE CENTRE	CENTER WHEEL
AXE DE BALANCIER	BALANCE STAFF
SPIRAL	BALANCE SPRING
BALANCIER	BALANCE
PITON	STUD
VIROLE	COLLET
PLATEAUX	ROLLERS

Fill in the grid grid

ANCRE	
PALETTE DE SORTIE	
TIGE D'ANCRE	
PALETTE D 'ENTREE	
ROUE D'ECHAPPEMENT	
PIGNON DE ROUE D'ECHAPPEMENT	
PIGNON DE SECONDE	
ROUE DE SECONDE	
PIGNON DE MOYENNE	

Answering grid

ANCRE	PALLET
PALETTE DE SORTIE	EXIT PALLET
TIGE D'ANCRE	PALLET STAFF
PALETTE D 'ENTREE	ENTRY PALLET
ROUE D'ECHAPPEMENT	ESCAPEMENT WHEEL
PIGNON DE ROUE D'ECHAPPEMENT	ESCAPE WHEEL PINION
PIGNON DE SECONDE	FOURTH WHEEL PINION
ROUE DE SECONDE	FOURTH WHEEL
PIGNON DE MOYENNE	THIRD WHEEL PINION

Fill in the grid

ROUE DE MOYENNE	
BARILLET	
RESSORT DE BARILLET	
CLIQUET	
RESSORT DE CLIQUET	
ARBRE DE BARILLET	
ROCHER	

Answering grid

ROUE DE MOYENNE	THIRD WHEEL
BARILLET	BARELL
RESSORT DE BARILLET	SPRING BARELL
CLIQUET	CLICK
RESSORT DE CLIQUET	CLICK SPRING
ARBRE DE BARILLET	BARELL ARBOR
ROCHER	RATCHET

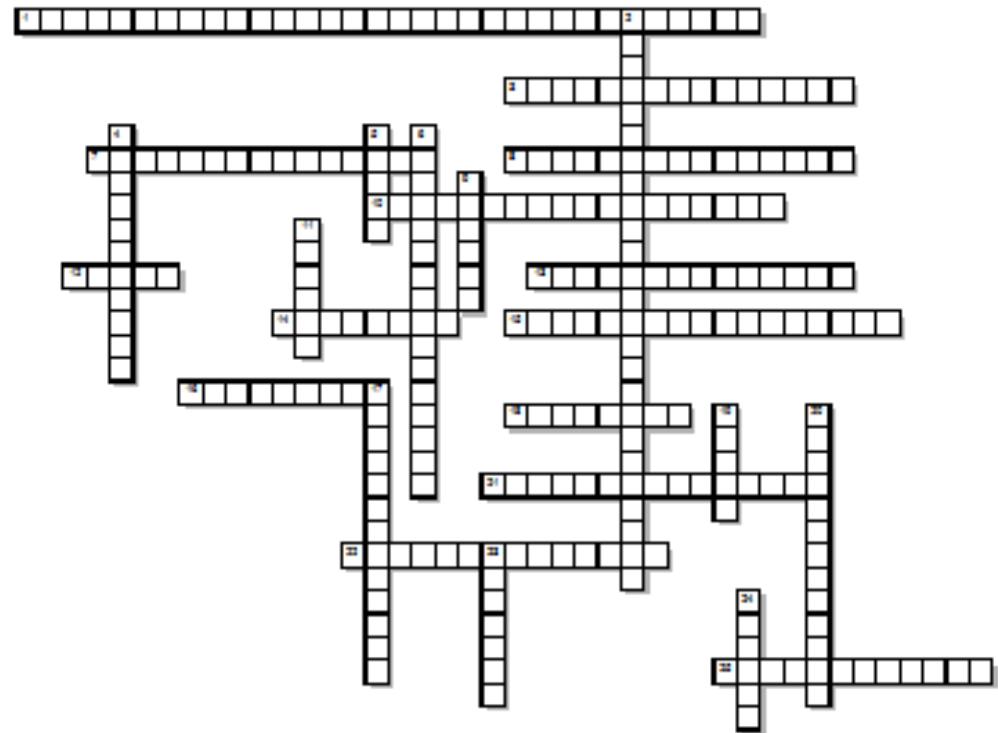
TÂCHE INTERMEDIAIRE

- Explain the rules of a domino game. You should use modal verbs to give instructions or the imperative form

ACT n° 3 : Playing with dominos. Find the right
translation and stick the dominos

You should work in pairs

crosswords



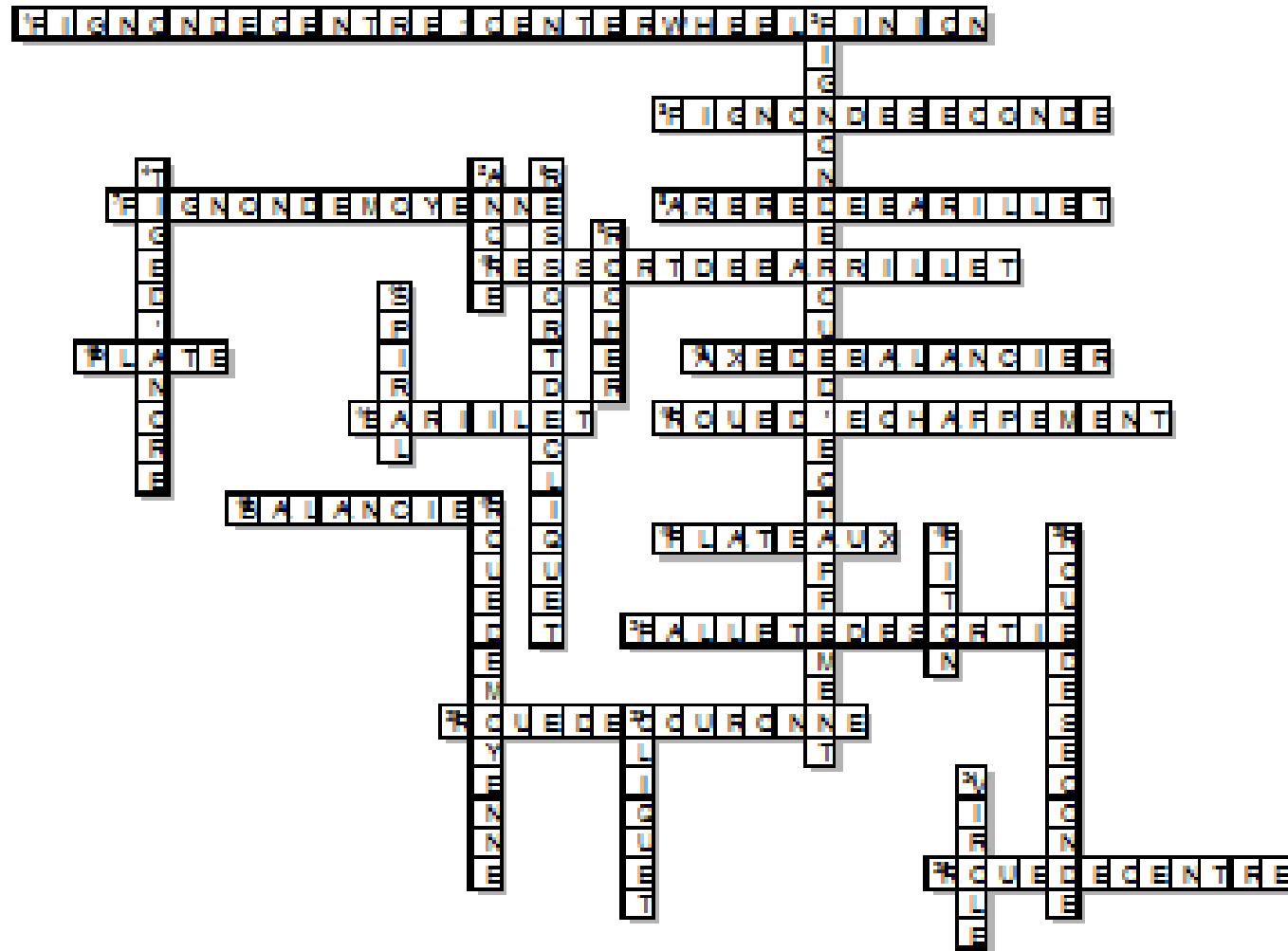
ACROSS

- 1 ACROSS OR CENTER CENTER WHEEL PINCH
- 2 FOURTH WHEEL PINCH
- 3 THREE WHEEL PINCH
- 4 SPOKE
- 5 SKEWED SPOKE
- 6 SPARE TIRE
- 7 BALANCE STEM
- 8 TIRE
- 9 SPOKE
- 10 BALANCE WHEEL
- 11 BALANCE
- 12 SPOKE
- 13 SPARE TIRE
- 14 CROWN SPOKE

DOWN

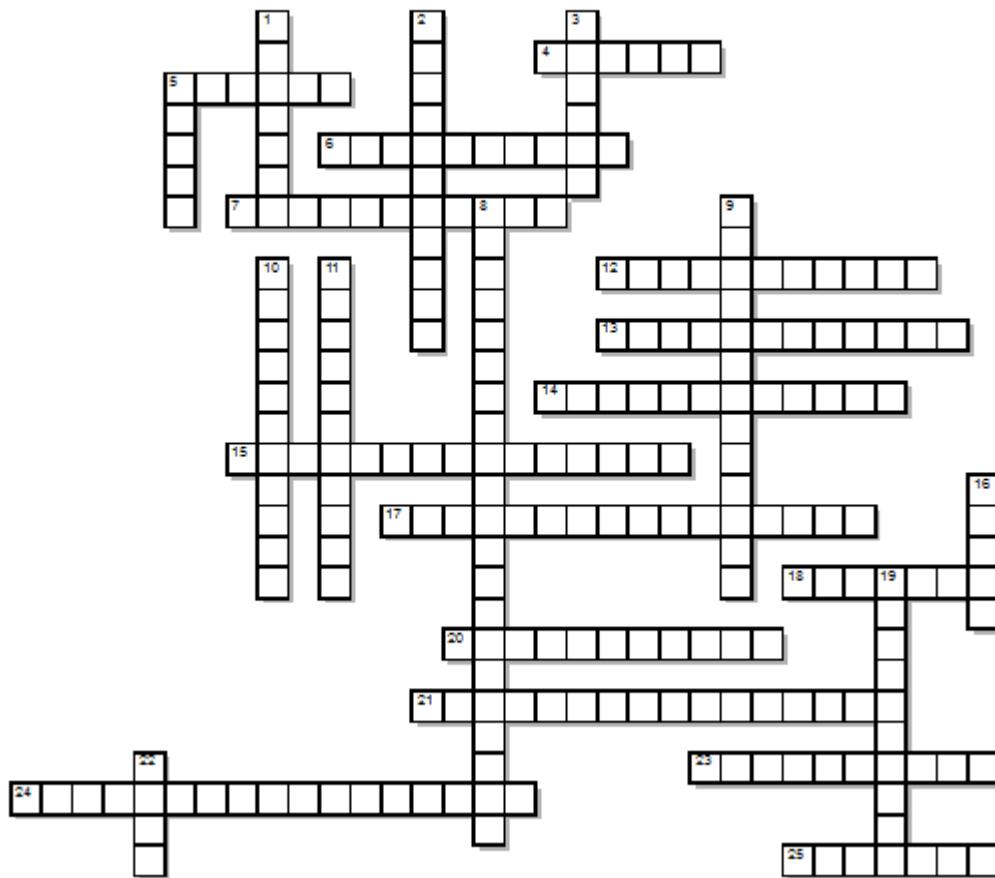
- 1 EQUIPMENT WHEEL PINCH
- 2 VALVETRIFF
- 3 VALVE
- 4 SPARE SPRING
- 5 SPOKE
- 6 BALANCE
- 7 SPOKE
- 8 FOURTH WHEEL
- 9 TIRE
- 10 BALANCE ENGINE
- 11 THIRD WHEEL
- 12 TIRE
- 13 FOURTH WHEEL
- 14 CROWN
- 15 SPOKE
- 16 CROWN

Crosswords ANSWERS



CROSSWORD 2

HOROLOGY MECHANISM



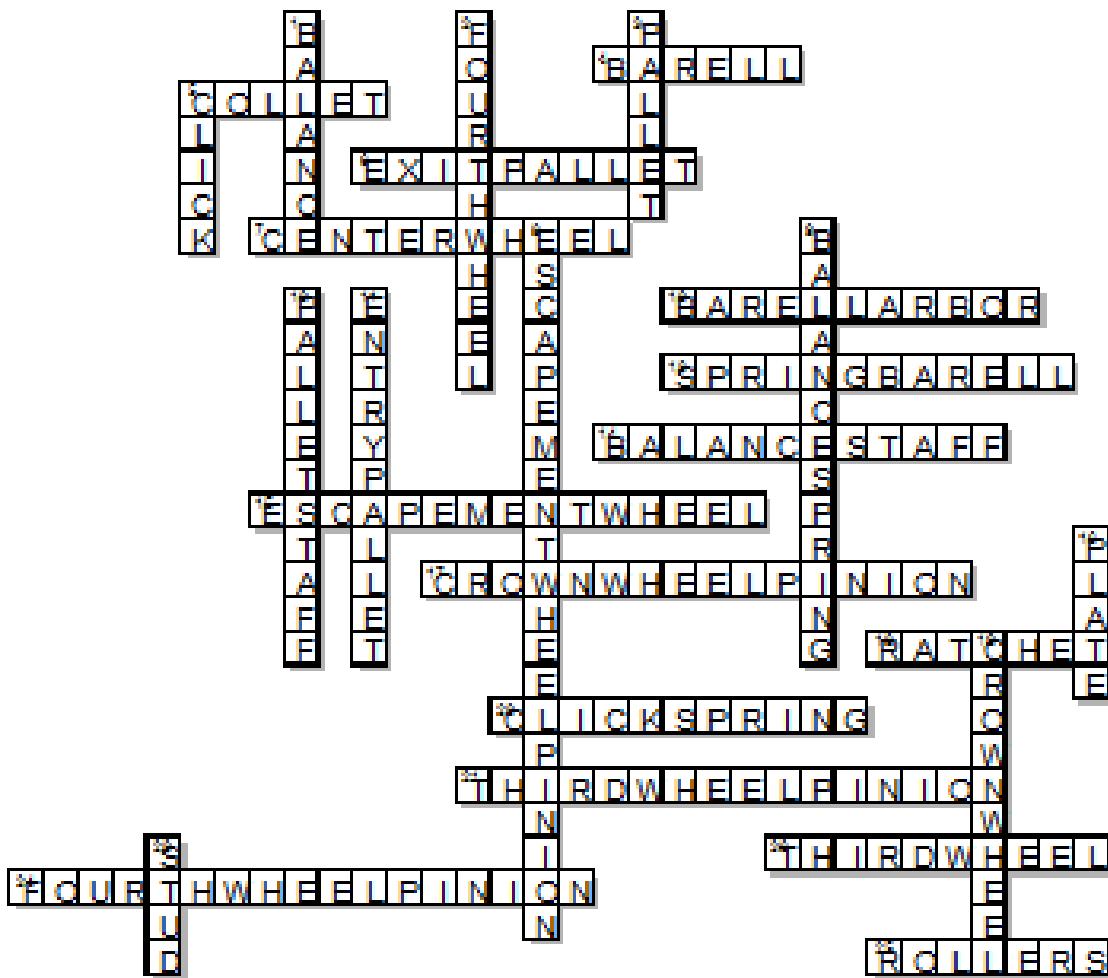
ACROSS

- 4 BARILLET
- 5 VIROLE
- 6 PALETTE DE SORTIE
- 7 ROUE DE CENTRE
- 12 ARBRE DE BARILLET
- 13 RESSOR DE BARILLET
- 14 AXE DE BALANCIER
- 15 ROUE D'ECHAPPEMENT
- 17 PIGNON DE ROUE DE COURONNE
- 18 ROCHE
- 20 RESSORT DE CLIQUET
- 21 PIGNON DE ROUE MOYENNE
- 23 ROUE MOYENNE
- 24 PIGNON DE ROUE DES SECONDES
- 25 PLATEAUX

DOWN

- 1 BALANCIER
- 2 ROUE DES SECONDES
- 3 ANCRE
- 5 CLIQUET
- 8 PIGNON DE ROUE D'ECHAPPEMENT
- 9 RESSORT DE BALANCIER
- 10 TIGE D'ANCRE
- 11 PALETTE D'ENTREE
- 16 PLAQUETTE
- 19 ROUE DE COURONNE
- 22 PITON

CROSSWORD 2 ANSWERS



Tâche finale

- Expliquez le fonctionnement du mécanisme d'une montre à l'aide du schéma donné