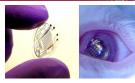
#### **BIONIC:** HOW TO COPY THE REAL?







- Improve the performances thanks to bionic.
- Undestand sensors.
- Program robots.

#### **SPORT:**

## How can the equipment improve performance?

- Materials constituting the skis
- Intelligent clothes





### After the 2°

As in each exploration teaching, all the choices are still possible after the  $2^{\circ}$ .

ES allows to discover the possibilities of continuing studies in «SI» or « STI2D» series, to prepare technical or scientifical studies in « BTS», « IUT», at the university and in the "grandes écoles".

## **Contacts**

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#### **INTERNET:**

http://lyc71-cassin.ac-dijon.fr/
OR « cassin macon » ON GOOGLE

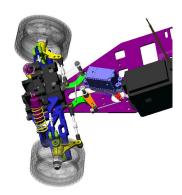






2° Exploration teaching

# **ENGINEERING SCIENCES**



How does it work?
How has it been conceived?

http://lyc71-cassin.ac-dijon.fr/ OR « cassin macon » ON GOOGLE

## **OBJECTIFS:**

- To make pupils discover the links between society and technology
- To understand how technical objects function and how they are built in the respect of sustainable development.
- To learn the approach of conception
- To work on your own educational guidance
- To learn to communicate with computers

## **LEARNING HOURS**

1,5H / week

Most activities are made in autonomy by small groups of 2 pupils. The work is based on the equipment of the engineering sciences lab.

## **ACTIVITIES DONE BY THE PUPILS**

To understand how the products are conceived:

- by using the products
- by reading digital technical documentation
- by using **professional softwares** (3D modelling tools, CAD, CAS, electrical and pneumatic engineeringõ)
- by writing reports
- by making a presentation to the class

#### THEMES ABORDES

# Home automation (domotics): Why and how to automate the house?

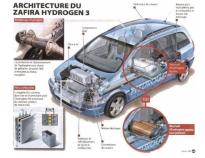


To understand the functioning of « intelligent » houses which make it possible to manage the heating, lighting, wateringõ to improve comfort, to make energy saving and to improve safety.



#### RENEWABLE ENERGY





Which energy to use to preserve our planet?



