

## Dynamics

### Objectius

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- To learn some specific content from the Science curriculum through English.
- To read, write and talk about dynamics in English.
- To develop cognitive skills in a CLIL context.
- To engage students positively in a CLIL environment to benefit both from the learning of the content and the learning of the language.

### Descripció de la proposta

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This project is designed to be developed in 4th of ESO, in the subjects of Physics & Chemistry. It is a Science unit focusing on dynamics and using a CLIL approach in English.

The project introduces some principles of classical physics. It makes an introduction to the use of vectors in mechanics. It also works on the approaches of Archimedes' work in physics and describes Newton's law of universal gravitation.

### Aspectes didàctics i metodològics

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This project is structured according to the number of lessons in the lessons plans. In each lesson the information provide has been organised in content, procedure and tasks. Activities have been labelled with different symbols in order to identify them.

Lesson 1: Newton's laws of motion.

Lesson 2: Types of forces and vectors.

Lesson 3: Archimede's principle.

Lesson 4: Satellites.

### Recursos emprats

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This didactic sequence contains downloadable worksheets addressed to students and ready to use materials and resources for teachers (ppt presentations, flashcards, games, videos, etc).

### Competències i continguts que es treballen de forma destacada

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The lesson plans of this didactic sequence have been designed taking into account the specific skills of the two subject areas involved plus some transferable competences.

## **Alumnat a qui s'adreça especialment**

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These CLIL materials are suitable for students of secondary education (ESO).

## **Interdisciplinarietat, transversalitat, relacions amb l'entorn...**

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This didactic sequence combines content from the English language curriculum and the Science curriculum.

## **Documents adjunts**

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The materials of this didactic sequence are structured as follows:

- **Introduction** to the didactic sequence with information about the context and the development of the units.
- **Lesson plans:** detailed information of the different units contained in the sequence with the teaching objectives, learning outcomes and assessment criteria.
- **Students' worksheets:** downloadable ready to use materials in pdf files.
- **Teaching notes:** step by step instructions to implement the didactic sequence.
- **Support teaching resources:** supplementary materials to support the teaching of the didactic sequence.

All these materials are accessible at:

[http://www.xtec.cat/monografics/cirel/pla\\_le/aberdeen/jordi\\_marin/](http://www.xtec.cat/monografics/cirel/pla_le/aberdeen/jordi_marin/)

## **Autoria**

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This material was developed by Jordi Marín Monfort in a paid study leave of the Catalan Department of Education, run by the University Aberdeen in the 2009-2010 academic year.

