

## Bibliography

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Curriculum primària DECRET 142/2007, de 26 de juny, pel qual s'estableix l'ordenació dels ensenyaments de l'educació primària. (Pàg. 21822) [http://phobos.xtec.cat/edubib/intranet/file.php?file=docs/primaria/curriculum\\_ep.pdf](http://phobos.xtec.cat/edubib/intranet/file.php?file=docs/primaria/curriculum_ep.pdf)

Feynman, R. P., Leighton, R. B., Sands, M. (1963). *Lectures on Physics, Vol 1*. Addison-Wesley. <http://en.wikipedia.org/wiki/Force>

Igal Galili (2001). "Weight versus gravitational force: historical and educational perspectives". *International Journal of Science Education* **23**: 1073. [doi:10.1080/09500690110038585](https://doi.org/10.1080/09500690110038585). <http://en.wikipedia.org/wiki/Weight>

Macaulay, A (1988). *The way things work*. Houghton Mifflin. United States.

Nave, R. 2005. Motion. Hyper Physics. Georgia State University <http://hyperphysics.phy-astr.gsu.edu/hbase/hframe.html>

Richard C. Morrison (1999). "Weight and gravity-the need for consistent definitions". *The Physics Teacher* **37**: 51. [doi:10.1119/1.880152](https://doi.org/10.1119/1.880152).

## Websites

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<http://ca.wikipedia.org/wiki/Gravetat>

<http://csep10.phys.utk.edu/astr161/lect/history/newton3laws.html> (laws of motion)

<http://www.grc.nasa.gov/WWW/K-12/UEET/StudentSite/dynamicsofflight.html#lawofmotion> (laws of motion)

<http://blocs.xtec.cat/aulacienciesceipalmenar/category/cicle-superior/> (laws of motion)

[http://www.physics4kids.com/extras/quiz\\_motion\\_laws/q01\\_yes.html](http://www.physics4kids.com/extras/quiz_motion_laws/q01_yes.html)

(Physics4Kids Quiz: Laws of Motion)

<http://science.discovery.com/interactives/literacy/newton/newton.html>

(Newton's three laws of motion, ICT)

<http://www.firstschoolyears.com/science/forces/forces.html> (Push and pull)

<http://en.wikipedia.org/wiki/Friction> (friction)

[http://www.colorado.edu/physics/2000/periodic\\_table/mass.html](http://www.colorado.edu/physics/2000/periodic_table/mass.html) (Difference between mass and weight)

<http://www.gcsescience.com/pfm18.htm>

<http://www.cape.k12.mo.us/blanchard/hicks/news%20Pages/Force%20pdf%20files/Matching.pdf> (matching game about forces)

# BIBLIOGRAPHY AND RESOURCES

## MACHINES MOVE THE WORLD

[http://en.wikipedia.org/wiki/Machine#cite\\_ref-AHD\\_0-0](http://en.wikipedia.org/wiki/Machine#cite_ref-AHD_0-0) (Machine)  
<http://centros5.pntic.mec.es/ies.de.bullas/dp/matema/conocer/arquimedes.htm>  
<http://en.wikipedia.org/wiki/Energy>  
[http://scifiles.larc.nasa.gov/text/educators/tools/pbl/invention\\_process.html](http://scifiles.larc.nasa.gov/text/educators/tools/pbl/invention_process.html)  
<http://www.math.nyu.edu/~crrres/Archimedes/Lever/LeverLaw.html>  
<http://en.wikipedia.org/wiki/Fulcrum>  
<http://en.wikipedia.org/wiki/Load>  
<http://en.wikipedia.org/wiki/Lever>  
<http://www.javicantero.com/?cat=11>  
[http://phobos.xtec.cat/cirel/cirel/index.php?option=com\\_content&view=article&id=102&Itemid=74](http://phobos.xtec.cat/cirel/cirel/index.php?option=com_content&view=article&id=102&Itemid=74)

Interactive activity online on forces and measure of forces.

[http://www.bbc.co.uk/schools/ks3bitesize/science/energy\\_electricity\\_forces/forces/activity.shtml](http://www.bbc.co.uk/schools/ks3bitesize/science/energy_electricity_forces/forces/activity.shtml)

ICT activity to reinforce the concept of friction and different surfaces.

[http://www.bbc.co.uk/schools/ks2bitesize/science/physical\\_processes/friction/play.shtml](http://www.bbc.co.uk/schools/ks2bitesize/science/physical_processes/friction/play.shtml)

You can start the activity on the smartboard and show how to use the interactive activity about push and pull force.

[http://www.bbc.co.uk/schools/scienceclips/ages/5\\_6/pushes\\_pulls.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/pushes_pulls.shtml)

Action and reaction forces.

[http://www.edu3.cat/Edu3tv/Fitxa?p\\_id=28530&p\\_ex=lift%20off&p\\_num=3](http://www.edu3.cat/Edu3tv/Fitxa?p_id=28530&p_ex=lift%20off&p_num=3)

Activity online with simple machines. [http://edheads.org/activities/simple-machines/frame\\_loader.htm](http://edheads.org/activities/simple-machines/frame_loader.htm)

Activity online with simple machines and forces.

[http://www.edheads.org/activities/odd\\_machine/frame\\_loader.htm](http://www.edheads.org/activities/odd_machine/frame_loader.htm)

## Pictures

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<http://plmtwine.com/2010/03/04/plm-trends-in-pull-economy/>

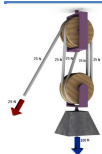


<http://virtualhelpsquad.com/wp-content/uploads/2010/10/push.gif>



<http://commons.wikimedia.org/wiki/File:Dinamometro.gif>

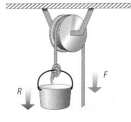
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<http://es.wikipedia.org/wiki/Archivo:Polea-simple-fija.jpg>

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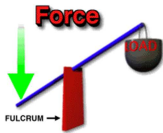
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<http://personal.telefonica.terra.es/web/jesustarrafeta/op1.htm>



<http://www.fbioyf.unr.edu.ar/alumnos/fisica/INDEXnuevo.htm>



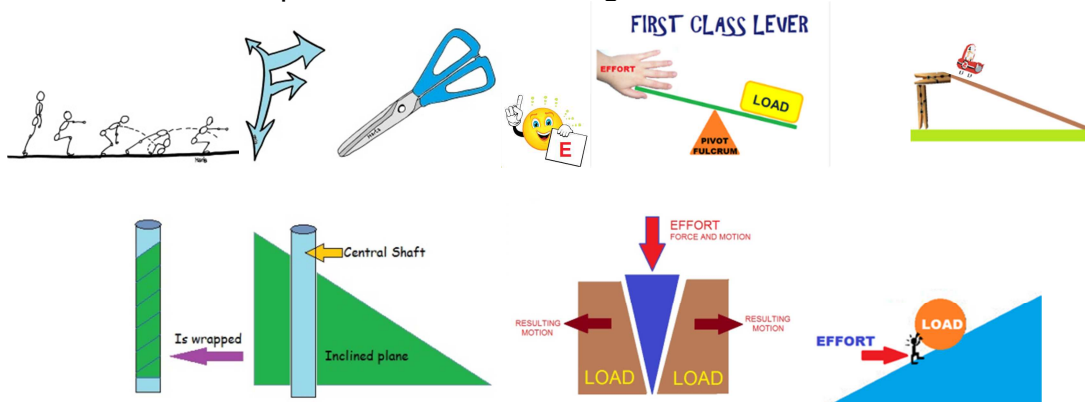
<http://discover.edventures.com/functions/termlib.php?action=&termid=405&alpha=f&searchString=>

<http://recursostic.educacion.es/bancoimagenes/web/>

## Other images from:

<http://office.microsoft.com/es-es/clipart>

I have made some pictures and some images for this CLIL unit.



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## Video resources

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<https://picasaweb.google.com/orojulian/NewtonSpace#50259104257912316501ralleiskateboardninet> (Inertia)

<https://picasaweb.google.com/orojulian/NewtonSpace#50259107436188115702nallicanyarefresc> (Newton's second law of motion)

<https://picasaweb.google.com/orojulian/NewtonSpace#50259136684915402103eralleiterrera> (Newton's third law of motion)

[http://www.edu365.cat/eso/muds/ciencias/minut\\_de\\_ciencia/index.htm?lang=en#](http://www.edu365.cat/eso/muds/ciencias/minut_de_ciencia/index.htm?lang=en#)

<http://www.youtube.com/watch?v=ve4M4UsJQo> (This is a Rube Goldberg machine made for a Honda commercial which should provide some inspiration and motivation for your mission possible project).

[http://www.youtube.com/watch?v=qybUFnY7Y8w&feature=player\\_embedded](http://www.youtube.com/watch?v=qybUFnY7Y8w&feature=player_embedded) (This one actually includes the creators as parts of the device... lots of fun)

<http://video.google.com/videoplay?docid=-2367646121273499414#>

Video 'Eureka!' from YouTube to explain INERTIA, first Newton's law of motion (4'50") <http://www.youtube.com/watch?v=by-7kkAu2Pg>

Video of the experiment about balanced forces.

[http://www.youtube.com/watch?v=S6hfDd-Hkc&feature=player\\_embedded](http://www.youtube.com/watch?v=S6hfDd-Hkc&feature=player_embedded)

If we want to reinforce the concept of friction there are two videos of 1 minute each 'Wheels meets friction' and 'slippery ice'.

[http://www.edu365.cat/eso/muds/ciencias/minut\\_de\\_ciencia/index.htm?lang=en#](http://www.edu365.cat/eso/muds/ciencias/minut_de_ciencia/index.htm?lang=en#)

[http://www.edu3.cat/Edu3tv/Fitxa?p\\_id=28528&p\\_ex=science%20please](http://www.edu3.cat/Edu3tv/Fitxa?p_id=28528&p_ex=science%20please)

Video about mass and weight

<http://www.youtube.com/watch?v=G5Fyw2z5HM8>