



## Science 1.1 Web Links

### **Steps to Solving Physics Problems** (page 6, Externals page 8)

Interested in finding out more? Go to:

<http://www.youtube.com/watch?v=XP0I2YExVpE>

### **Let's Get Moving - SPEED** (page 7, Externals page 9)

#### **Teacher Resources:**

<http://www.sciencelearn.org.nz/Science-Stories/Cycling-Aerodynamics/On-your-bikes>

<http://www.sciencelearn.org.nz/Science-Stories/Cycling-Aerodynamics/Individual-pursuit-graphs>

<http://www.sciencelearn.org.nz/Contexts/Rockets/Teaching-and-Learning-Approaches/Investigating-rocket-motion>

#### **Teacher Resource:**

<http://www.sciencelearn.org.nz/Contexts/Satellites/Teaching-and-Learning-Approaches/Alternative-conceptions-about-gravity>

### **Average Speed Problems** (page 11, Externals page 13)

See Karen Hay's car in action! Go to:

[http://www.youtube.com/watch?v=Ou88Jh\\_338I](http://www.youtube.com/watch?v=Ou88Jh_338I)

### **Checkpoint** (page 16, Externals page 18)

#### **Speed**

[http://www.nobraintoomsmall.co.nz/html/Level1\\_science/NCEA1\\_science.html](http://www.nobraintoomsmall.co.nz/html/Level1_science/NCEA1_science.html)

[http://www.bbc.co.uk/schools/gcsebitesize/science/add\\_ocr\\_gateway/forces/](http://www.bbc.co.uk/schools/gcsebitesize/science/add_ocr_gateway/forces/)

<http://www.bbc.co.uk/bitesize/quiz/q17407213>

<http://www.youtube.com/watch?v=calsn76D9gA>

<http://www.revisionworld.com/gcse-revision/physics/forces-motion/speed-velocity-and-acceleration>

### **Distance-Time Graphs** (page 17, Externals page 19)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Contexts/Satellites/Sci-Media/Images/Satellite-speed-and-force-directions>

### **Checkpoint** (page 27, Externals page 29)

#### **Distance-Time Graphs**

[http://www.youtube.com/watch?v=4pDGVOWgheA&list=TL4njFBnGPKMRLd3O0X-s\\_bZciKVR6RXr8%20%28%20distance%20time%20graphs%29](http://www.youtube.com/watch?v=4pDGVOWgheA&list=TL4njFBnGPKMRLd3O0X-s_bZciKVR6RXr8%20%28%20distance%20time%20graphs%29)

<http://www.bbc.co.uk/bitesize/quiz/q39899598>

### **Changing Speed – ACCELERATION** (page 28, Externals page 30)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Contexts/Rockets/Looking-Closer/Calculating-rocket-acceleration>

### **Checkpoint** (page 35, Externals page 37)

#### **Speed-Time Graphs**

<http://www.bbc.co.uk/bitesize/quiz/q63178454>

<http://mmsphyschem.com/VvsT1.htm>

[http://www.youtube.com/watch?v=84MwLscYyX0&index=7&list=PLfuhy6y37HA2QyUJ6hYLrgRBq\\_OLkQmy63](http://www.youtube.com/watch?v=84MwLscYyX0&index=7&list=PLfuhy6y37HA2QyUJ6hYLrgRBq_OLkQmy63) ( speed time graphs)

## **Basic Force Questions** (page 40, Externals page 42)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Science-Stories/Cycling-Aerodynamics/Sci-Media/Images/Forward-and-opposing-forces>

<http://www.sciencelearn.org.nz/Contexts/Rockets/NZ-Research/Rockets>

## **Understanding Mass and Weight** (page 43, Externals page 45)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Contexts/Satellites/Sci-Media/Images/Earth-Moon-system-and-gravity>

## **Problems – Forcing Acceleration** (page 49, Externals page 51)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Contexts/Flight/Sci-Media/Images/Forces-affecting-flight>

## **Pressure Questions!** (page 50, Externals page 52)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Science-Stories/Measurement/Measuring-foot-pressure>

## **Checkpoint** (page 55, Externals page 57)

### **Forces**

<http://www.youtube.com/watch?v=UcLy6Fqhwsq>

### **Mass and Weight**

[https://www.cgpbbooks.co.uk/interactive\\_gcse\\_science\\_massWeightGravity](https://www.cgpbbooks.co.uk/interactive_gcse_science_massWeightGravity)

### **Pressure**

[http://www.nobraintoosmall.co.nz/students/science/NCEA\\_Level1/pdfs/SCIENCE\\_AS\\_90940\\_pressure\\_selftest.pdf#zoom=100](http://www.nobraintoosmall.co.nz/students/science/NCEA_Level1/pdfs/SCIENCE_AS_90940_pressure_selftest.pdf#zoom=100)

## **ENERGY** (page 56, Externals page 58)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Contexts/Future-Fuels/Looking-closer/Nuclear-energy>

### **Teacher Resources:**

<http://www.sciencelearn.org.nz/Science-Stories/Harnessing-the-Sun/Alternative-conceptions-about-energy>

<http://www.sciencelearn.org.nz/Science-Stories/Harnessing-the-Sun/Using-heat-energy>

## **Gravitational Potential Energy** (page 58, Externals page 60)

### **Teacher Resource:**

<http://www.sciencelearn.org.nz/Contexts/Future-Fuels/Teaching-and-Learning-Approaches/Extension-Potential-and-kinetic-energy>

## **Kinetic Energy Problems** (page 61, Externals page 63)

Interested in finding out more? Go to:

<http://www.sciencelearn.org.nz/Science-Stories/Harnessing-the-Sun/Sci-Media/Images/Potential-and-kinetic-energy>

## **Checkpoint** (page 67, Externals page 69)

### **Energy**

[http://www.youtube.com/watch?v=mtKN\\_\\_s0LXY](http://www.youtube.com/watch?v=mtKN__s0LXY)

[https://www.cgpbbooks.co.uk/interactive\\_gcse\\_science\\_energy](https://www.cgpbbooks.co.uk/interactive_gcse_science_energy)

<http://www.thatquiz.org/tq/previewtest?N/D/S/E/85131325872728>

[http://www.youtube.com/watch?v=G\\_22yf\\_gJyg](http://www.youtube.com/watch?v=G_22yf_gJyg)

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

<http://www.proprofs.com/quiz-school/story.php?title=gravitational-potential-energy-kinetic-energy>

## **POWER** (page 74, Externals page 76)

### **Teacher Resource:**

<http://www.sciencelearn.org.nz/Contexts/Sporting-Edge/Teaching-and-Learning-Approaches/Measuring-the-power-output-of-elite-athletes>

<http://www.sciencelearn.org.nz/Contexts/Uniquely-Me/Teaching-and-Learning-Approaches/Crime-scene-DNA>

## **Checkpoint** (page 81, Externals page 83)

### **Work, Energy and Power**

<http://www.revisionworld.com/gcse-revision/physics/forces-motion/work-energy-and-power>

<http://www.youtube.com/watch?v=RpbxIG5HTf4>

## **NCEA Exam Links** (page 93, Externals page 95)

- The following NZQA web link:

<http://www.nzqa.govt.nz/ncea/assessment/view-detailed.do?standardNumber=90940>

will give you access to:

- past NCEA external exam papers (from 2011);
  - assessment schedules (answers to exam questions with requirements to gain achievement merit and excellence);
  - assessment reports;
  - assessment specifications.
- A range of past NCEA mechanics questions can be found in the 2004–2010 Science 1.6 (AS90191) exam papers using the following web link:  
<http://www.nzqa.govt.nz/ncea/assessment/view-detailed.do?standardNumber=90191>
  - A range of past NCEA mechanics questions can also be found in the 2004–2010 Physics 1.4 (AS90183) exam papers using the following web link:  
<http://www.nzqa.govt.nz/ncea/assessment/view-detailed.do?standardNumber=90183>

## **Science 1.1 Mechanics Revision Tests** (page 93, Externals page 95)

[http://www.nobraintoosmall.co.nz/students/science/NCEA\\_Level1/pdfs/SCIENCE\\_AS\\_90940\\_motion\\_selftest.pdf#zoom=100](http://www.nobraintoosmall.co.nz/students/science/NCEA_Level1/pdfs/SCIENCE_AS_90940_motion_selftest.pdf#zoom=100)

[http://www.nobraintoosmall.co.nz/students/science/NCEA\\_Level1/pdfs/90940\\_mechanics\\_selftest.pdf#zoom=100](http://www.nobraintoosmall.co.nz/students/science/NCEA_Level1/pdfs/90940_mechanics_selftest.pdf#zoom=100)