Help Contents

This is the Help contents page for **Investigating Forces and Motion**. Select a topic, or click Index for the list of areas covered in the Help section.

1. Measuring motion
2. Motion and graphs
3. Equations of motion
4. Newton's laws
5. Gravity
6. Work, energy and power
7. Momentum
8. Friction and air resistance
9. Equilibrium
10. Motion in a circle
11. Forces and materials
12. Pressure

main menu

The main menu screen allows you to select and view one of the twelve topics on the CD-ROM.

Select a topic name on the left hand side of the screen.

Select a section name from the top of the screen.

Start the multiple-choice quiz.

Display the topics available.

Replay the welcome sequence.

introduction section

The introductions set the scene for each of the twelve topics. Some introductions consist of videoclips, while others are presented as separate pages.

Play or pause the commentary.

Restart the commentary.

Jump to a page of the introduction.

main menu

Return to the main menu.

back

Return to the last screen visited.

history

Display a list of the screens visited.

glossary

Glossary of scientific words and phrases.

index

Display the list of topics available.

help

Display help about this screen.

key points

Display a list of key points relevant to this subject.

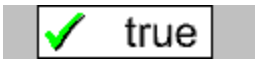
examples section

The examples section demonstrates how basic ideas and equations are applied to answer examination style questions and solve quantitative problems.

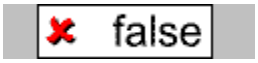
Some of the examples have an interactive element which you must complete correctly before you are given feedback.

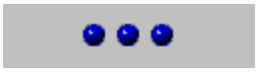
The interactive examples contain instructions at the top of the screen which you should follow.

The arrows are dragged to the correct answers. A 'click' sound plays when each arrow is matched.



The 'true' and 'false' labels are dragged into the appropriate slots.





Move on to the next example.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

study points section

The study points section develops and summarises all of the ideas, information and equations needed to understand a topic and solve typical examination problems. The study points are presented as a series of screens which you can look through in a similar way to a set of revision cards.

Move to the next study point.

main menu

Return to the main menu.

back

Return to the last screen visited.

history

Display a list of the screens visited.

glossary

Glossary of scientific words and phrases.

index

Display the list of topics available.

help

Display help about this screen.

key points

Display a list of key points related to this subject.

self assessment section

The self assessment section helps you to check your own progress with examination style multiple choice questions. Feedback is provided to give you appropriate help if an incorrect answer is given.

You will be asked a set of multiple-choice questions. Click on the correct answer. After reading the feedback, click 'OK' to move on. You will get a score at the end of each set of questions.

Return to the main menu. Any questions you have answered will not be saved.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

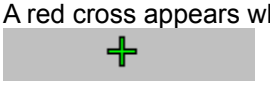
Display help about this screen.

Display a list of key points related to this subject.

Measuring motion investigation

This investigation looks at the way a space shuttle moves through space under different types of motion.

A red cross appears when you mark the shuttle's position.



A green cross appears when the shuttle moves on and the reading is registered.

Control the movement of the shuttle.

Display a graph of the readings.

Print out the table of readings.

Change the type of motion the shuttle undergoes.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Motion and graphs investigation

In this investigation you identify what type of motion is taking place by looking at the graph.

---

velocity - time

Select a graph type.

description only

Select whether you identify only the motion type, or the motion type and its value.

1

Select how many regions the graph will contain.

positive acceleration

Labels to drag into the appropriate slot in the table on the right.

values

If 'description plus value' has been selected, the relevant value is typed into this column. Use the cross-hairs on the graph to help you.

equations

Display a list of the standard equations of motion.

others

Go to another problem.

main menu

Return to the main menu.

back

Return to the last screen visited.

history

Display a list of the screens visited.

glossary

Glossary of scientific words and phrases.

index

Display the list of topics available.

help

Display help about this screen.

Display a list of key points related to this subject.

Equations of motion investigation

This investigation allows you to experiment with, and learn, the standard equations of motion.

You are given a problem to solve on the left hand side of the screen. Enter the correct numbers into the spaces on the right hand side of the screen.

check
Check the answers you have given. If any are wrong they can be altered.

equations
Display a list of the standard equations.

new problem
Move to a new problem.

main menu
Return to the main menu.

back
Return to the last screen visited.

history
Display a list of the screens visited.

glossary
Glossary of scientific words and phrases.

index
Display the list of topics available.

help
Display help about this screen.

key points
Display a list of key points related to this subject.

Newton's laws investigation

This investigation demonstrates how different forces affect the motion of masses.

F= [ ] N

Fill in the blank spaces with the correct values.

GO

Start the masses rolling.

new problem

Move on to a new problem.

main menu

Return to the main menu.

back

Return to the last screen visited.

history

Display a list of the screens visited.

glossary

Glossary of scientific words and phrases.

index

Display the list of topics available.

help

Display help about this screen.

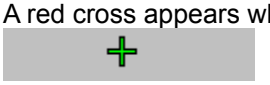
key points

Display a list of key points related to this subject.

Gravity investigation

This investigation looks at the way a football moves under the influence of gravity.

A red cross appears when you mark the football's position.



A green cross appears when the football moves on and the reading is registered.

Control the movement of the football.

configurations

Change the type of motion the football undergoes.

graph

Display a graph of the readings you have taken so far.

print

Print out the table of readings.

others

Move to a new example.

main menu

Return to the main menu.

back

Return to the last screen visited.

history

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Work, energy and power investigation

This investigation looks at how an object's kinetic and potential energies vary as it moves. NB the effects of friction and air resistance are neglected in this investigation.

This is dragged to set the initial height of the roller-coaster car.

Control the car's motion.

Track the car's potential and kinetic energies.

Take a reading of kinetic and potential energy.

Display a graph of the readings you have taken so far.

Print out the table of readings.

Reset the car to its original position.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display a list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Momentum investigation

This investigation examines the principle of conservation of momentum.

Two balls are dragged onto the lower section.

These blanks are filled in with the desired values of velocity.

Start the balls moving.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Displays the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Friction and air resistance investigation

This investigation looks at the frictional resistance on a falling object. NB the graph only displays values up to 300 seconds.

Change the medium through which the object is falling.

The radius and density boxes are filled in with appropriate values.

Release the object and allow it to fall.

Reset the object back to the start.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Equilibrium investigation

This investigation involves trying to balance a beam using the principle of moments.

This force can be dragged from side to side. Its magnitude can also be increased or decreased by dragging the red dot at the top up or down.

Release the beam and display the sum of moments on the right hand side of the screen.

Reset the beam. Does not change the forces.

Move on to another example.

Return to the main menu.

Return to the screen last visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Motion in a circle investigation

This investigation tracks a satellite's orbit as you alter four variables.

These boxes are filled in with the desired values.

Launch the satellite into orbit.

Select what type of trail the satellite leaves behind.

Return to the main menu.

Return to the screen last visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Forces and materials investigation

This investigation examines how various materials stretch under tension forces.

Select the desired material.

Add a load to the material under test.

Print out the graph.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

Pressure investigation

This investigation examines how changing pressure affects an air bubble as it rises through water.

Control the bubble's movement.

Set an initial volume of the bubble.

The calipers can be dragged around. The handle is pulled in and out, then the red button is clicked to take a reading.

Print out the table of readings.

Display a graph of your readings.

Return to the main menu.

Return to the last screen visited.

Display a list of the screens visited.

Glossary of scientific words and phrases.

Display the list of topics available.

Display help about this screen.

Display a list of key points related to this subject.

welcome

The welcome sequence introduces the **Investigating Forces and Motion** CD-ROM.

Click anywhere on the screen to end the Welcome sequence.

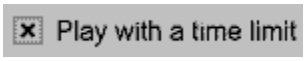
quiz

The quiz allows you to test your knowledge of science against the clock.

Choose the topics you want to be tested on from the left hand side of the screen. Click 'Select all' or 'Select none' to select or clear them all.

Type your name into the box at the top.

If you want to answer a set number of questions, type the number in the box on the right.



If you want to be tested against the clock, select the 'Play with a time limit' check-box, and type the desired time limit into the box.

Start the quiz.

The Investigating Forces and Motion CD-ROM is based around twelve topics, each one covering a physical concept. Each topic is split into five sections.

This CD-ROM contains a short introductory sequence which welcomes new users to the disc.

There are five sections in each topic. These are: introduction, examples, investigation, study points, and self assessment.

The opening screen is the main menu. From here a topic and section can be selected. The quiz can also be accessed from this screen.

The study points condense important ideas or equations related to the topics being examined.

system menu options

You can choose certain options by accessing the system menu in the top-left hand corner of the **Investigating Forces and Motion** window.

Mute sound

Turn the sound on or off.

Standard Size

Reset the program window to its original size.

Credits

Access the credits.

credits

Investigating Forces and Motion

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