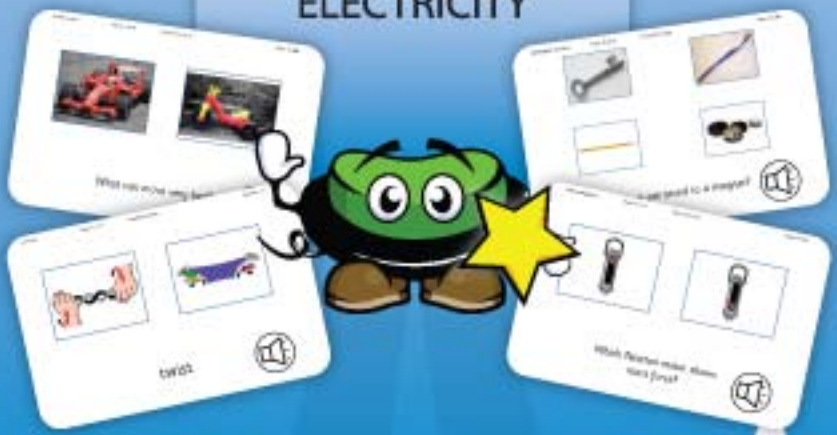
ChooseIt! Ready-mades

SCIENCE

FORCES AND ELECTRICITY



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Credits

ChooseIt! Ready-mades Science: Forces and Electricity was created by Maria Hood (Wordology). Program design by Rod Boyes. Programming by Ian Webb. Graphic design and illustration by Chris Thornton and David Hornsey. Audio engineering by Graham Wright. Voiceover by Louise Comerford Boyes. Documentation by Rod Boyes, Alison Littlewood and Peter Butler.

We welcome your comments on all Inclusive Technology products.

Inclusive Technology Ltd
Riverside Court
Huddersfield Road
Delph
Oldham OL3 5FZ
UK
Tel: +44 (0)1457 819790
Fax: +44 (0)1457 819799
email: inclusive@inclusive.co.uk
www.inclusive.co.uk

Introduction

Science: Forces and Electricity is a set of ***ChooseIt! Maker*** activities , supplied with the ***ChooseIt ! Ready -mades*** program . This user guide presumes you also have the general user guide for ***ChooseIt! Ready-mades***.

This Activity Set has 30 activities designed to give pupils revision in the knowledge learnt in practical lessons about forces and electricity at KS 1 and 2. Each activity consists of up to 20 multiple choice questions , focusing on each topic . A 'Monkey ' activity is also included as a fun round-up to each topic.

This program should be considered initially as a revision of facts learnt during science lessons, but also as a resource which can be used as either a teaching aid or for an assessment of the pupil's knowledge in that area. It is not a linear scheme of work. Because the topics have been broken down into very small steps, they are easily linked to SEN pupils' Individual Education Plans . Some activities are suitable for the pupil to do independently , but to get the most out of each activity a one-to-one situation is advisable . This way the language of the subject can be developed alongside the concept being practised.

All activities are self-correcting so the pupil does not experience failure. A simple scoring scheme allows you to track progress.

Note regarding children with learning difficulties:

The most important aspect in the life of a special needs child is routine, because with a good routine comes security, and hence confidence. Once the child has confidence and is relaxed with the surroundings, learning can then take place. This ideal has been used when planning the activities in ***ChooseIt! Maker 2*** by utilising repetition and simple language.

Installation

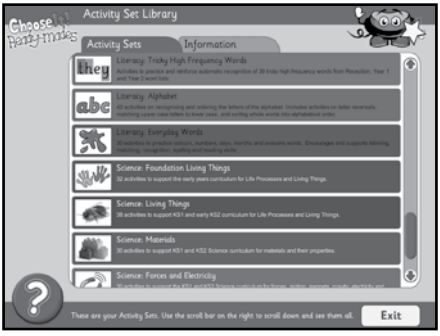
This manual is accompanied by a general user guide for ***ChooseIt! Ready-mades***. The ***ChooseIt Ready-mades*** user guide gives you help with installing and running this Activity Set. It also shows you how to use the options and how to set up switch access.

Getting Started

This Activity Set consists of 30 activities covering:

- Forces
- Electricity
- Two fun monkey activities

To see the activities, start the ***ChooseIt! Ready-mades*** program and click on ***Science: Forces and Electricity***. You can scroll down using the scroll bar on the right-hand side of the screen to see all of the activities.



To play an activity, tick the white box next to it and then click the **Play** button at the bottom of the screen.

Quick Hints and Tips

Use the left and right arrow keys on the keyboard to skip forward or back through an activity. They can be used for:

- Reviewing the content of an activity.
- Skipping to a page more suitable for the learner.
- Going back and trying some pages again.

Remember that learners do not need to read to play these activities, as all text is spoken. Learners can click on the loudspeaker button to hear the question again.

To make an activity easier, you can use the **Prompt** options to display the answer at the bottom of the screen.

The Activities

1 - 17 Forces

1 Switch practice
2 Fast or slow
3 Roll or slide
4 Push or pull
5 Sinking and floating
6 Forces
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16 Forces quiz
17 McMonkey

18 - 30 Electricity

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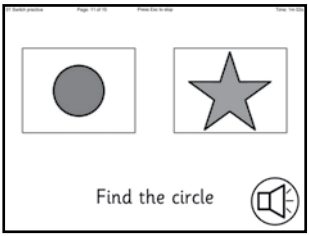
25 Energy
26 Safety with electricity
27 Heat, light, sound or movement
28 Battery or plug
29 On or off
30 Silly Monkey

The Activities

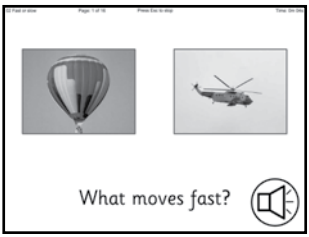
1 - 17 Forces

1) Switch practice - 15 pages



This activity provides practice using the switch or mouse. It enables the pupil to familiarise themselves with the format of the following activities.

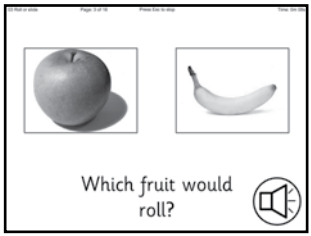
2) Fast or slow - 16 pages



This is intended as a follow-up activity after a lesson on fast and slow movements in different objects. Pupils will also gain understanding of the vocabulary through their own physical activity in PE lessons or daily movement around the classroom.

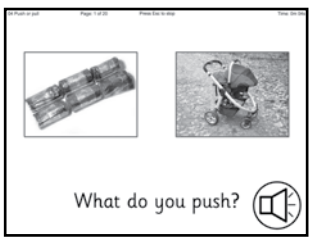
There are only two choices for the first 13 pages, to give the pupil easy comparisons of a fast moving object and a slow one. The final three pages have three choices, to check the pupils' understanding of the vocabulary fast and slow.

3) Roll or slide - 16 pages



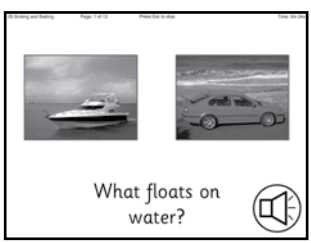
This is intended as a follow-up activity after a practical lesson on rolling and sliding objects. Throughout this activity there are only two choices, one object which rolls and one that can only slide.

4) Push or pull - 20 pages



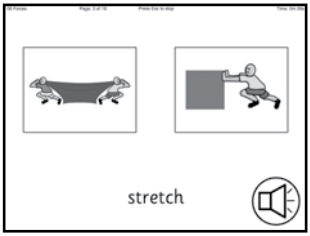
This activity can be used as a follow-up reinforcement or assessment after a class lesson about pushing and pulling actions. On the first twelve pages the pupil chooses the correct object from a choice of two. The final pages have a choice of three objects.

5) Sinking and floating - 13 pages



This activity can be used as a follow-up reinforcement or assessment after a class lesson on sinking and floating. Throughout this activity there are only two choices, one object that floats and one that sinks. To get the most out of this activity the pupil should work with an adult who should encourage discussions about each picture.

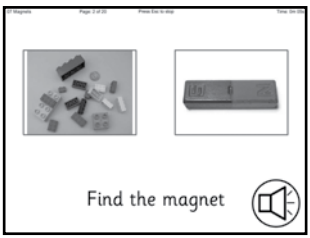
6) Forces - 18 pages



The following vocabulary is introduced: push, pull, stretch, squeeze, catch and twist.

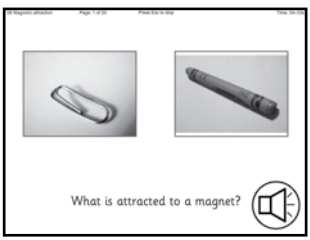
The first six pages introduce these words by choosing the correct action from two cartoon action pictures on each page. The following pages then have a choice of three objects. The pupil chooses which one is suitable for each force to be used upon it.

7) Magnets - 20 pages



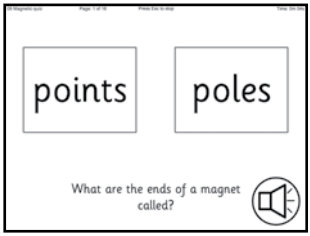
This is an introductory activity to magnetism. The first ten pages have two choices, which show different magnets and other objects. The pupil chooses the picture of the magnet to gain the reward. Pages eleven to fifteen introduce the properties of different combinations of the poles of the magnet, which is kept simple for the pupil by only using two choices. Pages sixteen to twenty introduce magnetic attraction to objects, with choices of three objects.

8) Magnetic attraction - 20 pages



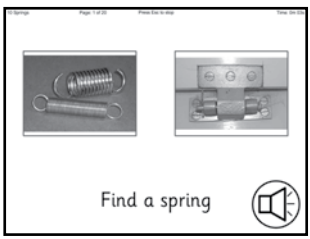
This activity checks if the pupil can find the objects that are attracted to magnets. It would be a good follow-up to a practical lesson on magnetism. There are five pages with two choices then the number of choices increases to three and four.

9) Magnet quiz - 16 pages



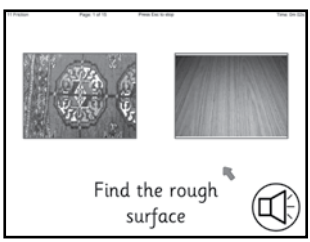
This activity consists of sixteen pages of general questions on magnetism with two or three choices of answers. It is designed to be used as an assessment at the end of a topic on magnetism.

10) Springs - 20 pages



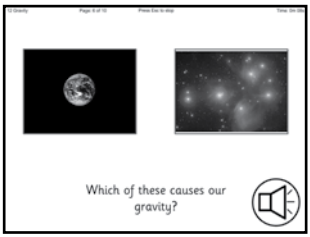
This activity can be used as a follow-up to a class lesson on springs. On each page the pupil chooses the object that contains a spring. Throughout this activity there is a choice of two pictures. To get the best out of this activity the pupil should work with an adult to encourage discussions about each picture.

11) Friction - 15 pages



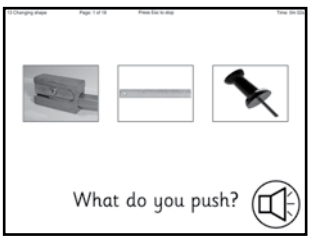
This activity can be used as a follow-up reinforcement to a class lesson on friction. There are only two choices on each page because this concept can be quite difficult to understand. An adult working with the pupil might be an advantage.

12) Gravity - 10 pages



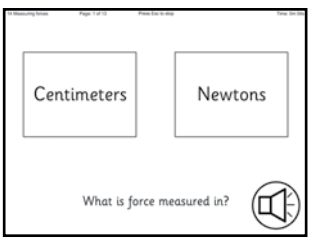
This activity is a short introduction to gravity. There are mainly two choices on each page.

13) Changing shape - 20 pages



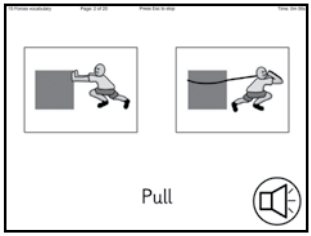
This activity is ideal as an introduction to discussions about objects changing their shapes. It compares objects that automatically change back to their original shape with those which do not. Two and three choices are used in this activity.

14) Measuring forces - 12 pages



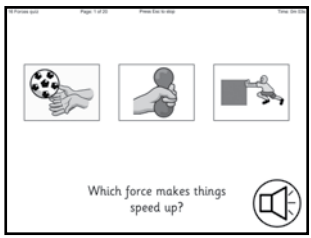
This activity can be used as a follow-up reinforcement to a class lesson on measuring forces. There are two choice boxes throughout because this can be quite a difficult concept to learn.

15) Forces vocabulary - 20 pages



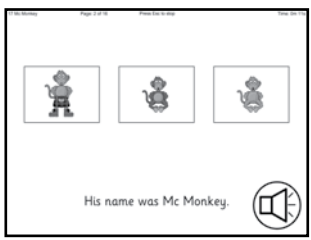
This can be used as a quick revision on forces vocabulary. Two choices are used throughout.

16) Forces quiz - 20 pages



This is a simple quiz on general knowledge about forces. There are two, three and four choices in this activity.

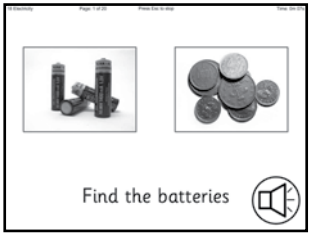
17) McMonkey - 16 pages



This fun activity tells a short story about a Scottish monkey in the Highland games using the different concepts and vocabulary of forces.

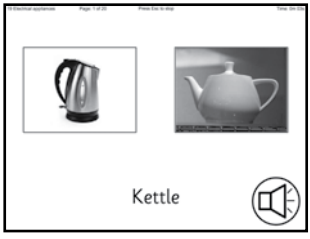
18 - 30 Electricity

18) Electricity - 20 pages



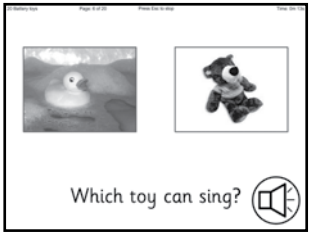
This activity introduces the topic of electricity. Different strengths of batteries are shown along with plugs, switches and sockets. It shows that some objects use batteries and some need an electricity supply. There are two or three choices on each page throughout.

19) Electrical appliances - 20 pages



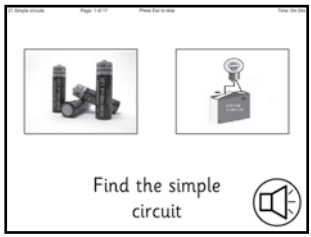
This activity encourages the pupil to look at objects around the house that need an electrical supply to make them work. There are two choices on each page for the first five pages and three for the remainder.

20) Battery toys - 20 pages



This activity looks at toys that need batteries to make them work. Two and three choices are used throughout.

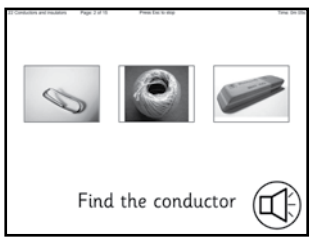
21) Simple circuits - 17 pages



This activity can be used as a follow-up reinforcement to a class lesson on simple circuits. The following circuit vocabulary is introduced: simple circuit, wire, battery, bulb, crocodile clip, switch and bulb holder.

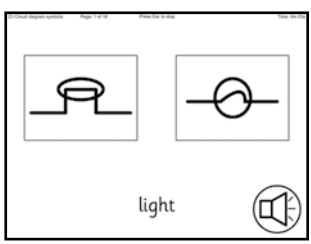
The first thirteen pages concentrate on the vocabulary needed to describe a simple circuit. Pages 14 -16 show different ways of drawing a simple circuit. Two and three choices are given throughout.

22) Conductors and insulators - 15 pages



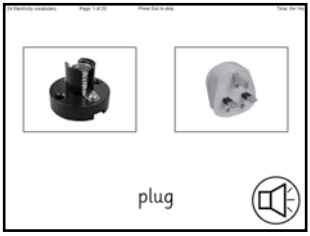
This activity is a simple introduction to conductors and insulators. The pupil finds the conductor from a choice of three in the first six pages then finds the insulator on the following five pages. Resistors are introduced for the final three pages. Two and three choices are given throughout.

23) Circuit diagram symbols - 16 pages



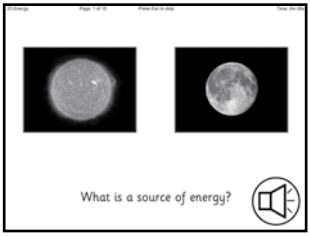
The following symbols are shown: light, switch, motor, connection, wire, buzzer, 3 volt battery and resistor. Two and three choices are given in this activity.

24) Electricity vocabulary - 20 pages



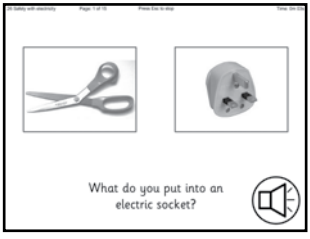
The pupil recognises the vocabulary given in the question from a choice of two or three pictures. This is a revision of vocabulary given in previous activities plus some general vocabulary related to electricity.

25) Energy - 15 pages



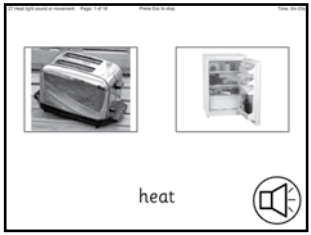
The pupil chooses sources of energy from a choice of two in the first seven pages. The activity then proceeds to look at fossil fuels and different sources of renewable power. This activity uses two and three choice boxes.

26) Safety with electricity - 15 pages



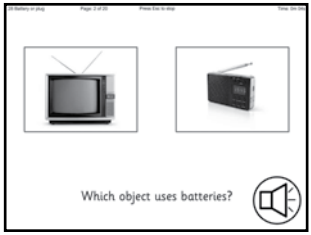
This is a quick revision activity on general knowledge about safety with electricity. There are two choices on each page for the first ten pages then three for the remainder.

27) Heat, light, sound or movement - 16 pages



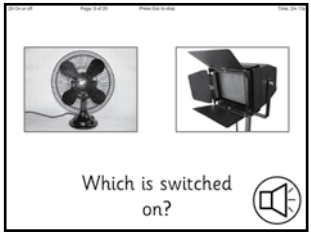
This activity gives the pupil experience of the different uses of electricity. Two and three choices are given.

28) Battery or plug - 20 pages



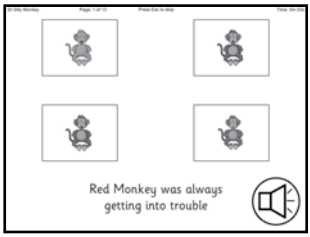
The pupil chooses the appliance that uses a battery or mains electricity. Two choices are given on the first six pages; the remainder of the activity has three choices.

29) On or off - 20 pages



The pupil finds the object that is turned on by listening to the sound on the choice box rollover. There are two choices throughout this activity.

30) Silly monkey - 13 pages



The dangers of electricity are addressed in this final monkey story. Two, three and four choices are given throughout.

Worksheets

Wikipedia image credits

Picture	Author
Rubber sole	Emel
Slide	Elsa Esthers
Sledge	Johann Jantz
Magnet	Eurice Zimbres
Bar magnet	Aney
Hand magnet	Ninelundeathtrap
Nose magnet	Ninelundeathtrap
Safety pin	Haragayato
Sewing needle	Pavel Krok
Gold ring	Sujit Kumar
Iron bridge	The singing badger
Tin can	Joadl
Magnetic field	Alexander Wilmer Duff
Flat magnets	Omegatron
Furby	D O'Neil
Pleo	Trexer
Dalek	Sara h McCulloch
Robby the robot	Hammacher Schlemmer
Meccano motor bike	Gadfium
Pooh piano	PD Layout; PDUSGOV
Tank	Ќанопуśиля
Bladestar	Milw
Helicopter	PD Drive 1061
Big helicopter	Webwings74
Aeroplane	PD Drive 1061
Truck	Phroziac
Racing car	Frettie
Tank	David Monniaux
Toy dinosaur	Popoto
Matching game	Kungfuman
Ludo	Bubblemakeratno
Leap pad	Sherry Kang
Wizard of Oz book	555
Microwave oven	Hedwig von Ebbel
Toaster	Donovan Govan
Slow cooker	MECU

Bread maker	Edward
Deep fat fryer	Kristofer 2
Food processor	Donovan Govan
Sandwich maker	Beto29
Teapot	Marshall Astor
Wire	Scott Ehardt
Electric meter	Mike 1024
Plasma globe	Non-dropframe
Solar power	Ceinturion
Wind power	FlickrLickr
Globe	Hoshie
Southern hemisphere	Sean Baker
Northern hemisphere	Sean Baker
Equator	C Burnett
Yuri Gagarin	NASA
Neil Armstrong	NASA
Apollo 11	NASA
Challenger	NASA
Crater	NASA
Eclipse	NASA
Edwin Aldrin	USA Airforce
Vostoc 1	Sergie Arssenev
Space man	NASA
Space shuttle	NASA
Lunar module	NASA
Space boots	NASA
Space helmet	NASA
Sputnik	NASA
Space food	NASA
Satellite	NASA
Lunar rover	NASA
Shuttle carrier aircraft	NASA
I L S	NASA
Rocket	Murali Dhanakoti
Launch pad	US Airforce
Space suit	Jawed Karim
Ground control	PD - USGOV
Pogo stick	Srd 2005
Mattress springs	Sawara,Chiba –Ken
Stapler	Daniel Mannique

Pen	Julo
Watch – (inside)	Panther
Pocket watch	Roger McLassus
Slinky	Roger McLassus
Slide	Fotoblog Rare
Peg	Jean - Jacques Milaw
Secateurs	Jean - Jacques Milaw
Tweezers	Jean - Jacques Milaw
Paper clips	Jean - Jacques Milaw
Computer keys	Jean - Jacques Milaw
Train wheels	Jean - Jacques Milaw
Springs	Qz10
Hinges	Audrius Meskaukas
Bow	Compagnia Arciercinque Stelle
Arrow	Dfrg.msc
Refracting telescope	Ericol
Radio telescope	Hajor
Lovell telescope	Mike Peel
Newtonian telescope	Analogue Kid
Telescope	Tom Hannen
Big Dipper	Gh5046
Astronomers	Halfiblue
Orion	Ptigrovick
Andromeda galaxy	US GOV
Northern lights	Flikr Nick Russill
Milky Way	NASA
Asteroid	NASA
Comet	NASA
Barge	Stacy
Speed boat	US Coast guard
High speed vessel	US Navy
Jet plane	Dr. Jaus
Biplane	Dylan Ashe
Isaac Newton	Godfrey Kneller
Charles Darwen	Julia Margaret Cameron
Squashed car	Oxyman
Tug of war	US Navy
Helicopter being pushed	US Navy
Twisted girders	Bidgee
Twisted cable	WolfWings

Impossiball	Hellbus
Train turtable	Torsten Batge
Stretched goat's skin	Michal Marias
Bent nail	Pee Tern
Bent thumb	Manic rage
Bent sign	In frogmation
Push pin	Cary Bass
Crushed can	Panhard
Morph	Supewdupew
Ball	Urbanballmen
Dough	Elinor D
Electric guitar	Hyperion
Electric Light	M-J
Electric Knife	Athol Mullen
Spotlight	ChrisHH
SIREN	MdE(de)
Metro	Chris McKenna
Coal	US Gov
Fireplace	Hedwig von Ebbel
Glass of water	Tysto
Wave energy converter	P123
Potato peeler	Pengo
Pizza cutter	Edoderoo
Screwdriver	Luigizanasi
Tweezers	Malvo Mikhail
Soap powder	Sanderflight
Comb	Stilferflight
Hair	Yogi
Hair grip	Larry D Moore
Push pin	Kalan
Anemometer	Stefan Khül
Seismograph	Kkkdc
Pylon	Iain Hart
Substation	Wtshymanki
Tube station	Sunil 060902
Fan	Shasihinka
Iron	Li – sung
Rolling pin	Peter Kammer
Game boy	Boffy b
Deep fat fryer	Dr. Juzam

Egg timer	André Karwatis
Steam roller	Norbert Schintzler
Toilet chain	Paul Michael Lee (Flickr)
Horse shoe	Fonzy
Shadows - balloon	Dixonsej
People on a beach	Matthew Bowden
Marble	Henry Mühlpfordt
Flowers	Nevit Dilmen
Person	Thapthim
Building	APK
Candle	Forrestjunky

Inclusive Technology Ltd
Riverside Court, Huddersfield Road
Delph, Oldham, OL3 5FZ

Tel: 01457 819790 Fax: 01457 819799
Email: inclusive@inclusive.co.uk
www.inclusive.co.uk

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SCIENCE
FORCES AND ELECTRICITY

This Activity Set has 30 activities designed to give pupils revision in the knowledge learnt in practical lessons about forces and electricity at KS1 and 2. Printable resources for off-computer activities can also be found on the CD.

This program is ideal for supporting learning and assessment, with clear, consistent presentation and simple performance recording. Includes additional audio support for visual impairment and switch access support for those with physical disabilities.