

Overview summary of SCI-FUN exhibits and support for the Curriculum for Excellence

Curriculum statement	Exhibit	Curriculum statement	Exhibit
Active exhibits			
	Viscosity Tubes	SCN 3-08a	Uphill Gravity
	Geometric Puzzles		Spinning Chair
	Tangrams	SCN 4-09b / TCH 3-01a	Seven Segment Display
SCN 2-11b	Colour Box		The Coanda Effect
	Moving Continents	SCN 3-12a	Heartbeat Monitor
SCN 2-09a	Human Circuit	SCN 2-11b	Infinity Box
SCN 2-01a	Life Through Time	SCN 2-11b	The Virtual Pig
SCN 2-12b	Match the Note	SCN 2-12b / SCN 3-12a	Hole in the Hand
SCN 3-09a	Human Battery	SCN 3-15a	Periodic Table
SCN 2-12a	BMI (Body Mass Index)		Animal Tracks
SCN 2-12b / SCN 3-12a	Conflicting Signals	SCN 3-12b	Centrifuge
SCN 3-18a	Forensics	SCN 4-11b / SCN 3-12b	Body Imaging
SCN 4-12a / SCN 3-13c	Components of Blood		Lightning on a Desk
SCN 2-12b	Reaction Timer	SCN 3-12a	Body Clocks
	Power Bike		Steam Engine
SCN 2-04a	Kinetic Cars		Gyrowheel
SCN 4-13a / SCN 4-13c	Stem Cell Treatments		Tippy Tops
	Rattleback	SCN 2-11b / SCN 2-12b / SCN 3-12a	Cube Illusion
MTH 4-12a	Reuleaux Curves	SCN 3-13a	Microscope
SCN 2-12b	Anaglyphs	SCN 3-05b / SCN 4-05b	CCSI
SCN 4-08b	Sink or Swim?	HWB 3-19a	Subject Choice panels
SCN 3-11a / SCN 3-11b / SCN 4-11b	IR Communication		
Other exhibits / Exhibits in development			
SCN 3-05b / SCN 4-05b / SCN 3-20a / SCN 4-20a / SCN 4-20b / TCH 3-01a	Carbon Capture and Storage (CCSI)	SCN 3-05b / SCN 3-20a / SCN 4-20a / SCN 4-20b / TCH 2-02b / TCH 3-01a	Renewable Energy (RE)
SCN 3-13c	Body vs Germ	SCN 4-11b	IR Camera

Explanation of codes
 $SCN^1 2^2-11a^3$
1 = Curriculum area

SCN = science; MTH = mathematics; TCH = technology; HWB = health and wellbeing

2 = Academic level of statement

Level	Early (0)	First (1)	Second (2)	Third (3)	Fourth* (4)	Senior
Age Range (usual)	Pre-school and P1	End of P4 (or earlier)	End of P7 (or earlier)	S1-S3 (or earlier)		S4-S6

*The fourth level is equivalent to Scottish Credit and Qualifications Framework (SCQF) level 4 and is intended to provide possibilities for choice. It is not intended that ALL pupils meet ALL fourth level statements.

3 = Strand of curriculum

There are five sections within the science curriculum area, which are then further split into sub-sections:

Section	Sub-sections
Planet Earth	Biodiversity and interdependence (01-03); Energy sources and sustainability (04); Processes of the planet (05); Space (06)
Forces, Electricity and Waves	Forces (07-08); Electricity (09-10); Vibrations and waves (11)
Biological Systems	Body systems and cells (12-13); Inheritance (14)
Materials	Properties and use of substances (15-16); Earth's materials (17); Chemical changes (18-19)
Topical Science	Topical science (20)

SCI-FUN Roadshow exhibits and links to the Curriculum for Excellence

Code	Full Statement	Exhibit(s)
SCN 2-01a	I can identify and classify examples of living things, past and present, to help me appreciate their diversity. I can relate physical and behavioural characteristics to their survival or extinction.	Life Through Time
SCN 2-04a	By considering examples where energy is conserved, I can identify the energy source, how it is transferred and ways of reducing wasted energy.	Kinetic Cars
SCN 3-08a	I have collaborated in investigations into the effects of gravity on objects and I can predict what might happen to their weight in different situations on Earth and in space	Uphill Gravity
SCN 4-08b	Through experimentation, I can explain floating and sinking in terms of the relative densities of different materials.	Sink or Swim?
SCN 2-09a	I have used a range of electrical components to help to make a variety of circuits for differing purposes. I can represent my circuit using symbols and describe the transfer of energy around the circuit.	Human Circuit
SCN 3-09a	Having measured the current and voltage in series and parallel circuits, I can design a circuit to show the advantages of parallel circuits in an everyday application.	Human Battery
SCN 4-09b	By contributing to investigations into the properties of a range of electronic components, I can select and use them as input and output devices in practical electronic circuits.	Seven Segment Display
SCN 3-11a	By exploring the refraction of light when passed through different materials, lenses and prisms, I can explain how light can be used in a variety of applications.	IR Communication
SCN 2-11b	By exploring reflections, the formation of shadows and the mixing of coloured lights, I can use my knowledge of the properties of light to show how it can be used in a creative way.	Colour Box; Infinity Box; The Virtual Pig; Cube Illusion
SCN 3-11b	By exploring radiations beyond the visible, I can describe a selected application, discussing the advantages and limitations.	IR Communication
SCN 4-11b	By carrying out a comparison of the properties of parts of the electromagnetic spectrum beyond the visible, I can explain the use of radiation and discuss how this has impacted upon society and our quality of life.	IR Communication; Body Imaging
SCN 2-12a	By investigating some body systems and potential problems which they may develop, I can make informed decisions to help me to maintain my health and wellbeing.	BMI (Body Mass Index)
SCN 3-12a	I have explored the structure and function of organs and organ systems and can relate this to the basic biological processes required to sustain life.	Heartbeat Monitor; Hole in the Hand; Conflicting Signals; Body Clocks; Cube Illusion
SCN 4-12a	I can explain how biological actions which take place in response to external and internal changes work to maintain stable body conditions.	Components of Blood
SCN 2-12b	I have explored the structure and function of sensory organs to develop my understanding of body actions in response to outside conditions.	Hole in the Hand; Conflicting Signals; Reaction Timer; Cube Illusion; Anaglyphs
SCN 3-12b	I have explored the role of technology in monitoring health and improving the quality of life.	Centrifuge; Body Imaging
SCN 3-13a	Using a microscope, I have developed my understanding of the structure and variety of cells and of their functions.	Microscope
SCN 4-13a	By researching cell division, I can explain its role in growth and repair and can discuss how some cells can be used therapeutically.	Stem Cell Treatments
SCN 3-13c	I have explored how the body defends itself against disease and can describe how vaccines can provide protection.	Components of Blood
SCN 4-13c	I can debate the moral and ethical issues associated with some controversial biological procedures.	Stem Cell Treatments
SCN 3-15a	I have developed my knowledge of the Periodic Table by considering the properties and uses of a variety of elements relative to their positions.	Periodic Table
SCN 3-18a	Having taken part in practical activities to compare the properties of acids and bases, I have demonstrated ways of measuring and adjusting pH and can describe the significance of pH in everyday life.	Forensics

Exhibits (cont)

Code	Full Statement	Exhibit(s)
MTH 4-12a	I have discussed the importance of mathematics in the real world, investigated the mathematical skills required for different career paths and delivered, with others, a presentation on how mathematics can be applied in the workplace.	Reuleaux Curves
TCH 3-01a	From my studies of technologies in the world around me, I can begin to understand the relationship between key scientific principles and technological developments.	Seven Segment Display
HWB 3-19a	I am developing the skills and attributes which I will need for learning, life and work. I am gaining understanding of the relevance of my current learning to future opportunities. This is helping me to make informed choices about my life and learning.	Subject Choice panels

Other exhibits / Exhibits in development

Code	Full Statement	Exhibit(s)
SCN 3-05b	I can explain some of the processes which contribute to climate change and discuss the possible impact of atmospheric change on the survival of living things.	Carbon Capture and Storage Interactive (CCSI) / Renewable Energy (RE)
SCN 4-05b	Through exploring the carbon cycle, I can describe the processes involved in maintaining the balance of gases in the air, considering causes and implications of changes in the balance.	CCSI
SCN 4-11b	By carrying out a comparison of the properties of parts of the electromagnetic spectrum beyond the visible, I can explain the use of radiation and discuss how this has impacted upon society and our quality of life.	IR Camera
SCN 3-13c	I have explored how the body defends itself against disease and can describe how vaccines can provide protection.	Body vs Germ
SCN 3-20a	I have collaborated with others to find and present information on how scientists from Scotland and beyond have contributed to innovative research and development.	CCSI / RE
SCN 4-20a	I have researched new developments in science and can explain how their current or future applications might impact on modern life.	CCSI / RE
SCN 4-20b	Having selected scientific themes of topical interest, I can critically analyse the issues, and use relevant information to develop an informed argument.	CCSI / RE
TCH 3-01a	From my studies of technologies in the world around me, I can begin to understand the relationship between key scientific principles and technological developments.	CCSI / RE
TCH 2-02b	I can investigate the use and development of renewable and sustainable energy to gain an awareness of their growing importance in Scotland or beyond.	RE