



General Certificate of Secondary Education
2010–2011

Science: Single Award (Modular)

Human Activity and Health
Module 2

Foundation Tier

[GSC21]

FRIDAY 20 MAY 2011, MORNING

**MARK
SCHEME**

1 (a)

Type of pollution	Example	Method to reduce amount of pollution
air	acid rain	filters on factory chimneys
land	household waste	recycle

[3]

(b) over-fishing – large

[2]

(c) better health care; better nutrition; better sanitation (any **two**)

[2]

7

2 (a) continuous —————> height; discontinuous —————> tongue rolling;

[2]

(b) accurate bar

[1]

3

3 (a) (i) experimentation/peer pressure/addicted/enjoyment/stress

[1]

(ii) tar; causes cancer/bronchitis/emphysema **or** nicotine; is addictive/speeds up heart rate **or** carbon monoxide; reduces oxygen carrying capacity of the blood

[2]

(b) (i) 68 [If 69 and working out shown = 1 mark]

[2]

(ii) cocaine *more* addictive/more people using cocaine

[1]

6

4 (a) (i) penicillin

[1]

(ii) bacteria

[1]

(iii) gonorrhoea/salmonella/tuberculosis/other example/MRSA

[1]

(b) good hygiene or named example; isolate patients with MRSA; not over-using antibiotics (any **two**)

[2]

5

5 (a) (i) changing climates; the temperature of the atmosphere is increasing

[2]

(ii) carbon dioxide/methane

[1]

AVAILABLE
MARKS

			AVAILABLE MARKS
	(b) (i) living	[1]	10
	(ii) lichens increase <i>away from city centre</i>	[1]	
	(iii) numbers lower in Coalville/greater increase away from centre in Coalville; more pollution in Coalville/more factories	[2]	
	(iv) same distances used in two cities/5 trees used/counted up to 2 metres/same type of tree (any two)	[2]	
	(v) more trees/greater area of tree/more distances used/different times of year	[1]	
6	(a) (i) graph showing fall after 1998; to 50%; then rise to 90% by 2005 (all 3 points correct = 2; 1 or 2 points correct = 1)	[2]	8
	(ii) link with autism proved false/there is no link	[1]	
	(b) mucous membranes —————→ <i>traps</i> microbes blood clotting —————→ prevents entry of microbes	[1] [1]	
	(c) antibodies produced when having been infected/vaccinated/ by lymphocytes/white blood cell/complementary shape to microbe/ antigen/can fit together; antibody antigen link/attach/latch on; microbes immobilised/clump; memory cells (any three)	[3]	6
7	(a) (i) grass grows rapidly/tall; outcompetes/covers primrose/stops light	[2]	6
	(ii) laws to prevent them being picked/don't pick; create new habitats; conserve current habitats (any two)	[2]	
	(b) any example, e.g. panda with reason, e.g. habitat destruction [second mark only if first mark correct]	[2]	6
Total			45