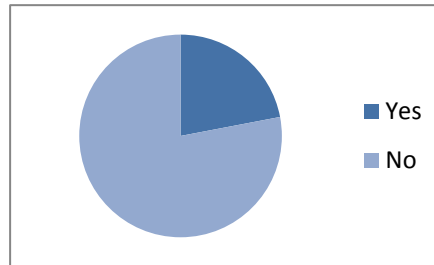


ScotGEN Schools Questionnaire (June - September 2010)
Sheila Sutherland November 2010

1 Before receiving this questionnaire, had you heard of ScotGEN?

	%
Yes	22
No	78

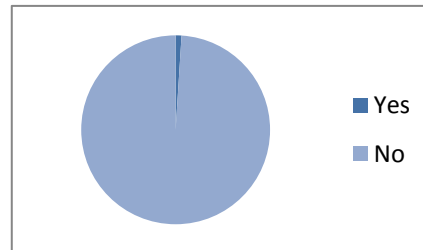
Total : 97



2 Are you registered with ScotGEN?

	%
Yes	1
No	99

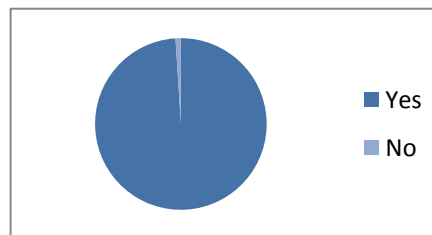
Total:97



3 Do you teach genetics within the current school curriculum?

	%
Yes	99
No	1

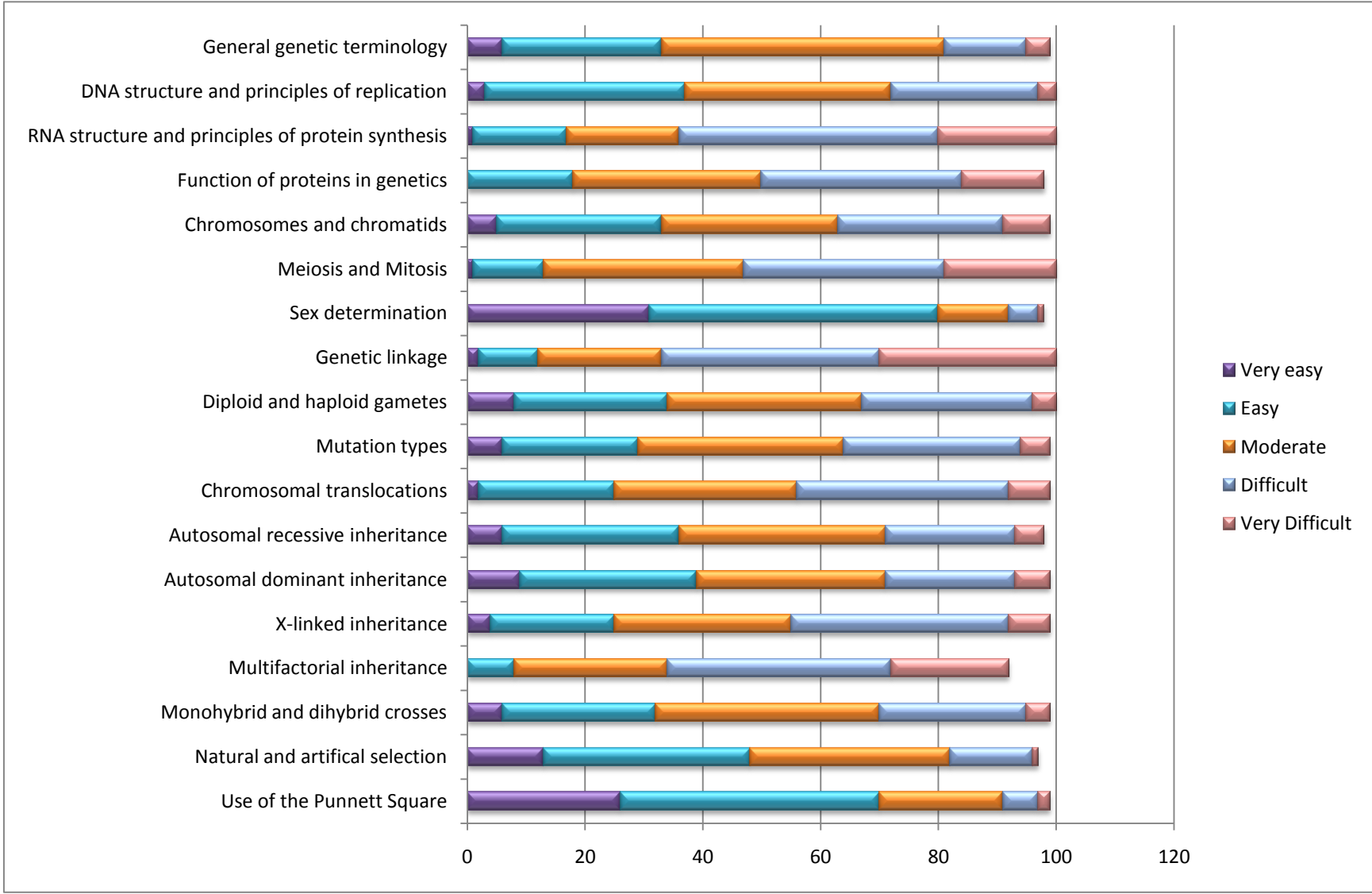
Total: 97



4a How easily do your students understand the following genetics topics?

Topic	Percentage of Total					Total no replies
	Very Easy	Easy	Moderate	Difficult	Very Difficult	
Use of the Punnett Square	26	44	21	6	2	96
Natural and artificial selection	13	35	34	14	1	95
Monohybrid and dihybrid crosses	6	26	38	25	4	96
Multifactorial inheritance	0	8	26	38	20	89
X-linked inheritance	4	21	30	37	7	96
Autosomal dominant inheritance	9	30	32	22	6	96
Autosomal recessive inheritance	6	30	35	22	5	95
Chromosomal translocations	2	23	31	36	7	96
Mutation types	6	23	35	30	5	96
Diploid and haploid gametes	8	26	33	29	4	97
Genetic linkage	2	10	21	37	30	97
Sex determination	31	49	12	5	1	96
Meiosis and Mitosis	1	12	34	34	19	97
Chromosomes and chromatids	5	28	30	28	8	96
Function of proteins in genetics	0	18	32	34	14	95
RNA structure and principles of protein synthesis	1	16	19	44	20	97
DNA structure and principles of replication	3	34	35	25	3	97
General genetic terminology	6	27	48	14	4	97

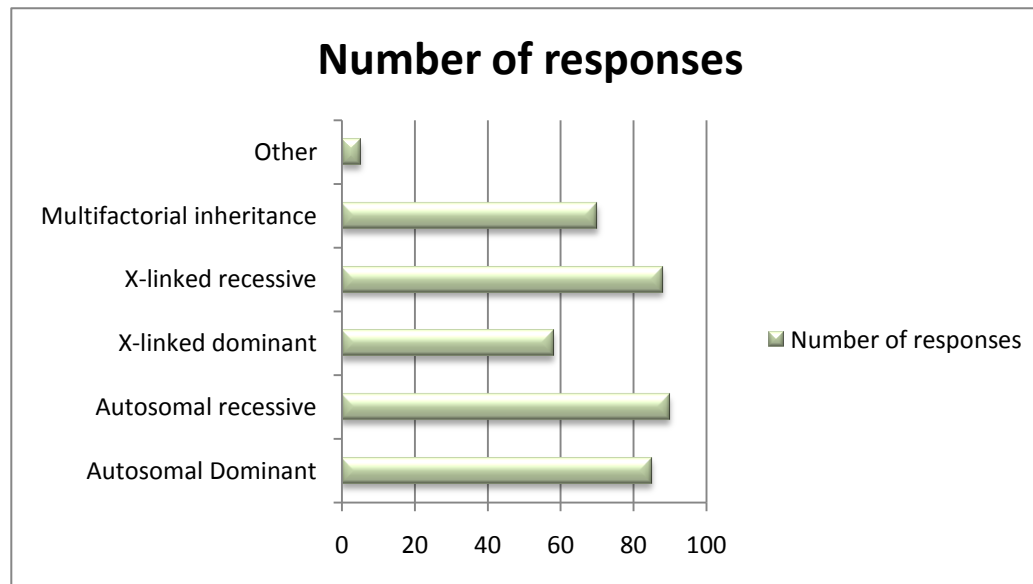
4b Another way of comparing the information above - you can see at a glance the scale of easy-difficult by the coloured bands.



5 Would you use case studies built around the following types of inheritance in order to facilitate your students understanding?

Type of inheritance	No of responses
Autosomal Dominant	85
Autosomal recessive	90
X-linked dominant	58
X-linked recessive	88
Multifactorial inheritance	70
Other	5

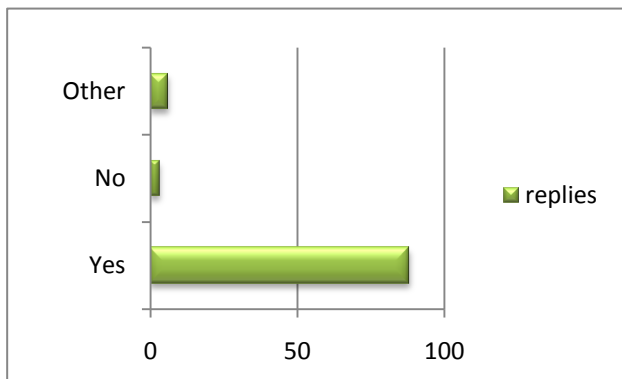
Other
Chromosome mapping and gene probes
Klinefelter's syndrome
Down's syndrome, Turner's syndrome, Klinefelter's syndrome



6 Would case studies containing laboratory results be a useful teaching tool?

Yes	88
No	3
Other	6

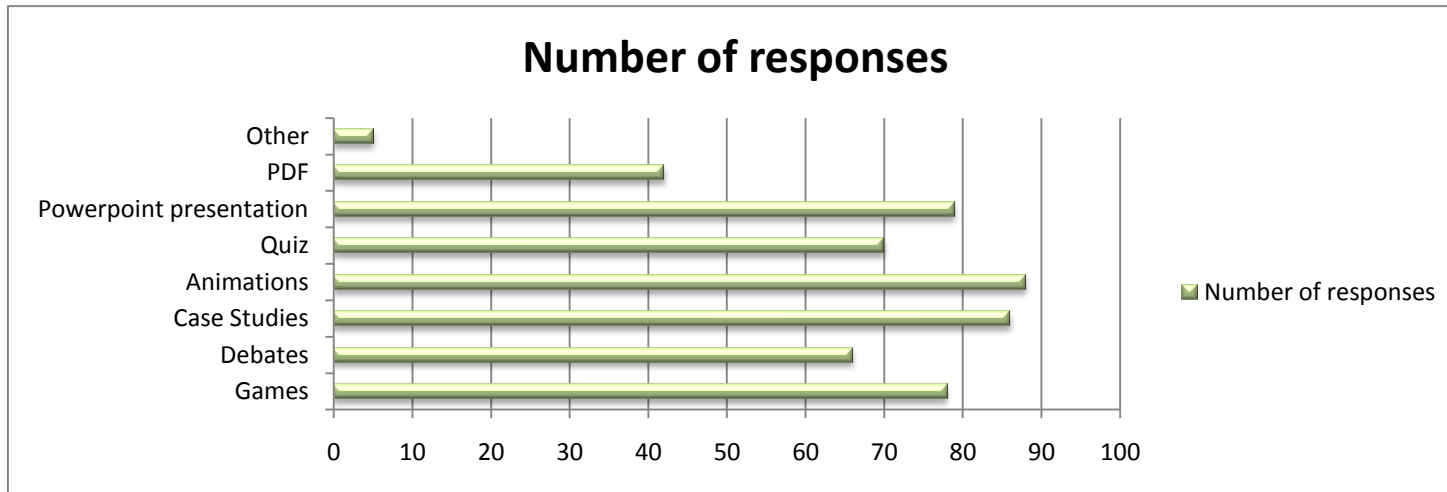
Total	97
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Other
Depends on context
That would depend on the complexity of the data and the level at which it was being used
If made in language accessible to young people
Time limited
Particularly to explore reliability and validity of results
Maybe, depending on complexity and quantity of data to be analysed

7 If new material was being provided, which type of resource would you use?

Resource	Number
Games	78
Debates	66
Case Studies	86
Animations	88
Quiz	70
Powerpoint presentation	79
PDF	42
Other	5

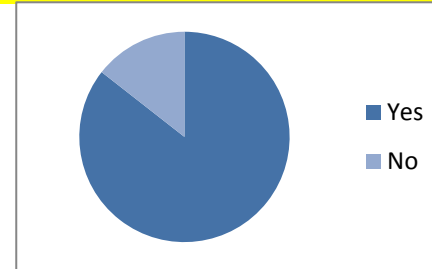


Other
Smartnotebook
Anything!
Various depending on age and stage; different resources are more or less appropriate with ability/ personalities within a group
Video clips

8 Do you currently download genetics material from the internet for teaching purposes?

Do you currently download?		%
Yes	83	86
No	14	14

Total	97
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9 If you answered yes to above question, which sites do you use?

Which sites do you download from?	Number
Scholar	55
GLOW	18
MRC	16
Wellcome Inst	44
Other	20

Other Sites used for downloads	
news items/ bbc programmes	Various
Wide variety of sources	various
charities eg jeans for genes	Arizona University, Access Excellence, Utah University, Skool
various charities eg cystic fibrosis and Jeans for Genes	any found
www.johnkyrk.com; www.biology.arizona.edu	any appropriate
yourgenesyourhealth	your genes your health, nobel education
upd8	search engine results
sites found via search engines	other schools info
GeneJury, Genome.gov	

10 Are you aware of the ScotGEN Message Board?

Genetics topics may be discussed here and your questions will be answered by genetics professionals.

	Number	%
Yes	0	0
No	97	100

Continue to Q11-13

11 What are your opinions as to the support and resources science teachers would find useful if teaching genetics to younger pupils?

Topics	Number
Human characteristics (rather than fruit flies etc)	3
Current issues/ research	3
Ethics	3
DNA structure - transcription & replication	2
Mitosis/ meiosis	2
Structure of chromosomes etc	1
Genetics related to other topics (e.g. Population migrations)	1
Monohybrid/dihybrid crosses	1
Continuous and discontinuous variation	1
Phenotypes/genotypes	1
Genetic counselling	1

Type of resource	Number
Case Studies	8
Hands on/ practical	7
Games	6
Visuals/animations	4
Detailed definitions	2
Quizzes	2
Workshops (by visiting professionals)	2
Debates	2
Interactive resources	1
Modifiable Word documents	1
Resources that can be used out of class - home/ study time	1
Other comments	Number
Must be tailored to new syllabus	3
Same resources as older pupils, but more simple	3
Must distinguish between info which families may receive during genetic counseling and teaching genetics as academic course.	1
Teachers have no time to seek out resources during working day	1
Beware - schools may have security filters in place, pupils may have to look at sites from home.	1

12 Additional comments about online resources that would assist in teaching genetics to secondary school pupils

Topics	Number
Topical issues (e.g. GM Foods)	3
Monohybrid/ dihybrid problem questions	2
Meiosis	2
Ethical issues	1
Chromosome mapping	1
Advanced sequencing techniques	1

Resource	Number
Animations/ video	6
Real life case studies (e.g. Harry Potter/ Simpsons)	6
Hands on/ DIY/ models	5
Interactive material	2
Powerpoints	2
Definitions/ Glossary	1
FAQ	1
Simulations	1
Information Bank (Scottish statistics)	1

Other comments	Number
Must be easy to use (intuitive) and accessible from home	6
Related to new curricula	3
Keep simple, don't overload with detail	1
Email directly to teacher - no time to search	1

13 In which local authority area is your school located?

Authority	Number	Replies	Undelivered
Aberdeen City	14	8	
Aberdeenshire	15	2	
Angus	8	4	
Argyll and Bute	10	4	
Clackmananshire	4	1	
Dumfries and Galloway	14	3	12
Dundee City	9	5	
East Ayrshire	8	3	
East Dunbartonshire	7	2	
East Lothian	6	3	
East Renfrewshire	7	1	
Edinburgh City	30	9	
Eilean Siar (W.Isles)	3	0	
Falkirk	7	2	
Fife	18	7	
Glasgow City	35	5	
Highland	26	3	
Inverclyde	7	0	
Midlothian	5	1	
Moray	8	7	
North Ayrshire	8	2	
North Lanarkshire	24	3	1
Perth and Kinross	13	1	
Renfrewshire	10	1	2
Scottish Borders	8	9	
South Ayrshire	8	2	
South Lanarkshire	17	3	
Stirling	8	0	
West Dunbartonshire	6	4	
West Lothian	10	2	
Other - independent		3	

Number is total number of schools receiving q're.

Replies is number of questionnaires returned, could be more than one reply per school.

Undelivered - repeatedly bounced back - estimate

Note: may have received more than one reply from any school.

No replies	Poss.	Actual
Inverclyde	7	0
Orkney	2	0
Shetland	2	0

