

SCIENCE ENGAGEMENT MEASURES RESEARCH PROJECT

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1. Executive summary

The Science Engagement Measures research project involves examining the data related to visitors' engagement with science during their visit to the Science Museum London, collected as part of the SMG's exit survey which visitors are invited to take part in at the end of their visit to the museum. The exit survey not only collects visitors' responses to the measures, but also collects their demographic information, group type, audience segment and so on, which allows for comparisons in science engagement between these groups.

The measures were initially called Life Enhancing Experiences (LEE) and their role was to add a quantifiable measure of learning and engagement that could be tracked across years. In 2016, the measures were reviewed to ensure that they aligned with the Science Museum Group's core priority to grow science capital in individuals and society. The updated measures were called Science Engagement Measures (SEM) and were designed to capture evidence of science engagement from which it would then be possible to infer that the museums were adhering to good Science Capital led practice. As the update from LEE to SEM resulted in only minimal changes to the measures, we can data track from the old measures to the new. The LEE and SEM are comprised of the statements as follows:

- Our visit today was enjoyable;
- Our visit today was interesting (from 2009/10 to 2016/17);
- The visit brought science and technology alive for me;
- I have learnt something new today;
- The visit made me want to learn more/continue exploring about some of the things discovered here;
- During our visit we talked to each other about what we were looking at and what we were doing;
- I feel the Science Museum is a place for me;
- The things covered here are relevant to me and my life (from 2017/18 to 2018/19).

This report is the result of comparing and analysing the responses to the science measures (LEE and SEM) of different groups of visitors over the years from 2009/2010 to 2018/19, aiming to improve the understanding of the visitors' relationship with science and how this is impacted by their visit, as well as to provide a picture of science capital informed practice at the Science Museum London.

There are some main findings worth being noted before going into the exploration of the detailed data manifestations:

- Over the past 3 years, during which the **audience segments** were added as a parameter of grouping visitors, the 8 segments did respond **differently** to some of the statements, in terms of the strength of agreement, however most of the differences have tended to be subtle.
- The **Engaged Community Drivers** have tended to agree more with the statements than visitors from other segments. The **Nostalgic Heritage Fans, Time-Poor Aspirers**, as well as the **Entertainment Seekers**, however, have tended to show a slightly lower level of agreement.
- Regarding the responses from the three socio-economic groups, the differences have been very subtle when coming to “**Our visit today was enjoyable**” and “**Our visit today was interesting**”. The groups have responded relatively more differently in the other statements.
- Overall, the **student** groups have tended to respond more differently to specific statements, while the differences between responses from the **NS-SEC 1-4** and **NS-SEC 5-8** have been very little, indicating that the socio-economic might not necessarily affect the responses.
- Overall, the visitors with **strong science interests** tend to show the highest degree of agreement with the majority of the statements, indicating a **positive correlation** between the visitors’ science interest and the strength of their agreement with the LEE/SEM. The only exception is for “**I have learnt something new today**”, where the visitors with modest science interests have rated the highest for several years.
- For all the socio-economic as well as science interest groups, in 2010/11, the strength of agreement with the majority of the statements reached the peak, while 2011/12 and 2012/13 are the two low points, indicating a relatively sharp drop off in 2011/12.

2. Research Introduction: Aims and Objectives

This research at the Science Museum London is a part of the project which aims to examine the data related to visitors’ engagement with science during their visit to SMG sites. Two student placements, from University College London MA Museum Studies program, will analyse Science Museum’s exit survey data from 2009 to 2019, to look for trends across time and to compare results for different audience segments and demographic groups. Working with the Audience Research and Advocacy and Visitor Insight teams, the placements will also work to interpret the findings and suggest reasons for trends in the data.

The aims and specific objectives for this research are as follows.

Aims:

- To build a picture of trends in visitors' response to the LEE/SEM over time;
- To understand how each audience segment responds to the LEE/SEM and compare this between segments;
- To understand how different NS-SEC groups respond to the LEE/SEM and compare this;
- To understand being a first-time visitor or a regular visitor affects how visitors' respond to the LEE/SEM;
- To understand how visitors' response to science interest questions affects their response to the LEE/SEM;
- To investigate, working with the Audience Research and Advocacy and Visitor Insight Teams, reasons for trends and differences in the LEE/SEM data.

Objectives:

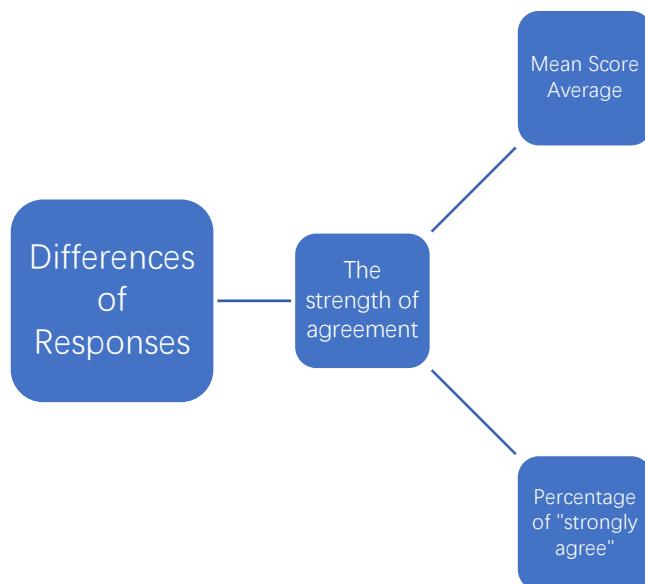
- How have visitors' responses to the LEE/SEM changed over time?
 - What, if any trends, exist in the data?
 - Are there any points in time at which there has been a significant change in visitors' response to the LEE/SEM?
- How have different NS-SEC groups responded to the LEE/SEM?
 - Does NS-SEC affect how visitors respond to the LEE/SEM? If so how?
 - Are there any differences in how NS-SEC 1-4/NS-SEC 5-8/Students respond to the LEE/SEM?
 - Do any of these responses change over time?
- How have first time visitors versus repeat visitors responded to the LEE/SEM?
 - Have first time visitors versus repeat visitors responded differently? If so how?
 - Does this change over time?
- How have visitors with different responses to science interest questions responded to the LEE/SEM?
 - Have visitors with different responses to the science interest questions also responded differently to the LEE/SEM? If so how?

- Does this change over time?
- Can any reasons for trends in the data be suggested?
 - How, if at all, do trends in the data map onto changes in the museum and other contextual factors?

3. Methodology

Based on data collected from the Science Museum's exit survey, which is in the format of structured interviews, the majority of this research is focusing on quantitative data analysis.

One of the research aims is to compare the differences of the responses from different visitors' group. Hence, the research has interpreted the "differences of responses" into the "differences of strength of agreement" with the statements (measures).



To reach the aims and objectives, the research has planned to mainly look into the "mean score average", as well as the "percentage of 'strongly agree'" in the survey data. For this research, "mean score average" could be used to examine the strength of agreement with the statements, as a score tending to 2.00 indicates "strongly agree", a score tending to 1.00 indicates "agree", a score tending to 0.00 indicates "neither agree nor disagree", a score tending to -1.00 indicates "disagree", and a score tending to -2.00 indicates "strongly disagree". The "percentage of 'strongly agree'", however, was used as another parameter to further illustrate the extent of visitors' agreement with specific

statements. Compared with other parameters from the data, these two were the ones which showed more obvious differences and thus were considered more appropriate for the research analysis.

4. Audience Segments

The SMG has 8 audience segments, comprising Engaged Community Drivers (**ECD**), Avid Cultural Consumers (**ACC**), Trend-Awares (**TA**), Entertainment Seekers (**ES**), Passionate Specialists (**PS**), Nostalgic Heritage Fans (**NHF**), Safe Self-Improvers (**SSI**) as well as Time-Poor Aspirers (**TPA**). The data regarding audience segments and their responses to the SEM was available starting from 2016/17 to 2018/19.

Main findings

- The **Engaged Community Drivers** have tended to agree more with the statements than visitors from other segments. The **Nostalgic Heritage Fans**, **Time-Poor Aspirers**, as well as the **Entertainment Seekers**, however, have tended to show a lower level of agreement.
- For all of the segments, the highest rated statement is “**Our visit today was enjoyable**”, while “**this visit has made me want to further explore some of the things covered here**” is the lowest rated one.
- Among the three annums, **2017/18** seems to be the one when the majority of the statements have received the highest level of agreements from visitors from different segments, indicating that it might be worth an exploration into the events or special occasions that might have triggered the rises. The relevant statements include: “**enjoyable**”, “**a place for me**”, “**have learnt something new**” “**want to learn more**” and “**feel relevant**”.
- The audience segments did respond **differently** to some of the statements, in terms of the strength of agreement, although most of the differences tend to be subtle. All the segments have **similarly** tended to “strongly agree” with “**Our visit today was enjoyable**”, “**Our visit today was interesting**”, “**I have learnt something new today**” and “**During our visit we talked to each other about what we were looking at and what we were doing**”.
- Most segments have tended to “strongly agree” that the Science Museum is a place for them. By contrast, the **Time-Poor Aspirers** have shown a relatively low level of agreement.
- Most segments have tended to “strongly agree” that their visits have brought science and technology alive for them. However, the **Nostalgic Heritage Fans** and **Time-poor Aspirers** have relatively low degrees of agreement.

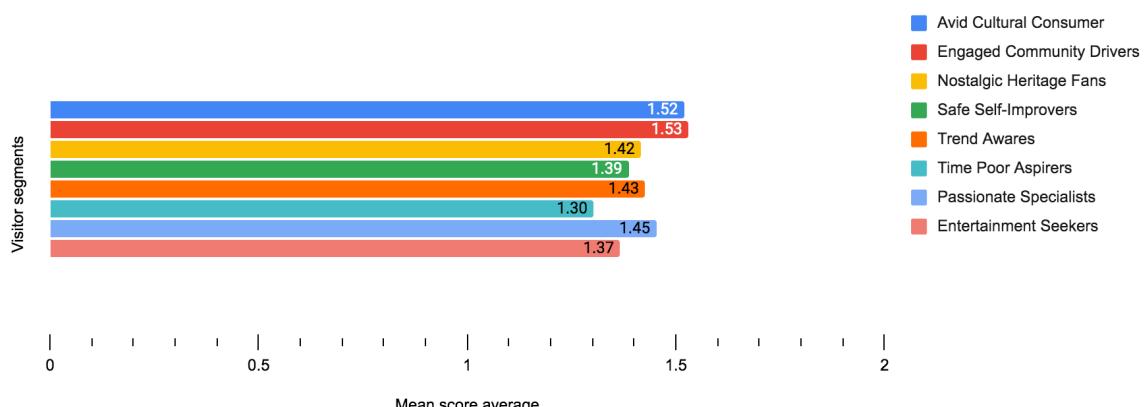
- The **Nostalgic Heritage Fans, Time-poor Aspirers, Passionate Specialists** and **Entertainment Seekers** showed a lower level of motivation to learn more or continue exploring about the things covered by their visits.
- The visitors from the **Entertainment Seekers** have the lowest degree of agreement with the statement “**The things covered here feel relevant to me and to my life**”.

More details regarding the responses of visitors from different segments are as follows.

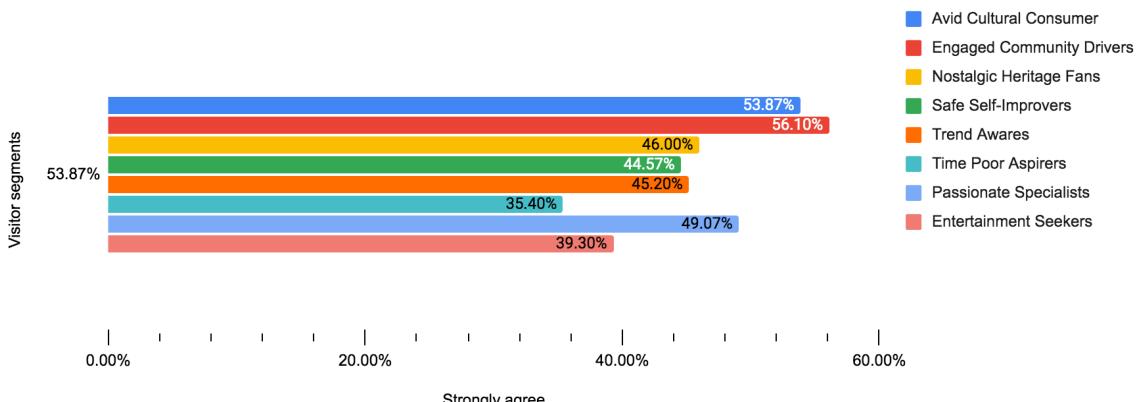
Our visit today was enjoyable

- On average, the strength of agreement from Time Poor Aspirers has tended to be the lowest. Those of the Nostalgic Heritage Fans and Safe Self-Improvers tend to be relatively low as well. The Engaged Community Drivers as well as Avid Cultural Consumer are the two segments which agree more with the statement.
- All 8 segments have tended to “strongly agree” with this statement.

Our visit today was enjoyable



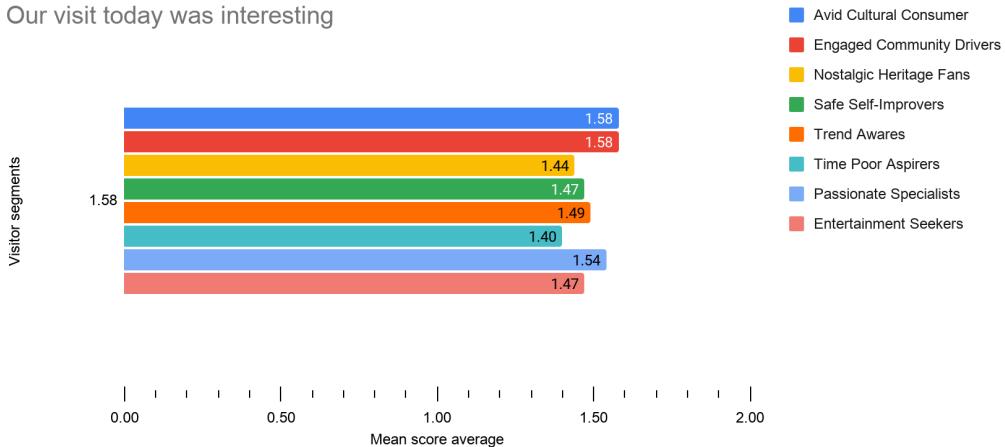
Our visit today was enjoyable



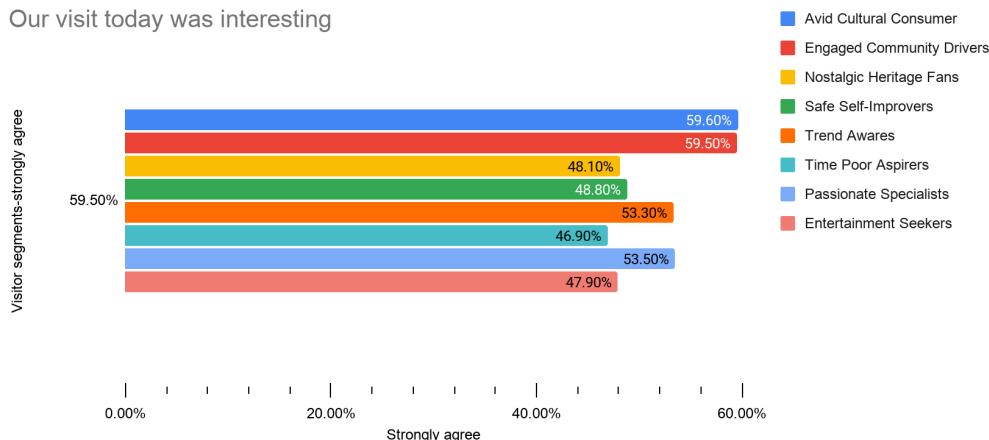
Our visit today was interesting

- On average, the strength of agreement of Time Poor Aspirers has tended to be the lowest. Those of the Nostalgic Heritage Fans, Safe Self-Improvers and Entertainment Seekers tend to be relatively low as well. The Engaged Community Drivers as well as Avid Cultural Consumer are the two segments which agree more with the statement.
- All 8 segments have tended to “strongly agree” with this statement.

Our visit today was interesting



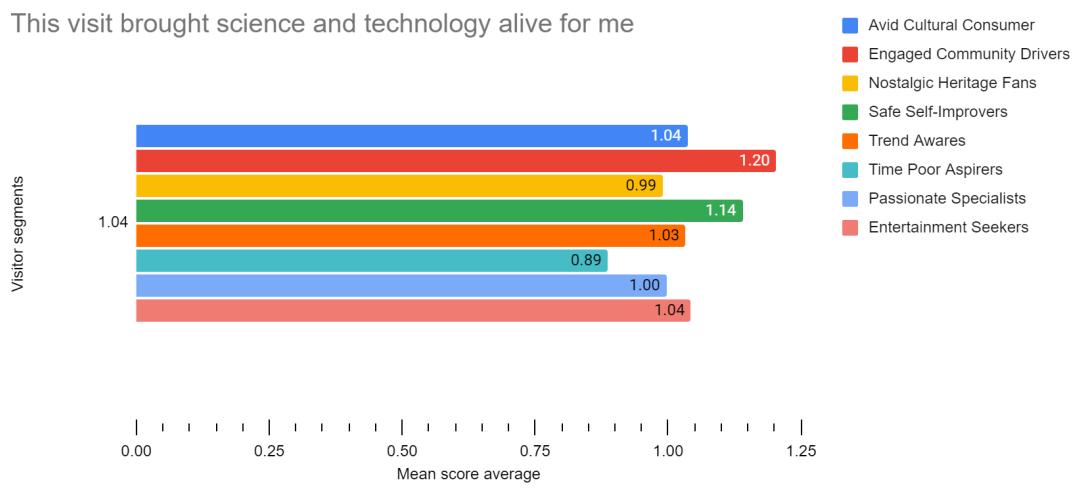
Our visit today was interesting



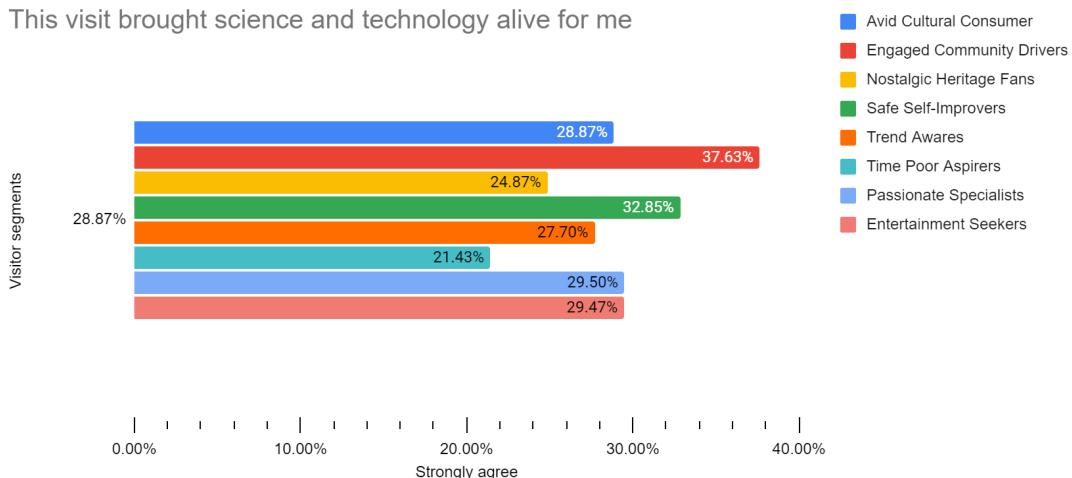
The visit brought science and technology alive for me

- The Time Poor Aspirers segment tends to be the lowest over the three years. The differences in the strength of agreement are not so obvious among Avid Cultural Consumers, Nostalgic Heritage Fans, Trend Awares, Passionate Specialists, and Entertainment Seekers. The Engaged Community Drivers is the segment which has the highest level of agreement.
- Six out of 8 segments have tended to “strongly agree” with this statement, while the Nostalgic Heritage Fans as well as the Time Poor Aspirers have shown a lower degree of agreement.

This visit brought science and technology alive for me



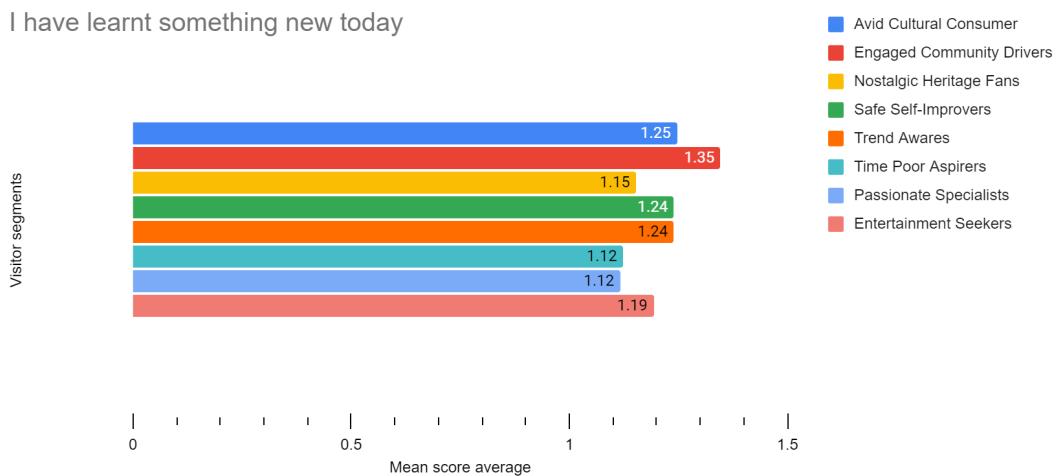
This visit brought science and technology alive for me



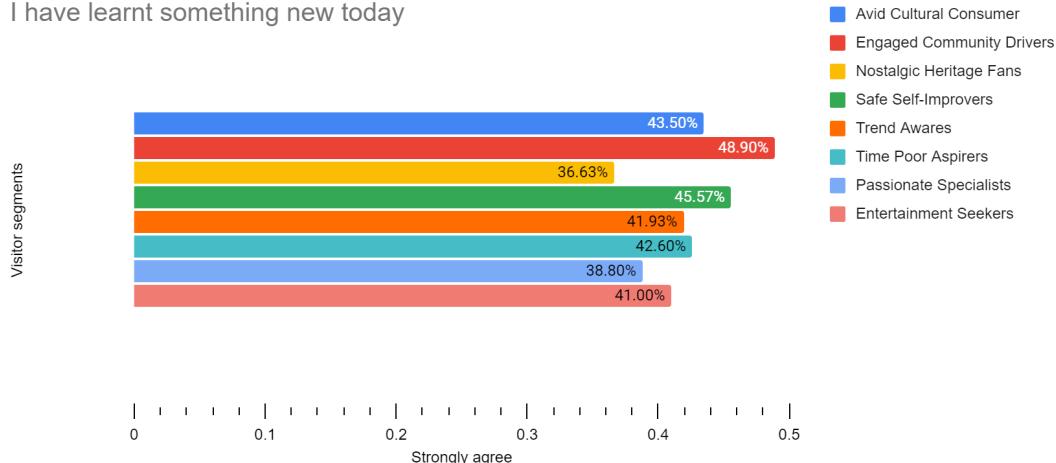
I have learnt something new today

- On average, the Time Poor Aspirers and Passionate Specialists segments tend to be the joint lowest over the three years. The differences among the responses of the Avid Cultural Consumer, Safe Self-Improvers and Trend Awarer are not obvious, while the Engaged Community Drivers is the segment which has the highest level of agreement.
- All 8 segments have tended to “strongly agree” with this statement.

I have learnt something new today



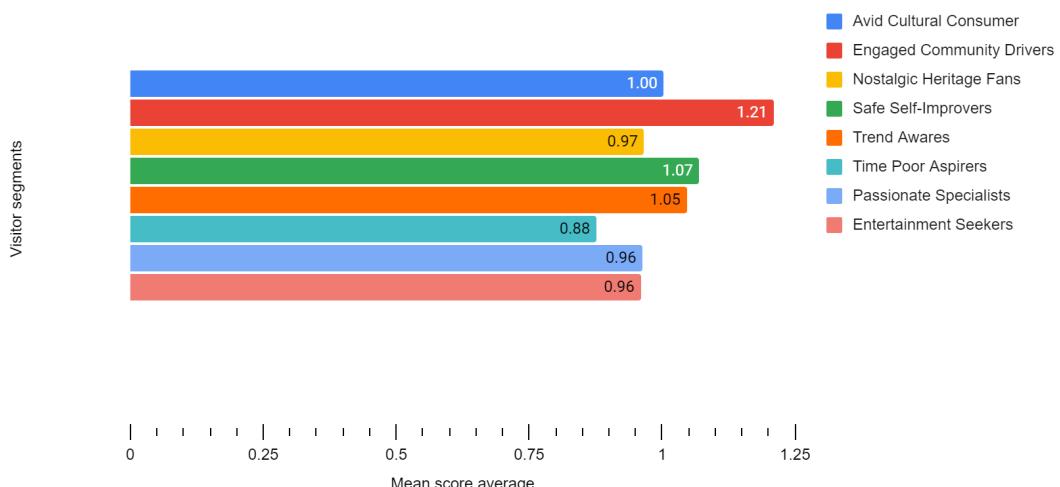
I have learnt something new today



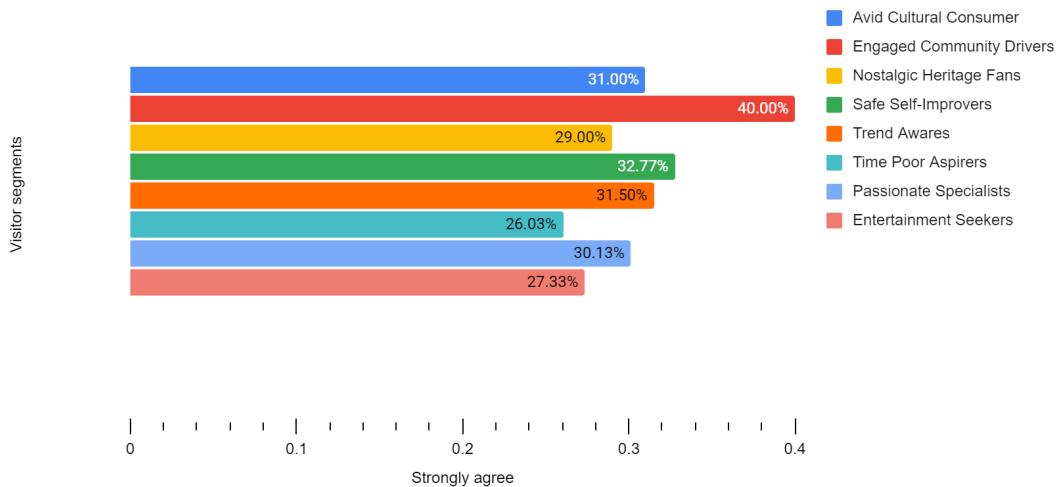
The visit made me want to learn more/continue exploring about some of the things cover here

- On average, the Time Poor Aspirers tends to be the lowest regarding the strength of agreement over the three years. The Engaged Community Drivers is the segment which has the highest level of agreement.
- Four segments have tended to “strongly agree” with the statement, including the Avid Cultural Consumers, Engaged Community Drivers, Safe Self-Improvers and Trend Awares, while the others have shown a lower degree of agreement.

The visit made me want to learn more/continue exploring about some of the things cover here



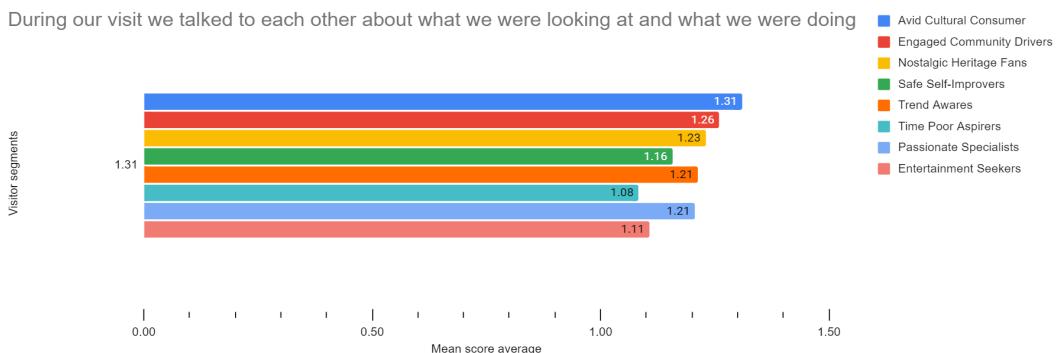
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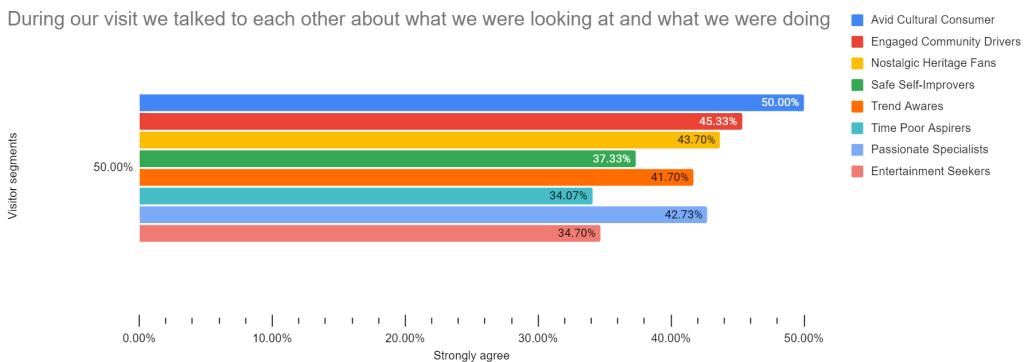
During our visit we talked to each other about what we were looking at and what we were doing

- On average, the Time Poor Aspirers tends to be the lowest regarding the strength of agreement over the three years. The Avid Cultural Consumer is the segment which has the highest level of agreement, with 50% of the visitors “strongly agreeing” with the statement.
- All the segments have tended to “strongly agree” with the statement.

During our visit we talked to each other about what we were looking at and what we were doing



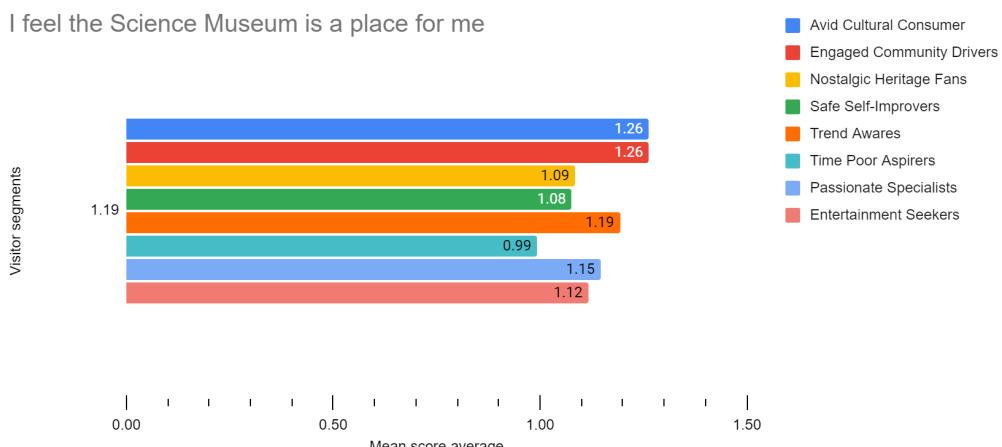
During our visit we talked to each other about what we were looking at and what we were doing



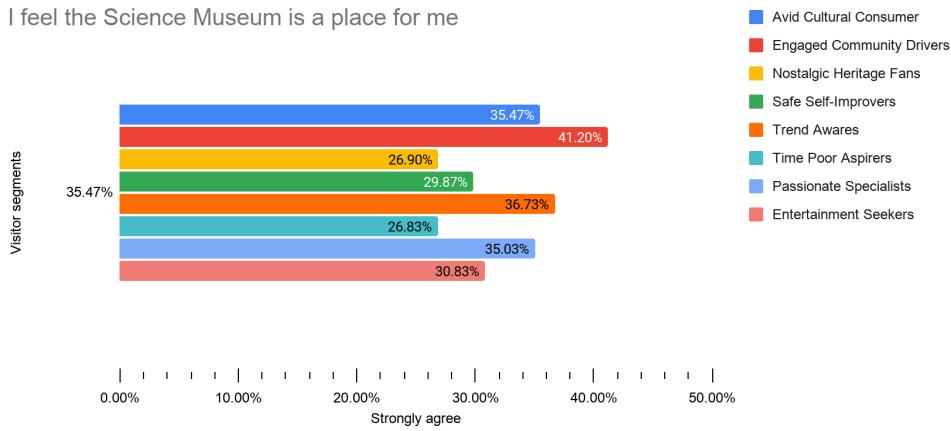
I feel the Science Museum is a place for me

- On average, the strength of agreement of the Time Poor Aspirers segment tends to be the lowest over the three years. The Nostalgic Heritage Fans and Safe Self-Improvers tend to agree less as well. The Avid Cultural Consumers and Engaged Community Drivers remain the two segments which have the highest level of agreement.
- Seven out of 8 segments have tended to “strongly agree” with this statement, except for the Time Poor Aspirers.

I feel the Science Museum is a place for me



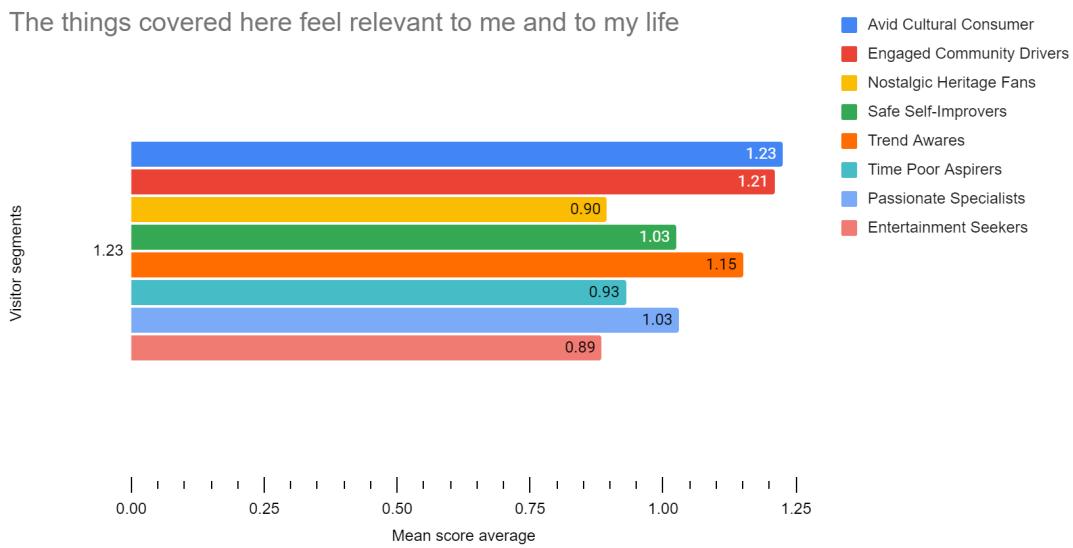
I feel the Science Museum is a place for me



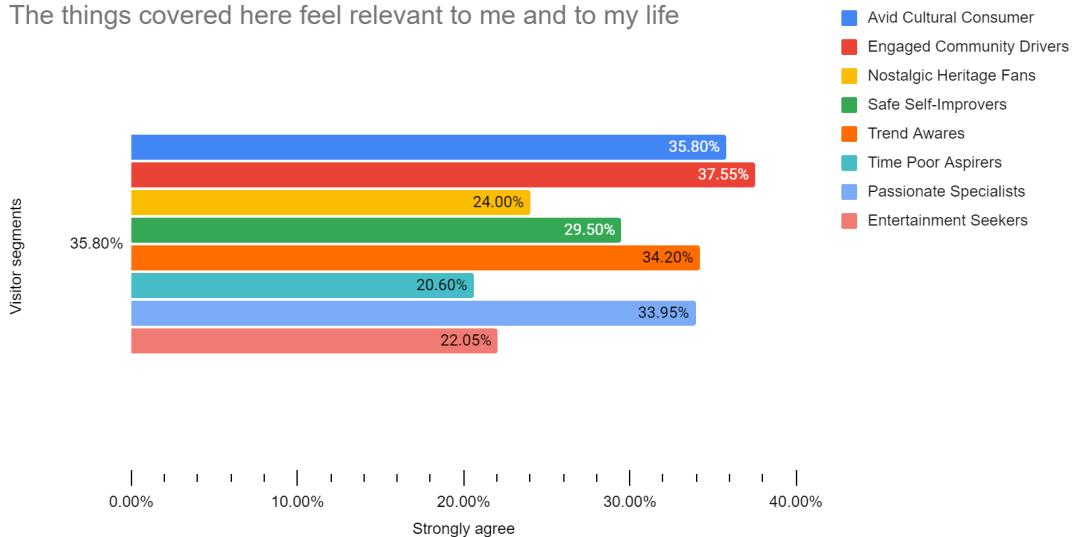
The things covered here feel relevant to me and to my life

- On average, the Entertainment Seekers tend to be the lowest regarding the strength of agreement over the three years. The Avid Cultural Consumer is the segment which has the highest level of agreement.
- Five out of 8 segments have tended to “strongly agree” with the statement, while the Nostalgic Heritage Fans, Time Poor Aspirers as well as the Entertainment Seekers have shown a lower degree of agreement.

The things covered here feel relevant to me and to my life



The things covered here feel relevant to me and to my life



5. NS-SEC Groups

The National Statistics Socio-economic Classification is the official socio-economic classification in the United Kingdom. It is commonly used in eight-class, five-class and three-class versions. The version intended for most users has eight classes:

1. Higher managerial and professional occupations
2. Lower managerial and professional occupations
3. Intermediate occupations (clerical, sales, service)
4. Small employers and own account workers
5. Lower supervisory and technical occupations
6. Semi-routine occupations
7. Routine occupations
8. Never worked or long-term unemployed

Based on this version, the Science Museum has categorised the visitors into three interrelated groups: NS-SEC 1-4, NS-SEC 5-8 and Students.

Main Findings

- ❑ The differences in the responses of the three groups have been very subtle regarding “**Our visit today was enjoyable**” and “**Our visit today was interesting**” over the ten years. However, the **NS-SEC 1-4** have been finding their visits slightly more enjoyable and interesting than the other two do, while the **students** seem to have been having the least fun.

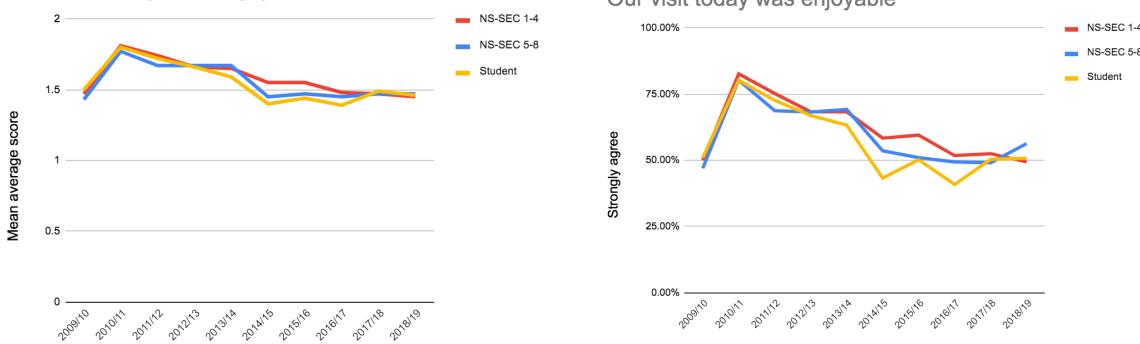
- For all the groups, in 2010/11, the strength of agreement with the majority of the statements (6 out of 7) reached the peak, while 2011/12 and 2012/13 are the two low points, indicating that since 2010/11, there has been a general decline in agreement.
- Since 2013/14, all the three groups have been tending to show more motivations to **learn and continue exploring more** about some of the things covered at the Science Museum, while the **students** seem to be motivated the most.
- Since 2012/13, the **students** have been talking less to each other during their visits, compared with the **NS-SEC 5-8** and **NS-SEC 1-4**.
- From 2013/14 to 2017/18, the **students** had been tending to agree the least that the **Science Museum is a place for them**. In 2018/19, however, they showed the highest degree of agreement with this statement. The differences in the responses of the **NS-SEC 1-4** and **NS-SEC 5-8** have been very little.
- Over the two years during which the new statement "**The things covered here feel relevant to me and to my life**" has been added into the SEM, all of the groups interviewed in 2018/19 tended to agree less than those in 2017/18. The **NS-SEC 5-8** has changed the most regarding the strength of agreement, with the percentage of "strongly agree" dropping from 36% in 2017/18 to 25.30% in 2018/19.

More details regarding the responses to the LEE/SEM from different NS-SEC groups are as follows.

Our visit today was enjoyable

- Overall, the visitors from **NS-SEC 1-4** have tended to agree with the statement the most and the students have tended to agree the least. However, the differences among groups have been subtle.
- Over the past 10 years, for all the three groups, data shows a general decline trend in terms of the strength of agreeing; both the strength of agreement and the percentages of "strongly agree" reached the peak in 2010/11.

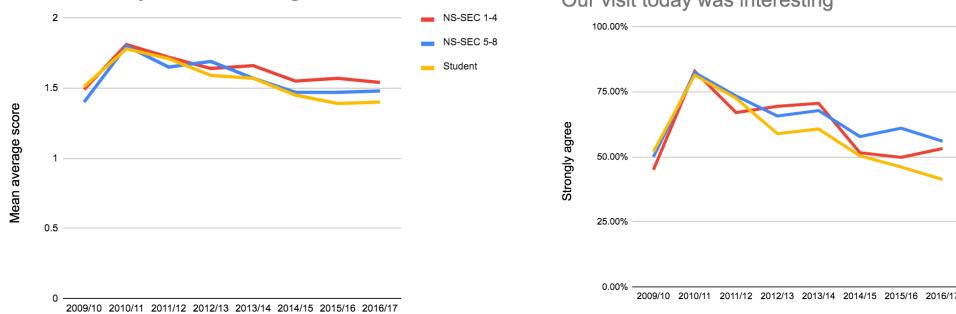
Our visit today was enjoyable



Our visit today was interesting

- Over the past years, the visitors from **NS-SEC 1-4** have been more tending to “strongly agree” that their visits were interesting, while the students have been finding the least fun during the visits. However, the differences among the groups have been very little.
- Over the past ten years, for all the three groups, data shows a general decline trend in terms of the strength of agreeing; both the percentages of “strongly agree” and the strength of agreement reached the peak in 2010/11.

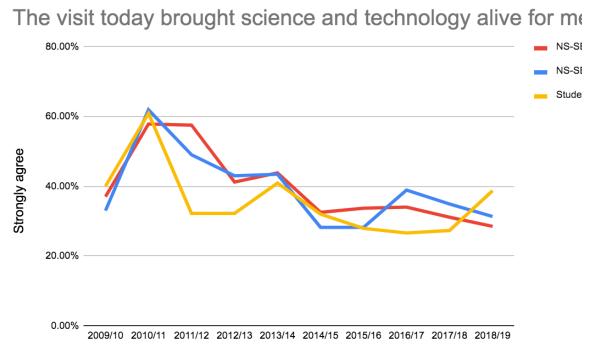
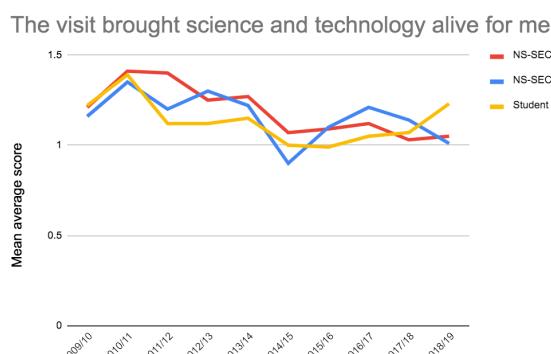
Our visit today was interesting



This visit brought science and technology alive for me

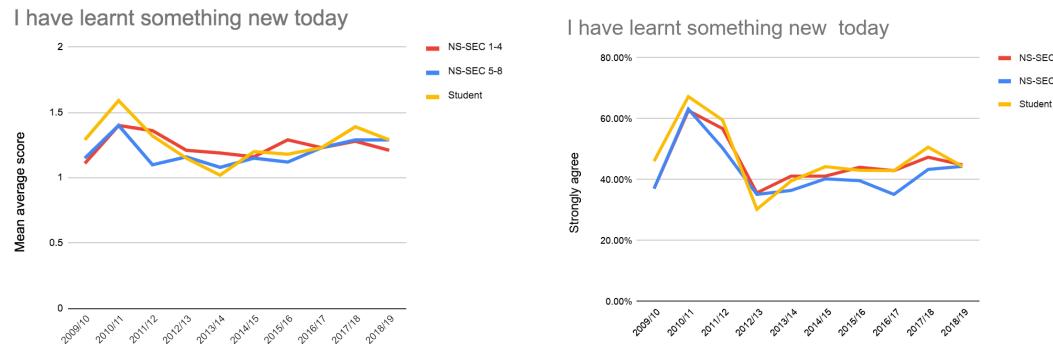
- There is no continuous pattern regarding the differences of the responses from the NS-SEC groups. Before 2015/16, the **NS-SEC 1-4** had tended to agree the most with the statement; after 2015/16, however, the strength of agreement of both **NS-SEC 5-8** and **Students** has been rising; since 2017/18, **students** have become the ones who agree the most.

- Over the ten years, for all the three groups, both the percentages of “strongly agree” and the strength of agreement have been through fluctuations, without consistent changing patterns; 2010/11 seems to be a high point of the strength of agreement of all the groups, while 2011/12 and 2014/15 are likely the two low points.



I have learnt something new today

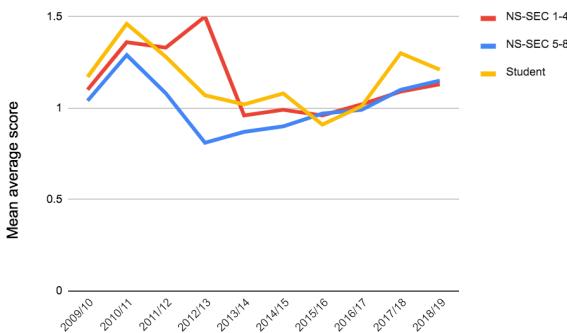
- Before 2011/12, **students** had tended to agree the most with the statement. With time passing by, however, the differences among the responses from the three groups have been little.
- From 2009/10 to 2014/15, for all the three groups, the percentages of “strongly agree” and the strength of agreement reached the peak in 2010/11, then dropped sharply.
- Since 2014/15, all of the three groups seem to have a slight tendency of climbing up, in terms of the strength of agreement. However the variances have been subtle.



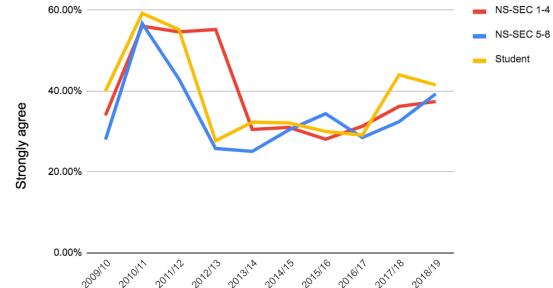
The visit made me want to learn more/continue exploring about some of the things covered here

- Before 2014/15, the differences in the responses of the three groups were more obvious. The strength of agreement of the **NS-SEC 5-8** had been much lower than the other two groups; Since 2014/15, however, the differences have gradually become more subtle; Since 2017/18, the **students** have tended to agree more with the statement.
- Since 2012/13, the strength of agreement of the NS-SEC 5-8 has been steadily rising.
- Since 2016/17, the strength of agreement of the student group has been rising specifically fast, making it the one who agrees the most in both 2017/18 and 2018/19.
- Over the years, the strength of agreement of both the **NS-SEC 5-8** and the **student** group have reached the peak in 2010/11.
- In 2014/15, the strength of agreement of the NS-SEC 1-4 has dropped sharply.
- Since 2013/14, for all the three groups, data shows a general tendency of increasing regarding the strength of agreement.

This visit made me want to learn more about some of the things covered here



The visit made me want to learn more about some of the things covered here



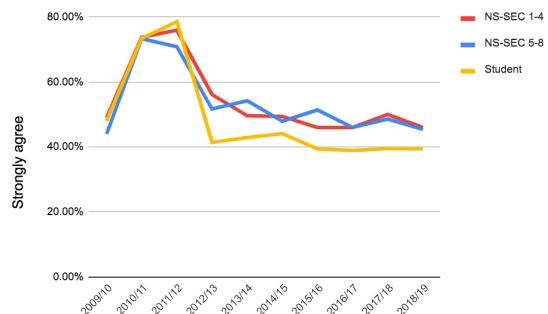
During our visit we talked to each other about what we were looking at and what we were doing

- The differences of the response had been very subtle before 2012/13. After that year, the **students** have tended to agree the least with the statement.
- Over the ten years, for all the three groups, data shows a general decline trend in terms of the strength of agreement, starting with a relatively sharp drop off in 2012/13.
- The responses from the **NS-SEC 5-8** and **NS-SEC 1-4** seems to have little difference.

During our visit we talked to each other about what we were looking at and what we were doing



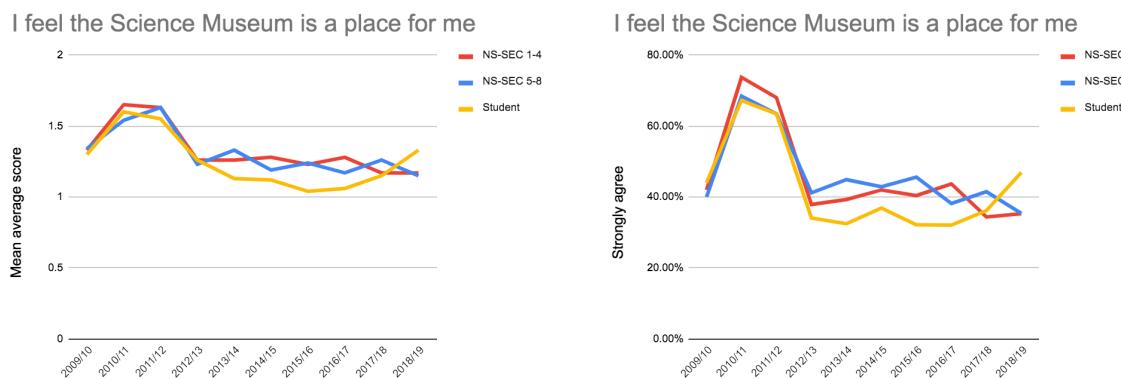
During our visit we talked to each other about what we were looking at and what we were doing



I feel the Science Museum is a place for me

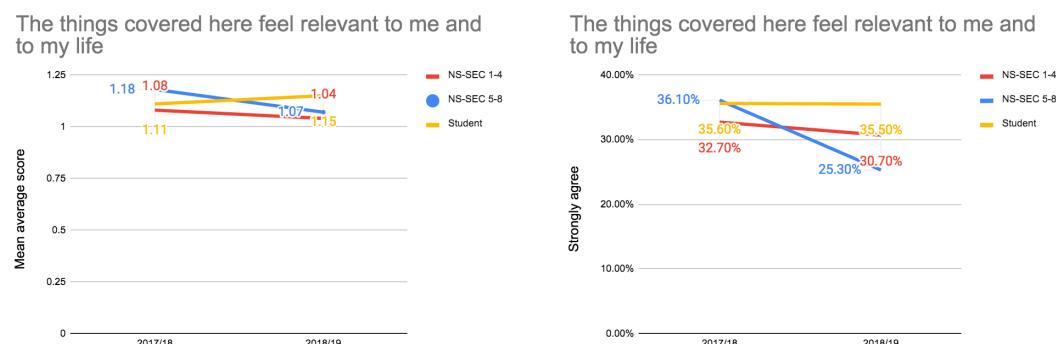
- In 2012/13, there has been a relatively sharp drop off regarding both the strength of agreement and the percentage of "strongly agree", for all the three groups.

- Over the ten years, the responses from the **NS-SEC 5-8** and **NS-SEC 1-4** seems to have little difference.
- From 2013/14 to 2017/18, the **students** had been tending to agree the least that the Science Museum is a place for them. In 2018/19, however, they showed the highest degree of agreement with the statement.
- The responses from both **NS-SEC 5-8** and **NS-SEC 1-4** have not been changing obviously since 2012/13.



The things covered here feel relevant to me and to my life

- Over the two years during which the new statement has been added into the SEM, all of the groups interviewed in 2018/19 tended to agree less than those in 2017/18.
- The **NS-SEC 5-8** has changed the most regarding the strength of agreement, with the percentage of “strongly agree” dropping from 36% in 2017/18 to 25.30% in 2018/19.



6. Science Interest

The visitors were invited to answer several science interests questions in the exit survey of the Science Museum. Based on the answers, the visitors were then categorised into three groups, each of which has different level of interests in Science subjects: **Strong**, **Modest** and **Weak**. The research also looks into how this might influence their responses to the measures.

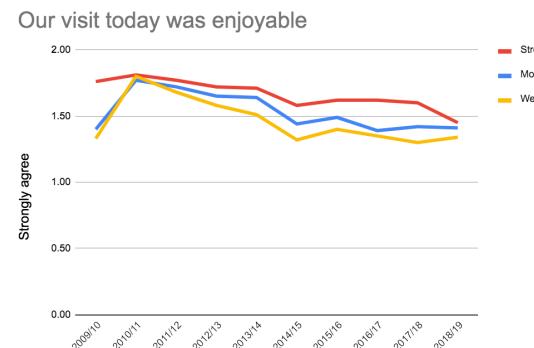
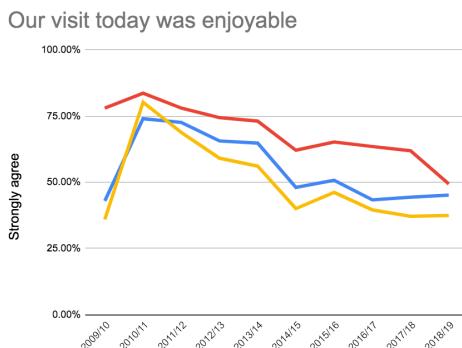
Main findings

- Overall, the visitors with strong science interests tend to show the highest degree of agreement with the majority of the statements, indicating a **positive correlation** between the visitors' **science interest** and the **strength of their agreement** with the LEE/SEM. The only exception is for "**I have learnt something new today**", where the visitors with modest science interests have rated the highest for several years.
- Among the LEE/SEM, the strength of agreement tends to be affected less by the visitors' science interest when coming to "**I have learnt something new today**" and "**during our visit we talked to each other about what we were looking at and what we were doing**".
- For all the three groups, the strength of agreement with the majority of the statements reached the peak in 2010/11 and then dropped sharply in 2012/13.
- In 2014/15, the percentage of "strongly agree" with the statement "**During our visit we talked to each other about what we were looking at and what we were doing**" rose sharply among all the three groups, then dropped sharply and has been changing little.
- 2016/17 is a high point for the visitors with **weak science interests**. Their agreement with "**the visit brought science and technology alive for me**", "**I have learnt something new today**" and "**I want to learn more/continue exploring some of the things covered here**" rose sharply.
- Since 2017/18, the visitors who have modest and weak science interests have started to agree more that the **Science Museum is a place for them**, while the strength of agreement of the "strong interest" group dropped sharply. It is worth being noted that in 2018/19, visitors with **weak science interest** become the one who agree the most.

Our visit today was enjoyable

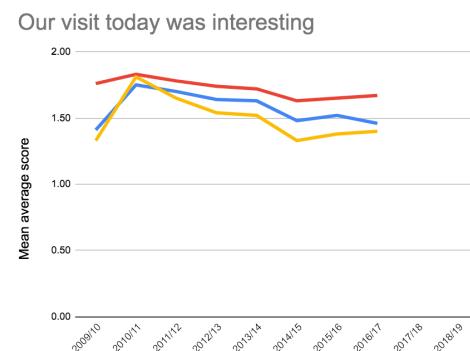
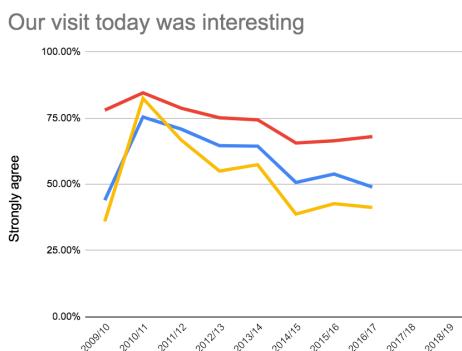
- Overall, the visitors with strong science interests tend to agree with the statement the most, followed by the modest-interested ones and then the weak-interested ones.

- For all the three groups, data shows a slight decline in terms of the strength of agreeing over the past ten years; the percentages of “strongly agree” reached a peak in 2010/11.
- The majority of the visitors, regardless of how strong their interests in Science are, tend to strongly agree with the statement (see figure)



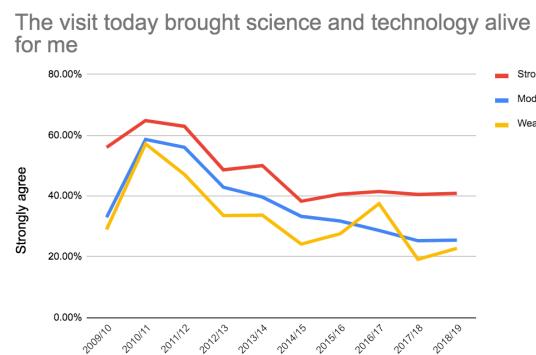
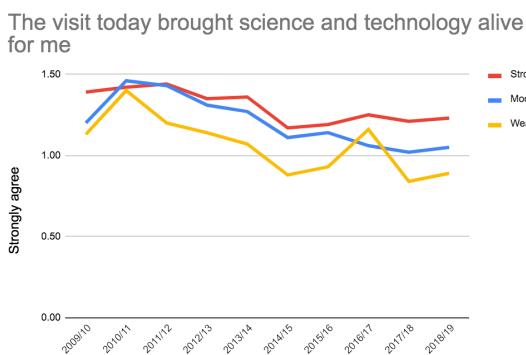
Our visit today was interesting

- Overall, the visitors with strong interests in Science tend to rate the highest, compared with the ones with modest and weak interests.
- For all the three groups, data shows a slight tendency of decline in terms of the strength of agreement; the percentage of “strongly agree” reached a peak in 2010/11.



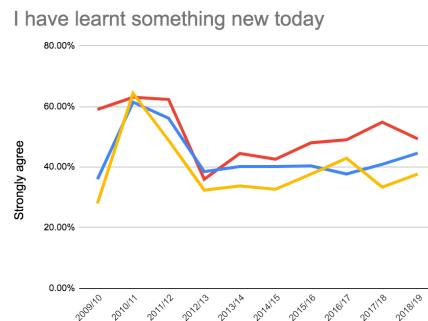
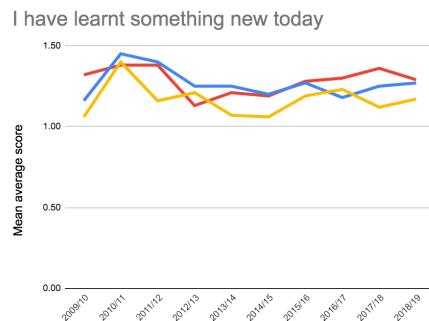
The visit brought science and technology alive for me

- Over the years, the visitors with strong interests in science showed the highest degree of agreement.
- For all the three groups, data shows a tendency of decline in terms of the strength of agreement; the percentages of “strongly agree” reached the peak in 2010/11.



I have learnt something new today

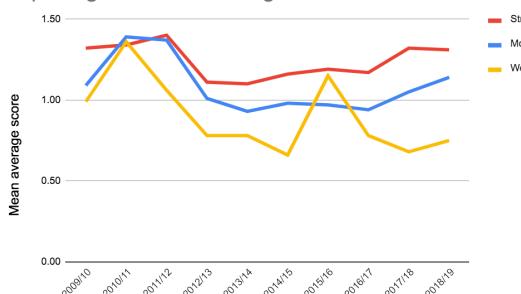
- Except for 2010/11 and 2012/13, the visitors with strong interests in science showed the highest degree of agreement.
- The percentages of “strongly agree” reached the peak in 2010/11 and dropped sharply in 2012/13, then have varied very little until 2018/19.



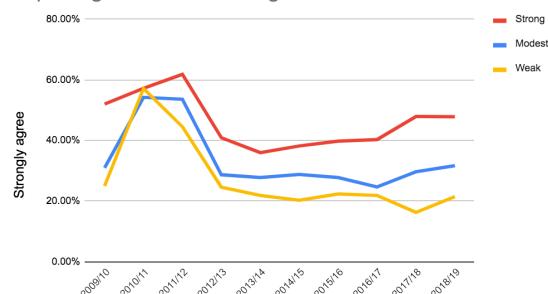
The visit made me want to learn more/continue exploring about some of the things covered here

- Over the 10 years, the visitors with strong interests in science showed the highest degree of agreement.
- For all the three groups, the percentages of “strongly agree” reached the peaks in 2010/11 (“modest” and “weak”) and 2011/12 (“strong”), but all dropped sharply in 2012/13.

The visit made me want to learn more and continue exploring some of the things covered here



The visit made me want to learn more and continue exploring some of the things covered here



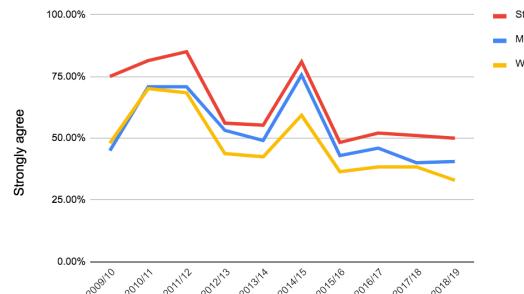
During our visit we talked to each other about what we were looking at and what we were doing

- Over the 10 years, the visitors with strong interests in science showed the highest degree of agreement.
- For all the three groups, the percentages of “strongly agree” have all dropped sharply in 2012/13 and risen relatively high in 2014/15 then dropped again.

During our visit we talked to each other about what we were looking at and what we were doing

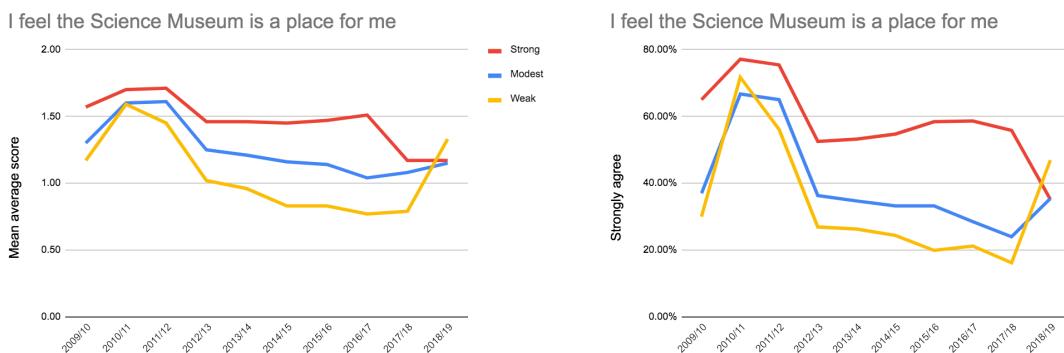


During our visit we talked to each other about what we were looking at and what we were doing



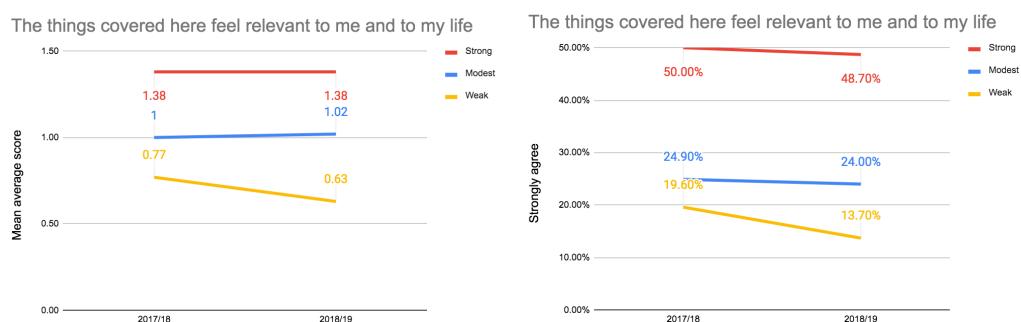
I feel the Science Museum is a place for me

- Before 2017/18, the visitors with strong interests in science showed the highest degree of agreement. However, the visitors who have modest and even weak interest have started to agree more since 2017/18, while the “strong”s strength of agreement dropped sharply.
- For all the three groups, the percentages of “strongly agree” have all dropped sharply in 2012/13.
- In 2018/19, the visitors with weak science interest become the ones who agree the most with the statement.



The things covered here feel relevant to me and to my life

- Over the 2 years when this statement was added to the SEM, the visitors with strong interests in science showed the highest degree of agreement.



7. Conclusion and Recommendation

Will be added in after finishing the first objective

8. Appendices

Visitor segments data: Mean score average and percentage of “strongly agree”

Segmentations/Measures	Scales	Avid Cultural Consumer				Engaged Community Drivers				Nostalgic Heritage Fans				Safe Self-Improvers			
		2016-2017	2017-2018	2018-2019	Average	2016-2017	2017-2018	2018-2019	Average	2016-2017	2017-2018	2018-2019	Average	2016-2017	2017-2018	2018-2019	Average
Enjoyable	Strongly agree	56.90%	51.90%	52.80%	53.87%	54.00%	58%	56.30%	56.10%	46.50%	49.70%	41.80%	46.00%	41.40%	46.90%	45.40%	44.57%
	Mean	1.55	1.5	1.51	1.52	1.51	1.56	1.52	1.53	1.38	1.48	1.39	1.42	1.36	1.41	1.39	1.39
Interesting (stopped after 2016/17)	Strongly agree	59.60%				59.60%	59.50%			59.50%	48.10%			48.10%	48.80%		48.80%
	Mean	1.58				1.58	1.58			1.58	1.44			1.44	1.47		1.47
A place for me	Strongly agree	39.90%	32.70%	33.80%	35.47%	42.90%	42.10%	38.60%	41.20%	32.40%	27.10%	21.20%	26.90%	27.80%	30.00%	31.80%	29.87%
	Mean	1.17	1.14	1.25	1.19	1.25	1.31	1.23	1.26	1.06	1.11	1.09	1.09	1.01	1.09	1.13	1.08
Brought science and technology alive	Strongly agree	32.50%	26.80%	27.30%	28.87%	35.90%	39.90%	37.10%	37.63%	28.60%	24.20%	21.80%	24.87%	32.20%	33.50%	34.8%	32.85%
	Mean	1.07	0.99	1.05	1.04	1.2	1.24	1.17	1.20	0.93	1.08	0.96	0.99	1.17	1.12	1.13	1.14
Learned something new	Strongly agree	38.20%	44.20%	48.10%	43.50%	46.20%	50.20%	50.30%	48.90%	36.20%	43.80%	29.90%	36.63%	35.90%	52.20%	48.60%	45.57%
	Mean	1.17	1.26	1.31	1.25	1.32	1.39	1.33	1.35	1.09	1.33	1.04	1.15	1.14	1.32	1.26	1.24
Want to learn more/continue exploring	Strongly agree	26.70%	28.60%	37.70%	31.00%	36.20%	40.00%	43.80%	40.00%	19.70%	35.30%	32.00%	29.00%	24.90%	40.00%	33.40%	32.77%
	Mean	0.87	1.01	1.13	1.00	1.13	1.23	1.27	1.21	0.78	1.09	1.03	0.97	0.95	1.15	1.11	1.07
Talked to each other	Strongly agree	52.40%	47.90%	49.70%	50.00%	44.40%	44.70%	46.90%	45.33%	39.70%	50.60%	40.80%	43.70%	36.50%	39.80%	35.70%	37.33%
	Mean	1.32	1.31	1.3	1.31	1.24	1.24	1.3	1.26	1.12	1.34	1.23	1.23	1.1	1.17	1.2	1.16
The things covered here feel relevant to me and to my life (2017-2019)	Strongly agree		34.40%	37.20%	35.80%		39.90%	35.20%	37.55%		27.50%	20.50%	24.00%		26.90%	32.10%	29.50%
	Mean		1.31	1.14	1.23		1.22	1.2	1.21		1.01	0.78	0.90		1	1.05	1.03

Segmentations/Measures	Trend Awarers				Time Poor Aspirers				Passionate Specialists				Entertainment Seekers				
	2016-2017	2017-2018	2018-2019	Average	2016-2017	2017-2018	2018-2019	Average	2016-2017	2017-2018	2018-2019	Average	2016-2017	2017-2018	2018-2019	Average	
Enjoyable	46.90%	43.70%	45.00%	45.20%	40.30%	37.20%	28.70%	35.40%	53.60%	48.00%	45.60%	49.07%	42.9%	33.90%	44.70%	39.30%	
	1.43	1.42	1.43	1.43	1.32	1.37	1.22	1.30	1.52	1.41	1.43	1.45	1.42	1.3	1.38	1.37	
Interesting (stopped after 2016/17)	53.30%				53.30%	46.90%			46.90%	53.50%			53.50%	47.90%		47.90%	
	1.49				1.49	1.4			1.40	1.54			1.54	1.47		1.47	
A place for me	41.70%	31.10%	37.40%	36.73%	33.30%	26.10%	21.10%	26.83%	37.30%	35.60%	32.20%	35.03%	33.10%	22.60%	36.80%	30.83%	
	1.22	1.11	1.25	1.19	1.01	1.02	0.95	0.99	1.15	1.14	1.15	1.15	1.08	1.05	1.22	1.12	
Brought science and technology alive	30.80%	20.80%	31.50%	27.70%	28.60%	19.40%	16.30%	21.43%	31.50%	25.50%	31.50%	29.50%	39.60%	20.30%	28.50%	29.47%	
	1.07	0.93	1.1	1.03	0.93	0.9	0.83	0.89	1.1	0.86	1.03	1.00	1.18	0.87	1.08	1.04	
Learned something new	39.50%	39.00%	47.30%	41.93%	42.60%	33.5%	30.8%	42.60%	40.80%	35.90%	39.70%	38.80%	47.10%	38.50%	37.40%	41.00%	
	1.15	1.22	1.35	1.24	1.12	1.19	1.06	1.12	1.19	0.97	1.19	1.12	1.31	1.14	1.13	1.19	
Want to learn more/continue exploring	25.90%	31.60%	37.00%	31.50%	31.70%	22.80%	23.60%	26.03%	29.10%	27.40%	33.90%	30.13%	31.90%	25.90%	24.20%	27.33%	
	0.93	1.01	1.2	1.05	0.92	0.85	0.86	0.88	0.96	0.93	1	0.96	1.06	0.91	0.91	0.96	
Talked to each other	39.60%	39.40%	46.10%	41.70%	33.70%	36.80%	31.70%	34.07%	44.20%	46.10%	37.90%	42.73%	37.80%	33.30%	33.00%	34.70%	
	1.18	1.19	1.27	1.21	0.99	1.17	1.09	1.08	1.31	1.25	1.06	1.21	1.2	0.98	1.14	1.11	
The things covered here feel relevant to me and to my life (2017-2019)		30.10%	38.30%	34.20%		25.20%	16.00%	20.60%		37.00%	30.90%	33.95%		20.50%	23.60%	22.05%	
		1.08	1.22	1.15		1.01	0.85	0.93		1.06	1	1.03		0.82	0.95	0.89	

NS-SEC groups data: Mean score average and percentage of “strongly agree”

Socio-economic status (UK only)		NS-SEC 1-4									
Annum	Scale	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Enjoyable	Strongly agree	50%	82.60%	75.20%	68.30%	68.30%	58.40%	59.50%	51.80%	52.50%	49.40%
	Mean	1.47	1.81	1.74	1.66	1.65	1.55	1.55	1.48	1.47	1.45
Interesting (stopped after 2016/17)	Strongly agree	50%	82.40%	73.40%	65.70%	67.80%	57.80%	61.00%	56%		
	Mean	1.49	1.81	1.72	1.64	1.66	1.55	1.57	1.54		
Brought science and technology alive	Strongly agree	37%	57.80%	57.50%	41.20%	43.80%	32.50%	33.70%	34.00%	31.10%	28.50%
	Mean	1.21	1.41	1.4	1.25	1.27	1.07	1.09	1.12	1.03	1.05
Learnt something new	Strongly agree	37%	62.60%	56.70%	35.60%	41.10%	41.10%	44.00%	42.90%	47.30%	44.80%
	Mean	1.11	1.4	1.36	1.21	1.19	1.16	1.29	1.23	1.28	1.21
Want to learn more/continue exploring	Strongly agree	34%	56%	54.60%	55.20%	30.50%	31.00%	28.10%	31.30%	36.20%	37.40%
	Mean	1.1	1.36	1.33	1.5	0.96	0.99	0.96	1.02	1.09	1.13
Talked to each other	Strongly agree	49%	73.70%	75.90%	56.10%	49.60%	49.40%	46.00%	46%	50.00%	46.00%
	Mean	1.42	1.7	1.71	1.49	1.42	1.29	1.27	1.29	1.35	1.33
A place for me	Strongly agree	42%	73.70%	68.00%	37.90%	39.30%	42%	40.40%	43.70%	34.40%	35.30%
	Mean	1.33	1.65	1.63	1.26	1.26	1.28	1.23	1.28	1.17	1.17
The things covered here feel relevant to me and to my life	Strongly agree									32.70%	30.70%
	Mean									1.08	1.04

Socio-economic status (UK only)	NS-SEC 5-8									
Annum	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Enjoyable	47%	80.20%	68.70%	68.20%	69.20%	53.60%	51.00%	49.40%	49.10%	56.30%
	1.43	1.77	1.67	1.67	1.67	1.45	1.47	1.45	1.47	1.47
Interesting (stopped after 2016/17)	45%	82.90%	67%	69.40%	70.60%	51.60%	49.80%	53.20%		
	1.4	1.8	1.65	1.69	1.57	1.47	1.47	1.48		
Brought science and technology alive	33%	61.90%	49%	43%	43.40%	28.20%	28.20%	38.90%	34.90%	31.30%
	1.16	1.35	1.2	1.3	1.22	0.9	1.1	1.21	1.14	1.01
Learnt something new	37%	63.10%	50.30%	35.10%	36.40%	40.20%	39.60%	35.10%	43.30%	44.30%
	1.15	1.4	1.1	1.16	1.08	1.15	1.12	1.23	1.29	1.29
Want to learn more/continue exploring	28%	56.70%	43.00%	25.80%	25.10%	30.40%	34.40%	28.50%	32.40%	39.30%
	1.04	1.29	1.08	0.81	0.87	0.9	0.97	0.99	1.1	1.15
Talked to each other	44%	73.30%	70.80%	51.70%	54.20%	47.90%	51.40%	46.00%	48.60%	45.40%
	1.38	1.66	1.68	1.44	1.4	1.22	1.34	1.25	1.37	1.29
A place for me	40%	68.40%	63.40%	41.20%	44.90%	42.90%	45.60%	38.20%	41.50%	35.40%
	1.34	1.54	1.63	1.23	1.33	1.19	1.24	1.17	1.26	1.15
The things covered here feel relevant to me and to my life									36.10%	25.30%
									1.18	1.07

Socio-economic status (UK only)	Student										
Annum	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	
	51%	80.20%	72.60%	66.90%	63.30%	43.30%	50.20%	40.90%	50.40%	50.80%	
Enjoyable	1.5	1.8	1.72	1.66	1.59	1.4	1.44	1.39	1.49	1.46	
Interesting (stopped after 2016/17)	52%	81.40%	72.50%	59%	60.70%	50.40%	46.10%	41.30%			
	1.51	1.78	1.71	1.59	1.57	1.45	1.39	1.4			
Brought science and technology alive	40%	60.90%	32.20%	32.20%	40.90%	32.00%	27.90%	26.60%	27.30%	38.70%	
	1.22	1.39	1.12	1.12	1.15	1	0.99	1.05	1.07	1.23	
Learnt something new	46%	67.20%	59.50%	30.20%	39.50%	44.20%	43.00%	42.90%	50.60%	44.30%	
	1.29	1.59	1.32	1.15	1.02	1.2	1.18	1.23	1.39	1.29	
Want to learn more/continue exploring	40%	59.20%	55.20%	27.70%	32.30%	32.10%	30.00%	29.10%	44.00%	41.50%	
	1.17	1.46	1.28	1.07	1.02	1.08	0.91	1.01	1.3	1.21	
Talked to each other	48%	73.40%	78.50%	41.40%	42.90%	44.10%	39.40%	38.90%	39.50%	39.40%	
	1.35	1.71	1.73	1.28	1.28	1.24	0.99	1.13	1.16	1.23	
A place for me	44%	67.20%	63.40%	34.10%	32.50%	36.90%	32.20%	32.10%	36.20%	46.90%	
	1.3	1.6	1.55	1.26	1.13	1.12	1.04	1.06	1.15	1.33	
The things covered here feel relevant to me and to my life									35.60%	35.50%	
									1.11	1.15	

Science interest data: Mean score average and percentage of “strongly agree”

Science interest/ Measures		Strong									
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Annum											
	Strongly agree	78%	83.60%	78.00%	74.40%	73.10%	62.10%	65.20%	63.50%	61.90%	49.40%
Enjoyable	Mean	1.76	1.81	1.77	1.72	1.71	1.58	1.62	1.62	1.6	1.45
Interesting (stopped after 2016/17)	Strongly agree	78%	84.50%	78.70%	75.10%	74.30%	65.60%	66.40%	68.00%		
	Mean	1.76	1.83	1.78	1.74	1.72	1.63	1.65	1.67		
Brought science and technology alive	Strongly agree	56%	64.80%	62.90%	48.60%	50.00%	38.30%	40.60%	41.50%	40.50%	40.90%
	Mean	1.39	1.42	1.44	1.35	1.36	1.17	1.19	1.25	1.21	1.23
Strongly agree	59%	63.00%	62.30%	36.00%	44.50%	42.60%	48.00%	49.00%	54.80%	49.30%	
Learned something new	Mean	1.32	1.38	1.38	1.13	1.21	1.19	1.28	1.3	1.36	1.29
Want to learn more/ continue exploring some of the things covered here	Strongly agree	52%	57.20%	61.80%	40.90%	36%	38.20%	39.80%	40.30%	47.90%	47.80%
	Mean	1.32	1.34	1.4	1.11	1.1	1.16	1.19	1.17	1.32	1.31
Strongly agree	75%	81.40%	85.00%	56.10%	55.30%	80.90%	48.30%	52.10%	51.10%	50.00%	
Talked to each other	Mean	1.67	1.75	1.82	1.49	144.00%	1.21	1.24	1.32	1.3	1.31
Strongly agree	65%	77.10%	75.40%	52.50%	53.20%	54.70%	58.40%	58.60%	55.80%	35.20%	
A place for me	Mean	1.57	1.7	1.71	1.46	1.46	1.45	1.47	1.51	1.17	1.17
Strongly agree									50.00%	48.70%	
Feel relevant to me and my life	Mean								1.38	1.38	

Science interest/ Measures		Modest									
		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Annum											
	43%	74.00%	72.60%	65.60%	64.80%	48.10%	50.80%	43.40%	44.40%	45.20%	
Enjoyable	1.4	1.77	1.72	1.65	1.64	1.44	1.49	1.39	1.42	1.41	
Interesting (stopped after 2016/17)	44%	75.40%	70.80%	64.60%	64.40%	50.70%	53.90%	49.00%			
	1.41	1.75	1.7	1.64	1.63	1.48	1.52	1.46			
Brought science and technology alive	33%	58.60%	56.00%	42.90%	39.70%	33.30%	31.80%	28.70%	25.30%	25.50%	
	1.2	1.46	1.43	1.31	1.27	1.11	1.14	1.06	1.02	1.05	
Learned something new	36%	61.40%	56.10%	38.50%	40.20%	40.20%	40.40%	37.70%	40.90%	44.60%	
	1.16	1.45	1.4	1.25	1.25	1.2	1.27	1.18	1.25	1.27	
Want to learn more/ continue exploring some of the things covered here	31%	54.20%	53.60%	28.70%	27.80%	28.80%	27.80%	24.70%	29.70%	31.70%	
	1.09	1.39	1.37	1.01	0.93	0.98	0.97	0.94	1.05	1.14	
Strongly agree	45%	70.80%	70.80%	53.20%	49.10%	75.50%	43.00%	46.00%	40.10%	40.60%	
Talked to each other	1.38	1.68	1.68	1.47	1.39	1.19	1.23	1.25	1.2	1.23	
	37%	66.70%	65.00%	36.30%	34.70%	33.20%	33.20%	28.50%	24.00%	35.40%	
A place for me	1.3	1.6	1.61	1.25	1.21	1.16	1.14	1.04	1.08	1.15	
Strongly agree								24.90%	24.00%		
Feel relevant to me and my life								1	1.02		

Science interest/ Measures	Weak										
Annum	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
	36%	80.20%	68.80%	59.10%	56.10%	40.10%	46.20%	39.60%	37.20%	37.50%	58.06%
Enjoyable	1.33	1.8	1.68	1.58	1.51	1.32	1.4	1.35	1.3	1.34	1.55
Interesting (stopped after 2016/17)	36%	82.40%	66.70%	55.00%	57.40%	38.80%	42.70%	41.30%			61.82%
	1.33	1.81	1.65	1.54	1.52	1.33	1.38	1.4			1.60
Brought science and technology alive	29%	57.10%	47.10%	33.60%	33.70%	24.20%	27.60%	37.50%	19.20%	22.80%	39.69%
	1.13	1.4	1.2	1.14	1.07	0.88	0.93	1.16	0.84	0.89	1.19
Learnt something new	28%	64.30%	48.80%	32.40%	33.80%	32.70%	37.70%	42.90%	33.40%	37.70%	44.54%
	1.06	1.4	1.16	1.21	1.07	1.06	1.19	1.23	1.12	1.17	1.24
Want to learn more/ continue exploring some of the things covered here	25%	57.10%	44.50%	24.60%	21.90%	20.30%	22.40%	21.90%	16.30%	21.50%	35.85%
	0.99	1.36	1.06	0.78	0.78	0.66	1.15	0.78	0.68	0.75	1.08
Talked to each other	48%	70.10%	68.40%	43.80%	42.50%	59.30%	36.50%	38.40%	38.40%	33.00%	54.92%
	1.35	1.64	1.62	1.35	1.29	1.09	0.99	1.15	1.15	1.12	1.37
A place for me	30%	71.70%	56.10%	26.90%	26.30%	24.40%	19.90%	21.20%	16.20%	46.90%	43.98%
	1.17	1.59	1.45	1.02	0.96	0.83	0.83	0.77	0.79	1.33	1.27
Feel relevant to me and my life									19.60%	13.70%	30.15%
									0.77	0.63	1.03