Developing a Cross-Curricular Session about Evolution for Initial Teacher Education: Findings from a Small-Scale Study with Pre-service Primary School Teacher

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1 Introduction

The Science National Curriculum for primary schools in England has included since 2014 a number of objectives relating to evolution and inheritance for year 6 (10–11 years old). Rationales given for this change emphasised that the theory of evolution is a key concept which is fundamental to biology and scientific literacy and that it is important for children to begin learning about evolution at this younger age to help them gain a good level of understanding for when they study it in more depth later on (Borgerding, Klein, Ghosh, & Eibel, 2015). Evolution is widely perceived, however, as a science topic that presents multiple challenges for teachers (Sanders & Ngxola, 2009). Most of the research to date consists of studies with secondary school teachers and secondary school pre-service teachers and this indicates concerns about tensions around subject knowledge, personal conflicts with evolution, and expectations of resistance from students and/or their parents on the basis of religion. It seems reasonable to presume that primary school teachers and pre-services would also experience many of these tensions.

There are aspects of primary teaching and of the backgrounds, interests and expertise of primary school teachers that differ from teaching science in secondary school. Primary teachers and pre-service primary teachers are unlikely to have completed a

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degree in science before their teacher training, in contrast with a typical secondary school science teacher. In addition, the primary school teacher typically teaches many curriculum subjects and in England this frequently includes teaching science and religious education (RE). Cross-curricular teaching is far more common in primary schools and there is a greater tendency to make time for teaching that adapts and responds to children's questions, concerns and interests.

The study described in this chapter was motivated by an interest in whether pre-service primary school teachers would appreciate an opportunity to explore ideas about evolution in a session that bridges their science and RE teacher education modules. Prior to the cross-curricular study, which is the main focus of this chapter, we gathered data from other cohorts of primary pre-service teachers during the two previous years to discover their attitudes to teaching evolution. We also conducted interviews with selected pre-service teachers. These interviews highlighted that pre-service primary school teachers are particularly concerned about the possibility that their school students with a religious faith will feel uncomfortable with, or conflicted by, the science. Pre-service teachers were also asked their attitudes towards different organisational formats, both within their own course and within their approaches to primary teaching—such as a cross-curricular session, a session of RE and a session of science. Responses by focus groups, by individuals in whole class sessions and in individual interviews indicated a mix of positions. Many of those interviewed said they would appreciate a cross-curricular session within their own programme but would be resistant to teaching a session using a cross-curricular format. This was typically said to be because of the risk of upsetting students with a religious faith. The design and statements in our survey were informed by this preliminary work.

2 Review of Literature

We begin this review of some of the existing literature by discussing perceptions and perspectives on single subject and cross-curricular teaching. The linking of subjects or disciplines for curriculum organisation is variously described as an integrated, interdisciplinary, multidisciplinary, transdisciplinary, blended, cross-curricular, cross-disciplinary, thematic or a topic-based process. The term 'cross-curricular learning' is used to describe the application of skills, knowledge and attitudes of different disciplines to a single experience, theme or idea; it also incorporates the interdisciplinary dimension of linking subjects to develop conceptual insight into particular phenomena, which, for the purposes of this study, is evolution as a teaching topic (Barnes, 2015). In the context of the National Curriculum in England, the Rose Report in 2009 emphasised the place and value of cross-curricular teaching across the curriculum. Foreseeably, however, using a cross-curricular approach to teach an area that is conceptually challenging and that is widely seen as contentious

could create an overload of questions and possibilities for participants. These possibilities informed the current study and the design of our cross-curricular session for pre-service primary teachers.

Previous research highlights that school pupils frequently hold misconceptions relating to the mechanism of evolution, which is poorly understood (Kalinowski, Leonard, Andrews, & Litt, 2013). Existing research also reminds us that teachers and pre-service teachers may themselves have limited evolution content knowledge and hold misconceptions about evolution content (Dodick, Dayan, & Orion, 2010; Kim & Nehm, 2011; Nehm, Kim, & Sheppard, 2009). Previous studies also indicate that teachers often experience negative responses to their teaching from students, parents, community, colleagues and clergy (Bramschreiber, 2014; Chuang, 2003; Fowler & Meisels, 2010). Perhaps not surprisingly, some teachers report feeling very distressed about the prospect, or their experiences of, teaching about evolution (Griffith & Brem, 2004; Sanders & Ngxola, 2009). There are also teachers, however, who have not seen any students responding negatively while learning about evolution (Hanley, Bennett, & Ratcliffe, 2014).

Few published studies have investigated the stances taken by pre-service and in-service primary teachers about the teaching of evolution. Our research in this area has indicated that a majority of teachers are positive about the prospect of teaching evolution while at the same time expressing need for support with developing classroom activities, improving subject knowledge and coming up with strategies to ensure positive experiences for children with a religious faith (Billingsley & Abedin, 2016).

3 Purpose of the Research

To date, research has revealed that there are several challenges, which teachers and pre-service teachers experience or anticipate in relation to teaching about evolution. The present study builds on this existing research to explore pre-service primary teachers' perceptions of a cross-curricular teaching session in their teacher education programme. The aim of the session was to provide pre-service primary teachers with a space in which they could explore the relationships between science and religion prior to their regular science session on evolution in the programme where they would be developing pedagogies and subject knowledge relating to science.

Before discussing the cross-curricular teacher education session for primary pre-service teachers, this chapter first reports on a baseline survey with 158 pre-service teachers. We then describe and discuss data gathered before and after a cross-curricular session ($n = 45$), regarding participants' subject knowledge, perception and attitude to teaching about evolution.

4 Methodology

4.1 Design of the Survey

Informed by the preliminary work, the aims of the baseline survey were to find out pre-service teachers' attitudes to teaching about evolution, planned approach to teaching evolution, subject knowledge of science and the relationship between religion and the nature of science.

The design of the survey instrument was informed by a series of studies in schools by the LASAR (Learning about Science and Religion) project team (see for example Billingsley, 2004; Billingsley, Brock, Taber, & Riga, 2016; Billingsley, Taber, Riga, & Newdick, 2011, 2012; Taber, Billingsley, Riga, & Newdick, 2011). The findings of these studies highlighted that school students have few if any opportunities to discuss a range of stances on the relationship between science and religion. We have also found that in science lessons, school students tend to hold back questions that they perceive to have a religious aspect and that misperceptions in some students' scientific understanding may not be apparent to their teachers. The themes addressed in the survey also drew on our review of issues that apply in secondary school when teaching evolution, as we surmised that many of these issues were also likely to apply in primary teaching with respect to evolution. These issues are weak teacher subject knowledge and resistance to teaching because of a perceived conflict by the teacher and/or the students between evolution and religious beliefs about human origins. The questionnaire was structured to determine pre-service teacher views on teaching evolution and subject knowledge before introducing the relationship between science and religion in order to not confound answers related to subject knowledge. Statements within the questionnaire included accurate subject knowledge as well as common misconceptions about the theory of evolution. These questions act as a tool to measure the impact of the cross-curricular session on subject knowledge. During the development of the questionnaire, we ran pilot studies with groups of teachers and pre-service teachers who did not participate in the final study. This included a pilot survey with postgraduate pre-service primary teachers and a pilot survey with primary school teachers attending a professional development workshop. Via these pilot studies, we honed the wording of the statements to reduce ambiguity. We also consulted with the project's Advisory Board which included senior academics in biology, ethics and theology, based in England and overseas.

The survey instrument consisted of 21 statements with a five-point Likert scale response section (strongly agree, agree, neither agree or disagree, disagree, strongly disagree). The survey was administered online and the instructions and design meant that participants could skip any question that they did not want to answer. Pre-service teachers also had the option of a space to explain their responses (labelled 'Comment if you'd like to'). These arrangements were to prevent participants from feeling pressured to give a response if they were reluctant or unsure about how to answer. The instructions also explained that participants' names would not be used in any reports. The surveys were provided to pre-service teachers using a computer lab

during time slots organised within their taught sessions. Pre-service teachers were given the option to complete but not submit the survey if they wished. Questions to discover participants' religiosity and level of science qualification were placed at the end of the survey to avoid influencing how participants responded to the statements.

4.2 Sample

The sample for the baseline survey consisted of 158 pre-service primary school teachers on a three-year undergraduate course. Those participating in the baseline survey were pre-service teachers on each of three iterations of the programme. The baseline survey was conducted in the first year of the three-year programme before participants had attended any teaching about evolution on their course.

5 Baseline Survey Findings

Analysis of the responses by this cohort of participants indicated that 43% were from comprehensive schools, 17% from academy comprehensives, 12% from private schools, 6% from academies and 4% each from colleges, sixth form colleges, grammar and state grammar schools. The remaining 6% came from technology colleges, grammar academies and British Military schools. Out of these schools, 77% were non-Church schools and the remaining 23% were Church schools.

We also noted that just under half, 45%, of 135 respondents of the total population identified themselves as Christians while the second largest group, about 27%, indicated that they did not have a religion ('none'); about 12% of the participants indicated they were atheist and 13% agnostic, 3% as Muslims and 1% as Hindus.

Just over a quarter (27%) of the pre-service teachers had a GCSE (qualification to age 16) or equivalent in general science, 55% had GCSE or equivalent in biology and another 18% had an A Level (qualification to age 18) in biology. The response rate to the baseline survey was good as 96% of pre-service teachers answered all questions except two. The principal findings are shown in Table 1. We have collapsed the categories for agree (agree/strongly agree and for disagree (disagree/strongly disagree).

In general, participants perceived that evolution is an important topic for primary children to learn. About 80% of participants agreed that 'Evolution is an important idea for children in primary school to learn about', and 75% agreed that they were 'glad that evolution will be taught in primary school'. Though positive on the inclusion of evolution in primary teaching, pre-service teachers revealed that they received very little teaching about evolution in their own school education. Some typical comments were:

> Very brief lessons

Table 1 Findings of the baseline survey

	Agree (%)	Neither agree nor disagree (%)	Disagree (%)
Evolution is an important idea for children in primary school to learn about in science	81	16	3
I am glad that evolution will be taught in primary school	75	22	3
Parents should be informed that a lesson on evolution will take place and can remove their child	42	28	30
I am looking forward to teaching evolution	54	39	7
I am concerned about teaching evolution	41	33	26
It will be important to take into account children's religious beliefs	86	11	3
Evolution is a theory and not a fact	49	29	22
I have an adequate understanding of evolution to teach at this level	23	40	37
Evolution says that humans evolved from monkeys	47	34	19
I think children are likely to ask questions about religion	62	21	17
The Church of England does not accept evolution	38	48	14
Christians believe in a six-day Creation	67	18	15
Christianity teaches that the universe was created in six days of 24 hours followed by a day of rest	65	24	11
Evolution says that life evolved over billions of years from simpler creatures	84	14	2
Darwin is the originator of the theory of evolution	80	17	3
The theory of evolution is in conflict with a belief in Creation	70	22	8
Darwin's theory was controversial because it contradicted religious teaching	83	14	3
Fossils are evidence for the theory of evolution	79	16	5
I will tell children they have a choice about whether to accept evolution	76	20	4
Children with religious beliefs are unlikely to accept evolution	25	70	5
Evolution is a very well supported explanation for how life came to be	73	22	5

> Quite basic overview during GCSE, on the survival of the fittest and adaptations of living things
>
> I don't actually remember doing evolution in school until it was touched upon very briefly in GCSE biology

In response to the survey statement: 'I have an adequate understanding of evolution to teach at this level', only 23% agreed/strongly agreed. This said, 80% of the pre-service teachers agreed or agreed strongly that it was important for children in primary school to learn about evolution. In addition, their confidence in the validity of the theory was high. In response to the statement 'Evolution is a very well supported explanation for how life came to be', about three quarters (73%) agreed. Markedly fewer, but still a majority of 54%, agreed that they were looking forward to teaching evolution.

We found that 76% of the pre-service teachers agreed with the statement that 'I will tell children they have a choice about whether to accept evolution'. Some further explanation can be drawn from their other responses. Thus, while the large majority accepted the theory of evolution for themselves, there was less agreement about the level of acceptance they might find in students and still less agreement on whether it is appropriate to attempt to move students closer to acceptance—for example, 'Because evolution is subjective not everybody believes it'. A student further explained in a comment 'Evolution is a theory which they can choose to believe in or not' and 'I believe that evolution is how humans came to be on earth, but then again I am an atheist, so just because I believe it doesn't mean that the children I teach should'. Another expressed the view that 'Because there are different theories and religious beliefs on the concept of evolution and children cannot be forced into one idea'. Another pre-service teacher said 'Religious views are very different and oppose the view of evolution. Man developed from earlier creatures'. Another wrote 'The contradictions between Christianity and Darwin's theory. That as time changed animals and plants had to adapt to their surroundings in order to survive'.

A majority of 70% agreed or agreed strongly that the theory of evolution is in conflict with a belief in creation. In addition, 38% of the pre-service teachers agreed or agreed strongly that the Church of England does not accept evolution. These perceptions likely create a level of pressure for teachers teaching evolution, and 86% of participants agreed or strongly agreed that 'It will be important to take into account children's religious beliefs'. A quarter agreed or strongly agreed that children with a religious belief are unlikely to accept evolution.

6 The Cross-Curricular Teacher Education Session

The cross-curricular session on teaching science and religious education took place during the pre-service primary teachers' undergraduate programme. The cohort who attended the session was those on the third iteration of the course and as such was a subgroup of the full cohort of pre-service teachers involved in the baseline study. In

England, primary school teachers teach a range of subjects including science and RE. Each cohort, including this cohort, also attended a teacher education session on evolutionary biology as part of their science teaching module later in their programme. For those taking part in the cross-curricular teacher education session, the pre-session survey was administered in the week before the session and the post-session survey was administered at the end of the session. The data we report correspond to the pre-service teachers who participated in the pre-session baseline survey, session and the post-session survey.

The design of the session took into consideration the findings from the baseline survey responses from previous cohorts. We intended that the session would provide a forum in which pre-service teachers could voice and explore their own and other ways to conceptualise the relationships between science and religion. In addition, we wanted to encourage pre-service teachers to shift from the position that children should be offered a choice between science and religion to the position that science and religion are not necessarily incompatible. Thirdly, we aimed to address some common misconceptions relating to evolution and to enhance participants' science subject knowledge.

The first section of the presentation invited pre-service teachers to give their perceptions of how the media typically describe the relationship between science and religion. The discussion turned then to the notion that a school teacher can resist and critique perspectives that appear in the media, and participants then examined and shared examples of ways that the relationship is described in scholarship. The session then drew participants' attention to particular areas of confusion or gaps that were common in survey responses and sought to address these. One part of the presentation examined the misperception that the Church of England does not accept evolution. Pre-service teachers were also introduced to the idea that Darwin's work built not only on his own observations but also on other scholars' research and reflections.

7 Findings from the Pre- and Post-Studies of the Cross-Curricular Teacher Education Session

In the following sections, we discuss the survey data gathered before and after the cross-curricular teacher education session using comments to add detail to the quantitative findings.

The first question (which was open) on the post-questionnaire asked pre-service teachers what they perceived to be the key ideas in the session. The responses indicated that the session had successfully moved many students forward from a perception of necessary conflict. Comments included:

> We should provide children with role models that represent a variety of scientists' views so that they feel that they don't have to choose science or religion.

> That evolution is not something that should be taught as a conflicting idea to religion but that both ideas can exist alongside each other.
>
> Teaching children a 'balanced view' isn't as simple as I first read, and in doing so I could be influencing the children toward the idea that a decision has to be made as to whether they hold a scientific or religious view toward evolution.
>
> The idea that you can have both a religious (Christian) view and a science orientated view. I have both and I previously hadn't known of anyone who has both, other than my family so I didn't really know if my view was accepted.

(a) Attitudes to cross-curricular pedagogy

In the post-session survey, pre-service teachers ($n = 45$) were asked if their teaching would be cross-curricular (science and RE) or single subject and why. The majority of students indicated that they were in favour of a cross-curricular session in their own approaches to teaching evolution (71%, $n = 32$), while a small number of pre-service teachers favoured single subject teaching or were unsure. In some of these cases, the cross-curricular session was in addition to a single-subject lesson. Six (13%) of the pre-service teachers were unsure and 7 (16%) felt that teaching about evolution should only take place in a science session. The comments selected below illustrate some of these positions:

> Single subject. The two should not be mixed. BELIEFS (RE) should not be intertwined with FACT (Science).
>
> I will teach them separately because I feel the combined teaching of them encourages children into making a choice.
>
> Cross-curricular, because different perspectives can help answer different questions.
>
> Probably both cross curricular and single subject. Some questions are best answered in isolation and others with other considerations.
>
> I think it would be a good idea to teach them separately and together so that they are represented equally and then have another lesson to discuss possible contradictions or how they complement each other.
>
> I would teach science first, and then follow up with the RE, giving all the theories and ideas. I would then put them both together showing how it is not a question of either or.

(b) Changes discerned in the data between the pre- and post-cross-curricular session surveys

In this section, we compare the before and after data and discuss changes in the pre-service teachers' positions. Firstly, on the importance of teaching evolution, the proportion who agree increased from 73 to 89% following the study. About half of the participants both before and after (48 and 50%, respectively) indicated that they were 'looking forward to teaching evolution'. The proportion who agreed with the statement 'I have an adequate understanding of evolution to teach at this level' increased substantially from 24% in the pre-session survey to 53% in the post-session survey. We also found an increase in the proportion who agree with the statement that 'Children are likely to ask questions about religion'; post-cross-curricular session, this proportion was 84%, an increase of 17% from the pre-session level.

Pre-service teachers were divided in their opinions on whether 'Parents should be informed that a lesson on evolution will take place and can remove their child'—while more than 40% of them agreed in both the pre- and post-session surveys, half of them (50%) disagreed in the post-session survey, which was an increase from 38% at the pre-session stage.

We noted that there is a very slight increase in the proportion who agree that 'Not all scientists support evolution' with the before and after figures being 55 and 57%, respectively; for 'Evolution says that life evolved over billions of years from simpler creatures', agreement increased from 82 to 95%; for 'Fossils are evidence for the theory of evolution', the percentage who were in agreement increased from 66 to 86% and for 'Evolution is a very well supported explanation for how life came to be' the percentage in agreement increased from 67 to 75%. The number agreeing that 'The theory of evolution is in conflict with a belief in Creation' fell considerably from 73 to 41%.

Similarly, pre-service teachers' agreement with 'Christians believe in a six-day Creation' and 'Most Christians reject evolution' decreased by 13% (from 74 to 61%) and 14% (39 to 25%) following the session. About half of the pre-service teachers (48%) agreed that 'The Bishops of the Church of England do not accept evolution' in the pre-session survey. The figure reduced to 12% in the post-session survey.

8 Discussion

The concerns raised by the pre-service teachers in this study about teaching evolution are similar to those reported by other studies (see for example Sanders & Ngxola, 2009). Pre-service teachers said that they felt they lacked sufficient subject knowledge and they were also of the view that children would ask questions about religion. Findings from the data gathered here indicate that pre-service teachers are concerned to ensure that their students will have positive experiences of learning about evolution. At the same time, the perceptions held by a substantial majority (70%) were that the theory of evolution is in conflict with a belief in creation and a quarter of survey participants agreed or agreed strongly that children with a religious belief are unlikely to accept evolution. We note that three quarters of these pre-service teachers identified that they would tell children that they could choose what to believe.

Our intention in the design of the cross-curricular teacher education session was that pre-service teachers would have opportunities to consider other ways to conceptualise the relationship between science and religion and also to consider presenting any choice to students as a choice between 'conflict or not' rather than a choice between science and religion. The post-session data indicate that these aims were met and also that a significant proportion of the pre-service teachers following the cross-curricular session felt that they would also use this strategy with their students.

One unintended outcome of the session was the possibility of a slight increase (from 55 to 57%) in the numbers of the pre-service teachers who supposed that 'Not all scientists accept evolution'. There was an opportunity in follow-up interviews to find out more about what led to this. We found that some pre-service teachers had misunderstood the meaning of the phrase 'theistic evolution', which had been included at some points during the session.

With these points in mind, this leads us to offer a number of recommendations. The science of evolution is conceptually challenging and so too is the reasoning that underpins an appreciation that science and religion are not necessarily incompatible. Key concepts for evolution include variation, natural selection and adaptation, each of which can be understood/misunderstood in terms of conscious agency in addition to the manner in which evolutionary scientists use them. There is certainly potential to explore these notions with pre-service primary school teachers more fully to examine where potentially confusing notions are impacting on the understanding and acceptance of evolutionary theory by teachers and potential improvements in teaching. These may relate to religious notions and/or common usage of terms. There are many additional terms associated with these activities and we recommend a glossary and care by teacher educators as well as teachers when defining and using these terms.

With regard to perceptions of ways to relate science and religion, it is interesting to note the number of comments by pre-service teachers that seem to indicate a fairly passive acceptance of the notion of conflict. There may be the potential in sessions about religious education for pre-service teachers to introduce other science topics that are less commonly associated with conflict and explore how these relate to religious ideas prior to tackling the more specific concerns encountered in teaching evolution. In a similar way to the problems encountered in teaching evolution, the terminology used in science and religion discussions is often technical and involves the specific use of terms with different common usage. Useful work could be carried out in examining alternative ways to present concepts that would enable teachers and students to be more comfortable and to avoid misunderstanding and ambiguity.

Overall, we see an advantage with delivering the teaching for pre-service primary teachers in two sessions where the first is a cross-curricular teacher education session. The central aim of the first session is to develop pre-service teachers' own confidence and understanding. This includes ensuring that pre-service teachers appreciate that science and religion are not necessarily incompatible, countering misperceptions and establishing some key aspects of subject knowledge. We recommend that a second session is focused on developing classroom activities to develop and consolidate participants' understanding of evolution and ways to teach it.

9 Limitations and Suggestions for Further Research

For this study, the cross-curricular session was delivered to the full cohort on the programme in one iteration of the course. Further research could include creating a

comparison group who only receive the science education teaching session that arises later in the programme to compare with this group who received a cross-curricular session in their first year. Another limitation is that this study was conducted only with pre-service teachers on an undergraduate teacher education programme and it would be interesting to discover whether those attending postgraduate courses respond in similar ways.

Appendix

Pre-session survey

Answer options	5 (agree strongly)	4	3	2	1 (disagree strongly)	Response count
Evolution is an important idea for children in primary school to learn about in science	18	15	9	3	0	45
I am glad that evolution will be taught in primary school	15	18	12	0	0	45
Parents should be informed that a lesson on evolution will take place and can remove their child	12	6	10	8	9	45
I am looking forward to teaching evolution	9	12	18	4	1	44
I am concerned about teaching evolution	2	10	15	12	5	44
It will be important to take into account children's religious beliefs	29	10	3	1	1	44

(continued)

(continued)

Answer options	5 (agree strongly)	4	3	2	1 (disagree strongly)	Response count
Evolution is a theory and not a fact	20	10	7	2	6	45
I have an adequate understanding of evolution to teach at this level	4	7	17	10	7	45
Not all scientists support evolution	12	12	15	4	1	44
Evolution says that humans evolved from monkeys	11	13	11	3	7	45
I think children are likely to ask questions about religion	14	16	6	8	1	45
The Bishops of the Church of England do not accept evolution	8	13	17	5	1	44
Christians believe in a six-day Creation	19	14	4	7	1	45
Evolution says that life evolved over billions of years from simpler creatures	24	12	7	0	1	44
Darwin is the originator of the theory of evolution	17	20	4	1	2	44
The theory of evolution is in conflict with a belief in Creation	14	18	8	2	2	44
Darwin's theory was controversial because it contradicted religious teaching	24	14	4	1	1	44
Fossils are evidence for the theory of evolution	15	14	9	3	3	44
I will tell children they have a choice about whether to accept evolution	27	6	8	2	1	44
Most Christians reject evolution	5	12	18	6	3	44
Evolution is a very well supported explanation for how life came to be	12	17	10	2	3	44

Post-session survey

Answer options	5 (agree strongly)	4	3	2	1 (disagree strongly)	Response count
Evolution is an important idea for children in primary school to learn about in science	19	20	5	0	0	44
I am glad that evolution will be taught in primary school	18	16	9	1	0	44
Parents should be informed that a lesson on evolution will take place and can remove their child	8	11	3	8	14	44
I am looking forward to teaching evolution	7	15	18	3	1	44
I am concerned about teaching evolution	0	17	12	11	4	44
It will be important to take into account children's religious beliefs	22	12	9	1	0	44
Evolution is a theory and not a fact	21	11	8	3	1	44
I have an adequate understanding of evolution to teach at this level	5	18	19	2	0	44
Not all scientists support evolution	9	16	18	1	0	44
Evolution says that humans evolved from monkeys	1	0	4	9	30	44
I think children are likely to ask questions about religion	14	23	7	0	0	44
The Bishops of the Church of England do not accept evolution	1	4	25	9	4	43
Christians believe in a six-day Creation	11	16	10	5	2	44

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Answer options	5 (agree strongly)	4	3	2	1 (disagree strongly)	Response count
Evolution says that life evolved over billions of years from simpler creatures	24	18	2	0	0	44
Darwin is the originator of the theory of evolution	11	19	11	2	1	44
The theory of evolution is in conflict with a belief in Creation	8	10	16	7	3	44
Darwin's theory was controversial because it contradicted religious teaching	12	20	9	3	0	44
Fossils are evidence for the theory of evolution	20	17	5	0	1	43
I will tell children they have a choice about whether to accept evolution	25	10	5	1	2	43
Most Christians reject evolution	1	10	14	16	3	44
Evolution is a very well supported explanation for how life came to be	13	20	9	1	1	44

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