

Are year 13s too old to think?

Clare Rose explains how she encouraged students at a selective girls' school in the West Midlands to think through big issues relating to China for themselves.

Introduction

Last summer I had the opportunity to experience the diversity of China while on the GA China: A Yangtze Odyssey study tour. We covered a variety of areas: the Beijing Olympics, the one child policy, a detailed study of the Yangtze River, the Three Gorges Dam, rural resettlement projects and the development of Shanghai. Students throughout the school have enjoyed various assemblies as a result of this visit and my classroom teaching has been greatly enriched. But then came year 13 and China's population policy. Our students face a challenge here as they tend to remember with accuracy

this topic at GCSE. However, I didn't want them to switch off; I wanted them engaged and working through the implications of this issue. And therein lay my answer – thinking through the meaty issue. Rather than 'deliver', I wanted to encourage them to do it themselves. While on school inset, I had been introduced to a new way of using De Bono's six hats theory (Figure 1) and I wanted to trial it.

My aim was to create a problem-solving lesson where the students worked together and, through discussing the issue, worked out what they thought would be the consequences of the one child policy.

Students were given some key facts (Figure 2) to provide the background to China's decision to introduce the one child policy and were asked to produce a multi-flow map to examine the causes and effects of China's explosive population growth (Figure 3). I deliberately didn't give them much information as I wanted them to reach back into the ether of year 10 and focus on the small pieces of information they had been supplied with. I briefly explained that

- 1950s Great Leap Forward – widespread famine
- 1960s food available
- Society dependent upon agriculture
- Parents depend on children for support in old age
- Mao said birth control was 'bloodless genocide'.

Figure 2: Characteristics of China's population (part 1).

the Great Leap Forward and unemployment in cities led to many being sent to the countryside to create agricultural employment and increase yields. My aim was for the students to link the various factors together, see the political (Mao's influence and link to poor healthcare and high infant mortality), social (cultural requirements for children in old age), economic (as the country tried to leap forward) and environmental (society dependent upon agriculture, requirement for food as 1950s in period of famine, majority of population rural) factors together. There should have been some prior knowledge to draw upon (China experienced explosive population growth, lack of contraception, desire for many children, males prized highly). However, I also wanted the students to make some educated guesses (impact of rural population, e.g. difficult access to healthcare, family planning and contraceptives coupled with a great need to produce high crop yields requiring greater labourers).

Some of the students remembered their GCSE lessons and quickly recorded the effect of population control and limiting birth rates. Once they had reached this stage, they mistakenly thought their work was done. It was interesting that, so often, they assume we are looking for one answer and, once that is reached, there can be limited discussion. Each group fed back and we briefly discussed their findings using a population pyramid. I asked the students to annotate various key points onto the image: time of famine (1950s), introduction of the one child policy, evidence of preference for male offspring and relaxation of one child policy (Figure 4).

Now for the revision: remembering China's population policy. Some key points were remembered. However, there was a great imbalance towards the 'grannies' and infanticide. This led to a longer than intended whole-class discussion on the policy. Potentially, a summary handout or a reading homework could solve this issue. At this

Edward De Bono's theory is used as a way of disseminating a problem or issue. It could be used as a discussion tool, as a creative thinking tool or in any number of situations. It helps to train the students to think through an issue fully from a number of different viewpoints.

White hat	Focusing on data: what you have, gaps in your information, accounting for these missing sections.
Blue hat	Focusing on organisation: how is this being run, what's the big picture? This role could be a chairperson – impartial, observant.
Yellow hat	Focusing on the positive: optimistic thinking, what are the benefits and advantages of the issue in question?
Black hat	Focusing on the negative: devil's advocate, what are the problems, drawbacks, flaws of the issue in question?
Red hat	Focusing on the emotions: what will the emotional responses be to the issue in question, how might this change over space?
Green hat	Focusing on creativity: what are the possibilities, are there alternatives, any new ideas?

Figure 1: De Bono's six hats theory.

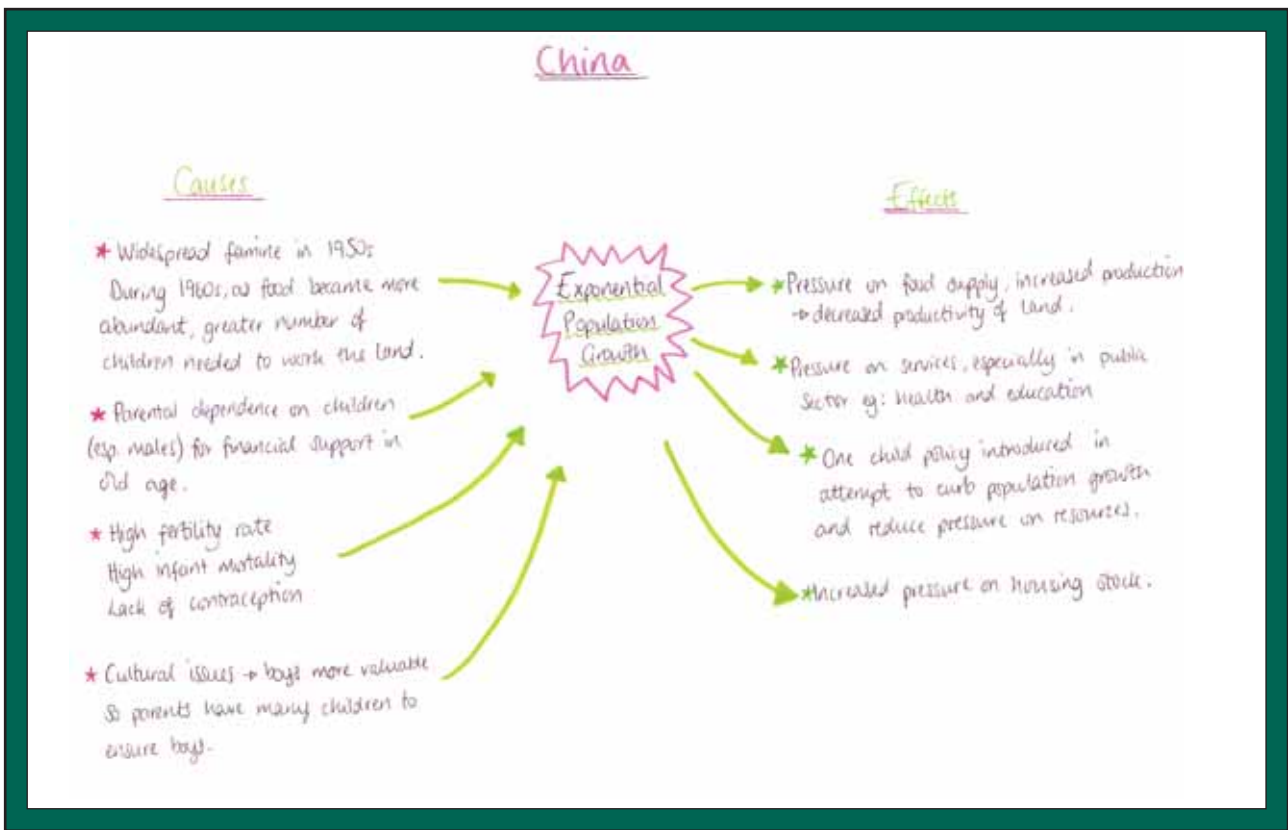


Figure 3: An example of students' work by Abigail Duff-Walker.

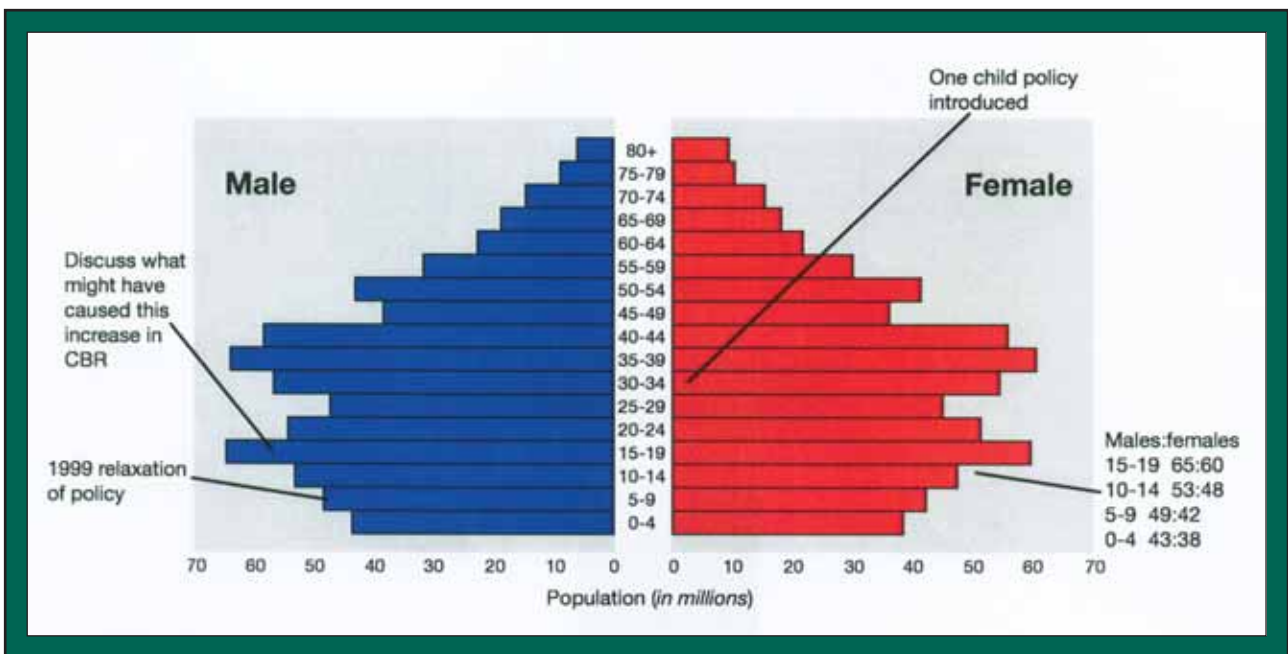


Figure 4: Annotated population pyramid for China, 2006. Source: US Census Bureau.

point, I was ready to introduce the challenge. Some facts were given (Figure 5) and these were fairly implicit – I wanted the students to have to work things through. Having said this, one group found this much more challenging so I joined their table. This group comprised the weaker ones within the class and, once I'd given them some introductory questions to start them thinking, they picked up the thought process very quickly and were excited to run with it.

The students were asked to work in larger groups (5-6) while analysing the

consequences of China's one child policy. They were given coloured guiding questions (Figure 6) to help them think within De Bono's six hats theory and asked to work through each of the boxes (in any order), discuss ideas and note down key points from their deliberations. I did request that they tackle the creative (green) box last and left plenty of time for it. Thus, each group would consider a number of different viewpoints before creatively examining potential consequences for China.

I have used De Bono's six hat theory in a 'jigsaw' activity, which has

- China's constitution states 'Each married couple is obliged to practise family planning'
- Mean annual population growth rates fell from 1.3 in 1980s to 0.9 in 1990s
- Birth rate fell from 37 to 17 per 1000
- 1984 policy relaxation, particularly in rural areas

Figure 5: Characteristics of China's population (part 2).

What do you know based on the information you've been given? What other information do you need?	Who is in charge? Who has promoted the policy? What's the big picture?	What positive things happened as a result of the population policy? Has the role of women changed?
What problems/drawbacks have resulted from the introduction of the population policy?	What are the views of people about the population policy? How might these views change between location (urban rural), gender or demographically?	What are the consequences of the population policy for China? What are the subsequent issues going to be?

Figure 6: Questions to guide thinking.

worked well. Figure 7 provides the general guidelines for jigsaw activities.

This method of 'becoming experts' has worked very well in the past. In spite of this, I wanted each student in my year 13 class to examine the consequences of China's population policy in the six different ways given by De Bono.

In general, this activity led to more discussion than writing. It took the students time to get used to using the different hats, although the guiding questions were useful here. Lower achieving groups found it easier to access the lesson at this point and were capable of making progressive logical steps to build a picture of what might be happening.

The quality of the discussion was very good and the students were captivated by the problems China would be facing. It was easy for them to create a list of negative aspects, yet the positives were more of a challenge. Some students transformed into energetic, animated advocates on behalf of the Chinese government, whereas others spoke for rural women. These roles were unplanned and fluid at times, bringing clarity to the debate.

While on the GA study tour of China, we met with a member of the National Population and Family Planning Commission of China to discuss their family planning policy. There was much I learnt here and while the students were in their groups I asked

1. As a whole class the general issue or question would be introduced and briefly discussed. This could be using an image, poster or media file etc. I would then introduce the activity and take the register, giving each student a colour (black, white, green, blue, red or yellow) and number (1-5 in a class of 30).
2. The class would split into their coloured groups; these groups relate directly to De Bono's thinking hats. Each group would be given some stimulus material for their discussion and a card introducing their thinking hat, often giving them a role to play: e.g. if a town council meeting were being created the black hat would be the budget holder aka devil's advocate. This card would give them an idea of their character who in this instance thinks negatively, always sees the glass as half empty, is always looking to save money, and can be relied upon to find the problems, drawbacks and issues with any good idea. In lower school, I would usually provide a pro-forma for them to record their thinking and discussion. The students would become 'experts' in their field and would formulate some points for discussion for the next group.
3. The final stage is when the students move into their numbered groups. Each group should have one representative from the earlier activity. Thus, within each group there would be a white (data), blue (organisational and acting as chairperson for this next section), yellow (positive), black (negative), red (emotional) and green (creative) representative. The group would then work to debate an issue or often hold a council meeting where their role would be exemplified through their preparation. This would usually require some form of joint decision, with a brief justification that the students record on the back of their worksheets.

Figure 7: General guidelines for a jigsaw activity.

probing questions and stirred discussion by divulging parts of my meeting in China. While discussing the uneven implementation of the policy, I mentioned that the impression from the Chinese government was that this was planned. The coastal areas from Beijing to Shanghai, where the economy was relatively advanced, followed a strict one child policy. Areas in central and western China followed a more relaxed two child policy (exemplified by a Chinese saying: the mountains are high and the emperor is far, far away), whereas in Tibet there was no limit on the numbers of children per family. We discussed contraceptive use in China and the role of family planning education (Figure 8) and how it has changed over time.

	1992 (%)	2005 (%)
Female sterilisation	41.66	33.84
Male sterilisation	11.81	6.98
Intra-uterine device	40.12	50.57
Implant	-	0.35
Oral pill and injection	3.75	1.54
Condoms	1.80	6.31
Others	0.86	0.41

Figure 8: Contraceptive use in China.

The Chinese government stresses the importance of 'informed choice' throughout their education programme. The most interesting statistic was the (more than threefold) increase in condom use from 1992-2005. The government blames this primarily on the fear and misunderstanding of condoms prior to their national campaign, which was focused on encouraging people to use condoms to avoid contracting HIV. It began with condom vending machines at university, which were untraceable and therefore seen as 'safe' due to the anonymity. These machines offered 24 varieties of condoms and were empty within 1-2 days. Interestingly, there was a public outcry as it was felt this was encouraging students to have sex before marriage (highlighting the traditional culture to which China was clinging). This is further understood given that teenage abortions are increasing in China despite the overall number of abortions decreasing. This general decline in abortions is linked to the government banning selective abortions and introducing sanctions for this. Only a limited number of authorised hospitals are allowed to practice abortions and there

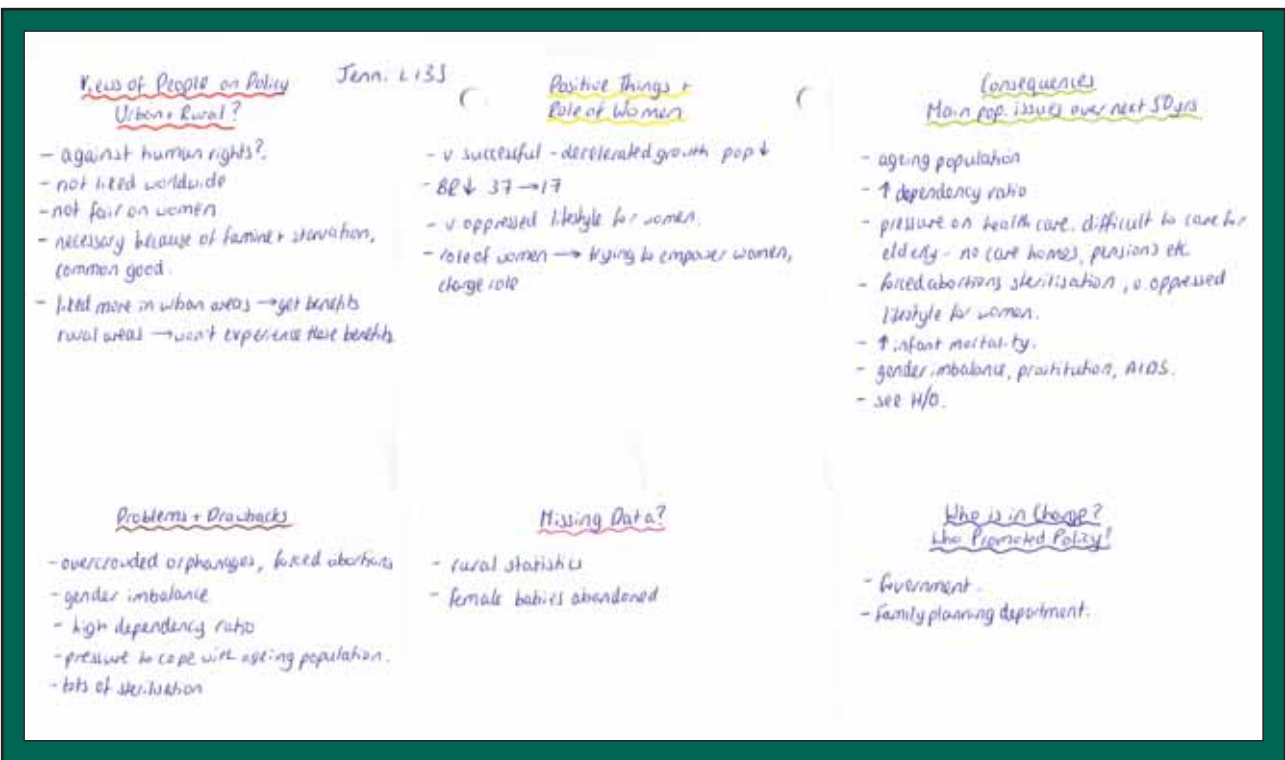


Figure 9: Example of students' work by Jennifer Lawton.

is strict control of the ultrasound machines used to assist this. There is still a strong negative social stigma connected with younger girls desiring abortions, which can lead to social discrimination. Many teenagers and younger women travel to international women's clinics in the cities for abortions as there are limited government officials there. We briefly discussed the wider implications of these changes and the threat to traditional Chinese culture, in addition to the dramatic economic change that China is currently experiencing.

Generally, the students struggled with the white box most, trying to establish what data was missing and what information was required before studying the subsequent bias of their opinions. Allowing for their bias was the greatest challenge and no group really succeeded here (see Figure 9: only missing data has been accounted for in this section). I think with more time for discussion and repetition of this lesson structure they would begin to find the process of self-analysis much easier and would find their conversations more detailed and appropriate. Most groups had a tendency to focus on one particular idea and work from there and sometimes then struggled to find a new idea. However, having time for discussion helped this.

Afterwards, the students were given a handout with a copy of possible effects (Figure 10). We discussed these ideas and they were pointed to some further reading. Their homework was to use the information to produce an essay plan for the question: 'Examine the national challenges posed by

- Uneven success – urban compared with rural (Tibet no limit)
- Negative growth – Shanghai – has the policy been too effective? Effect on city life?
- Shift in dependency exacerbated by ageing population (LE 65–72 years 2005)
- 4–2–1 problem – single child caring for 2 parents and 4 grandparents – needing state care for elderly, also impact of changing culture – more 'westernised'?
- Absence of adequate pensions – 2005 government provide financial support to couples over 60 yrs – only enough to cover food
- Labour shortages – unemployment in cities, exacerbated by R–U migration, encouraged women to work (to improve social status of women). However, implications for elderly care-giving
- Sex-selective abortion (97% female) – cultural need for a son, sex ratio 119:100 (m:f) international average = 107:100
- Female infanticide (17 million thought to be missing)
- 2004 government plan – Girl Care project – incentives to reduce abortion of female foetuses
- Increased divorce rate – increased by 20% 2007, since 2003 can gain a divorce in 1 working day
- 'Little emperor' syndrome – parents spoil one child especially seen in boys
- Gender imbalance
- Bride bartering
- Kidnapping
- Immigration of women
- Social instability (especially crimes against women) & rising crime rate from 'little emperors'
- Rise of prostitution in cities – increased HIV/AIDS population (rising by 30% annually 2005) – Nationwide HIV campaign encouraging condom use & sexual health education
- Government-led example to improve the status of women in society (of the 30 ministries, there are 5 where women hold high positions of authority 2007).

Figure 10: Consequences of China's family planning.

declining fertility in China! The following lesson was a timed exam question using this essay plan.

Debrief

I felt the lesson went well: the students were engaged, they thought hard and worked through the issues presented to them. I was very pleased with the way the lower-achieving students within the group were more confident with their ideas and bounded ahead. We spent time at the end of the lesson discussing how they found this format, what they struggled with and what they enjoyed.

What wasn't enjoyed? Some students really didn't like this method as they liked being spoon-fed, happy and secure in the knowledge that whatever the teacher was delivering to them was preparing them for their exam success. In this selective grammar school there seems to be greater competition between students to succeed and for students to better their academic performance. This is often seen with the higher achieving students and, interestingly, these were the ones who were feeling 'unsafe' and insecure about what they were doing as the lesson, from their point of view, was based on their knowledge and creativity rather than subject content 'delivered' by me, the teacher. They did concede that six months previously they might have enjoyed it more but, with exams looming and reports being written, they were feeling pressurised. Some commented that, although the lesson was good and enjoyable, they would struggle to revise from the notes they had made. However, the handouts were useful in this respect. I think the timed exam question and extra reading further

reassured them.

What was enjoyed? The majority enjoyed doing something very different and were hooked to some extent from the beginning. They found they were being forced to concentrate and examine the deeper issues. Many found using blank paper and coloured diagrams helpful. They also appreciated the challenge of not stopping after the first response but trying different options. Many loved the interactions throughout the lesson and felt it was, for them, a more imaginative way of going through a topic already studied. A number also enjoyed not knowing the answer and having to discuss the issue in a very different but structured way.

Conclusion

This lesson was motivated by a struggle to keep year 13 enthused on

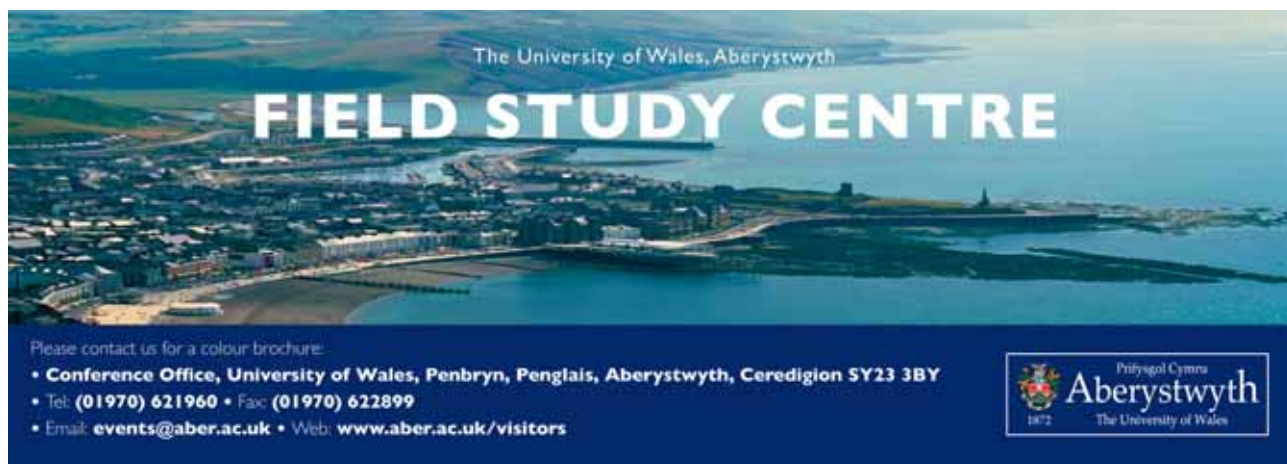
Wednesday afternoons about a subject they had already studied and remembered well. Equipping them to think holistically about an issue and training them to automatically cover a number of different viewpoints within their analysis of a problem or case study is vital, not only to their examination success, but to life in general. This problem-solving structure has also met with great success with younger students. The students thrive on variety and giving this a chance kept them engaged and interested while ensuring they used their intelligence creatively to analyse the management of China's population over the next 50 years.

The PowerPoint presentation used in this lesson is available to download free at www.geography.org.uk/journals. ■

Websites

- BBC News: China divorce rate rises
<http://news.bbc.co.uk/1/hi/world/asia-pacific/7208385.stm>
- BBC News: China warns of population growth
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- Times online: Tradition of sons causes leap in births
www.timesonline.co.uk/tol/news/world/asia/article3047244.ece

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