Dear students,

Your class is taking part in a study which is being carried out in eight European countries. We are testing ways of improving the teaching of biology, chemistry, and physics. For this purpose we designed new instruction units, some of which are now tested in your class. To inform us how this way of teaching is accepted by students, we kindly ask you to fill in a questionnaire both before and after this instruction unit.

The questionnaire is anonymous. No information will be disclosed about your name, your school or your academic achievement, nor will your answers to this questionnaire affect your grades in any way.

Martin Lindner and Wolfgang Gräber, University of Kiel, Germany

Please enter a code, following the instructions below.



Special characters count as one proper character, e.g., enter ä as ä.

Third character of your father's first name
2. Second character of your mother's first name
3. First character of your mother's maiden name
4. Third character of your place of birth
5. Your month of birth (in two digits), e.g., July = 07

Age: years	Male	Female		
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Physicists who work in scientific research	
Please check the right answer(s)	
make up new experiments all the time	
sit all alone in their laboratory in front of the computer	
prefer doing research alone than in a group	
are part of a group who works on a question	

Scientific researchers use measuring instruments because	
Please check the right answer(s)	
the objects they observe are sometimes too small to be seen with the	
naked eye	
the processe they observe are sometimes too fast to be perceived with	
human senses	

one cannot trust one's eyes	
all scientists do it	

If biologists, physicists or chemists want to find out something, they	
Please check the right answer(s)	
start off by doing a lot of reading	
start off by planning an experiment	
start off by doing an experiment	
make plans with their colleagues before starting	

If scientists observe something that has to do with technology,	
Please check the right answer(s)	
it often seems to them like magic	
they trust their eyes and their ears	
what they want most is doing an experiment	
they want to use measuring instruments to measure what is happening	

You can only become a scientist if you		
kreuze die richtige(n) Antwort(en)	an	7
can hear very well		
can see very well		
can think very well		
are well versed in technology		

Sometimes scientists use models to explain something. Do you know any such a model? What can you explain with that model?

If you cannot think of a model, think about ways of constructing a rocket. Which pieces do you need for that?

Have you ever observed anything in nature or on technical devices which you could not explain at first? What was this question or problem? How did you eventually find a solution?