Questions 1 and 2

Choose TWO letters, A-E.

Write your answers in box 1 and 2 on your answer sheet.

According to the passage, which TWO observations did Sirois make about the children in his experiments?

A. They can concentrate for long periods.
B. They could not distinguish between the events they were shown.
C. New events attracted their attention.
D. They showed understanding of new events
E. Their pupils grew bigger with new events.

Question 3

Choose the correct letter, A, B, C or D.

Write your answer in box 3 on your answer sheet.

3. What happened in the inconceivable event but not in the conceivable event?

A. The object remained visible at all times.
B. The object was secretly taken away.
C. The flap was not moved at all.
D. The object prevented the flap from closing.

Reading Passage:

Explanations of the way in which infants develop intellectually have been underpinned by two contrasting theories over the last century. Both of these ideas offer differing views of the knowledge which babies have and how this relates to development.

Swiss psychologist Jean Piaget was the first to offer a hypothesis in this field. From observations of his own children in the early 1900s, he reached the conclusion that, below the age of 9 months, humans have no knowledge of the world or any concept that objects still exist even when not seen, called ‘object permanence’. Consequently, he deduced that children construct this knowledge by accumulating experience of the world. This central idea is known as Piaget’s “constructivist theory”.

The second theory has gained in popularity in more recent times. This was founded on a number of complex experiments from the 1980s. The experiments typically showed infants events which seemed to contradict basic natural laws. In one such experiment conducted by the University of Illinois' Renée Baillargeon, a child was placed in front of a table which had a hinged flap attached to its surface. The flap could either swivel forward or backwards to lay flat on the table or move into an upright position, which would therefore obscure any object located behind it. The baby watched two scenarios; one possible and the other not.

The possible condition started with the flap lying flat on the child's side and an object was placed just beyond it so as to be visible. Then the flap was rotated upright, blocking the object from view, and continued to be rotated until it stopped at a 112 degree position. In this conceivable event, the object behind the flap would have stopped it moving any further. The inconceivable event began in the same way. However, instead of the flap stopping its rotation, it continued for the full 180 degrees. Unseen by the infant, the object had been removed.

Baillargeon and M.I.T's Elizabeth Spelke found that babies younger than 6 months old would repeatedly look at the apparently impossible events longer than those which were conceivable. This led to their conclusion that babies are born with the ability to understand that something is wrong. In other words, humans have some knowledge of the world from birth. This school of thought has been labelled "nativism".

There continues to be debate concerning these two theories among psychologists and cognitive scientists. For example, in 2006 Dr. Sylvain Sirois, the director of Babylab, a unit of the University of Manchester, weakened the nativist argument. In Sirois's experiments, he used an eye tracker to record the direction of a child's gaze. But he also measured the size of the pupils as an indication of interest. If an event was genuinely interesting, the pupils widened. What he found was that inconceivable events, when first occurring, aroused interest. However, if such events were repeated, the child displayed boredom. As a result, he suggested that, in the experiments of the 80s, it was the novelty of the illusions which held babies' attention rather than the conceptual understanding that something was physically impossible.