

# Making the most of questions and ideas in the



## early years

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CHILDREN'S SCIENCE QUESTIONS AND IDEAS PROVIDE AN INVALUABLE TOOL FOR THE EARLY-YEARS TEACHER

Carl Sagan, the astronomer and award-winning educator, wrote in an article entitled 'Why we need to understand science':

*'Every now and then, I am lucky to teach a class in kindergarten or the first grade. Many of these children are curious, intellectually vigorous, ask provocative and insightful questions and exhibit great enthusiasm for science'. (Sagan, 1993)*

### General observations

When I first read Sagan's article I thought that it would be interesting to collect young children's science questions, just to see what they ask. Later, the opportunity to do this came when, being involved in a teacher-evaluation research project, I was an observer in early-years classrooms (attended by children of 4-6 years of age) in central northern Greece. These

observations gave me the chance to interact with the children during their free activities between teacher-organised activities. The children, being both curious and friendly, came to see the 'visitor' to their class and have a chat with me about different things. This was a good chance for me to focus on their questions and ideas about science.

'Why don't big ships sink?' asked a 4-year-old girl who, at that moment, was examining a

HOW CAN WE HANDLE [CHILDREN'S QUESTIONS] SO AS TO MAKE CONSTRUCTIVE USE OF THE VALUABLE OPPORTUNITIES THEY REPRESENT?

children's book about boats. 'Why do you think?' I asked her back. 'Because they are big and move fast', she answered. Another girl, aged 6, a very bright one the teacher

informed me later, came to me with a book showing the phases of the Moon. She sat next to me and said 'Can you please help me?' 'How?' I asked her. 'See, what I can not understand is why the Moon is not always the same shape in the sky.'

During the children's free activities I could also move around, talk to them, watch them play in the different classroom 'corners' and again record questions and ideas. The 'corners' are classroom areas for different kinds of activity, such as the 'doll house', the 'theatre' corner, the 'building material' corner, 'the library', the 'music' corner, the 'science corner'. One day I was talking to a 4-year-old girl at the 'building material' corner while she was building a house with wooden blocks. 'Do you see?' she asked, 'I have made a ghost house. They come out at night when there is no light and it is dark. During day time there is light and the ghosts hide.' And after a small pause she asked 'Why is there no light during night?' 'Why do you think?' I asked her. 'So our eyes won't hurt' she responded. On another occasion, I stopped at the 'doll house'. A girl of about 4½ years of age, who was playing with a shampoo bottle, turned to me and said 'When my mummy puts me in the bath tub I play with my shampoo bottle'. 'And what exactly do you do?' I asked her. 'I try to make it stay at the bottom. But when I put it down there it keeps coming up. Why doesn't it stay there?'

### Science activities

Later, in the course of my research project, I had to observe systematically the science activities organised by teachers. This gave me the chance to record more of the children's stimulating questions and ideas. The science activities often took place at the beginning of the day so I was present when children were arriving at school. One morning, a 4½-year-old boy told his teacher when she welcomed him to school: 'I don't