

Everyday animals in children's lives- in touch with everyday nature

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Background

Children from the earliest years notice the animals in their everyday lives, and build a bank of knowledge gradually acquiring an understanding of adaptation to habitats indicating the importance of everyday observations out of formal education. Experiences of seeing or finding out about animals are encapsulated for many children in the form of narratives and contribute to their mental models of animals and their habitat. Hence knowing what children do know about animals that they see everyday should be an important starting point for formal learning strategies. Driver et al. (1994) explain children will have a developed theory about natural phenomena before they experience any formal teaching and out of school experiences are an important as a source of science literacy for all age groups (Lucas, 1991). Children are also introduced to animals in their everyday lives through encounters with artifacts with animal images at home, in various media (Tunnicliffe et al., 2008) and decorations in their classroom (Medin, 2008). Children are also introduced to animals in their everyday lives through encounters with artifacts with animal images at home, in various media (Tunnicliffe et al., 2008) and decorations in their classroom (Medin, 2008). As a child develops they encounter animals at home, as pets, as domestic animals kept for meat or other production such as milk, eggs, or honey or in more rarely in the UK for transport and a source of energy to drive machines. Furthermore, many children in Western developed nations see animals in their gardens, during walks through the streets, in parks or other places of leisure. Families, schools or other social groups e.g. Guides or Scouts take children on outings to such places that may include zoos; nature centres, local forests or places further afield, such as the mountains or seaside and. Such 'field trips' are arranged to visit farms, petting or children's zoos, field and nature centres, where they see domestic and farm animals, with possibly a few exotics. Thus, some children are exposed to other animals beyond their home environment or endemic to the country where they live.

Research Questions

The purpose of this research was to establish what animals are well-known to children in England and which animals they notice in their everyday environment. Indeed, (Louv, 2007) traces the development of ages of environmental and biological awareness through to the technological age where children acquire their information about the natural world at second hand through the media and associated media. However, even though this may be the case, in England, children do encounter some real animals, or representations thereof, in their daily lives. There are universal aspects of the understanding of children about animals, in what is described by Atran and Medin (2008:137) as folk biological cognition. Such cognition is based on what the child sees in its everyday environment. Whereas comparatively much attention has been afforded to children's experiences, with school or family in zoos, predominantly seeing exotic animals, little attention has been paid to the encounter and knowledge of children with everyday animals. This gap we seek to begin filling. This pilot study sought to answer questions that we, as biology educators and researchers, posed with each other. Namely, which animals do children know? From where have they gleaned their knowledge? Which animals did they recall as seeing at home, at school or in their immediate environs? A major area of our interest was whether children could name any animals, which lived in a particular broad habitat such as in water or the air, or was only usually active at night. We also wondered whether they were familiar with any invertebrates.

Methods

A set of questions was devised through electronic collaboration with the group, to explore the knowledge and experience of animals that children encountered everyday or knew about. Each

researcher contacted schools that agreed to allow their pupils to be interviewed. At least nine children, 3 from each of low, middle and high ability bands, were chosen by the school from the class (or preschool) of 4 years, 6 years- 10 years, 13 - 14 years and 15- 16 years. The Head teachers of the schools concerned dealt with ethical issues of parental consent and procedure and questions were discussed with the Heads. The school was invited to select the pupils to be asked, from the age groups with as equal as possible distribution of male and female, lower, middle and higher abilities.

The questions to be asked, revised after an initial study, were printed on the sheets. Responses were written on pre-designed interview sheets by the interviewer contemporaneously. Technical terms such as 'invertebrate' were explained appropriately to the pupils as necessary during the interviews. Biological terminology was used on the sheets for the guidance of the researchers.

Each child was interviewed alone. We started with asking the pupils to name as many kinds of animals about which they knew in 1 minute, which was timed. The interviewer wrote down each name and then the next question was to ask the pupil to say where they had found out about or seen each animal named. The next asked what real living animals pupils saw every day, at home, on their way to school, 'around', on a special outing to their families or relatives, or with other people to a special venue. The last section described nine different habitats; this was designed to probe whether children understood that certain animals lived in particular places. The categories of animals were : a bird, readily seen; a small mammal; a domestic animal; a walking invertebrate; a soil / ground living invertebrate; an animal that lived on water; an animal that lived in water, a nocturnal animal. Children were asked to name an animal kind or an exemplar of an animal category, e.g. bird, mammal, that lived in that type of habitat and say where they had seen it or found out about it.

Frame

The data sheets were read and reread. Superordinate categories in the responses emerged from this reading across the data. The animals were grouped in the following subordinate categories which emerged from the read-re-read: exotic to England; farm animals; pets or domestic animals; animals seen everyday - these were endemic animals and occasionally exotic pets. The responses obtained from the interviews and entered into the recording sheets were each allotted to its appropriate category and counts made of the number of responses in each category.

Research findings

Two categories of observations emerged 1. real first hand 2. vicarious observations. The first category is subdivided A). Unstructured observations, spontaneously made outside e.g. in the street, the home, e.g. pets and other domestic animals kept by the family;

B) Observations made at animal collections of i) domestic animals e.g. farms, ii) exotic animals e.g. safari parks .

C). structured observations made at animal exhibitions with explanatory information e.g. Zoos and natural history museums.

Second category, Vicarious animal observations, are made via television or radio and other media . Such representations, mythical or actual, can be seen on 1. Buildings - carvings, statues 2. In other works such as painting, book illustrations . 3. Animal Representations on materials e.g. curtains, clothes, as soft toys, on wrapping paper ; 4. Decoration in various forms in classrooms and bedrooms; 5. utilitarian representations as artifacts for eating and drinking - cups, spoons, decorated plates: 6. Media in which category there is a) two-dimensional still media such as photographs and books and b) VR- virtual reality on the Internet, computer games, movie cartoons and DVDs or heard.

Locations of animal observations also vary. Locations of observations are classified into five subgroups: 1 Home -the children see domestic animals in the home and some exotic animals are kept

as pets, more so in some countries than others. Farm animals may be seen at home or as part of school-originated activities. 2. School. At school children may see wild animals in the school grounds, occasionally some domestic animals as well as encountering various kinds of media representations. 3. En route or 'just around' near home was an important source of observing animals some of which were domestic animals particularly dogs and cats on the streets whereas other specimens were endemic animals such as pigeons and squirrels. 4. Other locations further from home or school boundaries, but often nearby such as woods or local park, 5. Further distanced locations were beaches, zoos and museums to which children had been taken, especially on holiday and may explain some of the more exotic citations as the holidays were not necessarily in the UK.

Everyday experiences and observations are more important than school in biological learning and children have a wide understanding of animals encountered in various forms in their everyday lives which increases with age as biological knowledge develops