

HUMAN AND ANIMAL STUDY GRADES 4 - 6



WRITTEN FOR
THE EAST AFRICAN WALDORF TEACHER DEVELOPMENT
PROGRAM

BY

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Acknowledgements

Initially I found the task of writing this manual quite daunting in the face of the amazing and fascinating information to be found in the bibliography list (see end of manual). However, my purpose with this manual is primarily to make these controversial ideas around the connection between the human being and the animals accessible to second language speakers who find English challenging at the best of times. A second purpose is to facilitate and encourage a creative approach to teaching human and animal study, especially through a variety of artistic media. Hence I include a large number of animal drawings in this manual.

I wish to extend my appreciation to all those who assisted me: Beulah Reeler for her delightful and comprehensive compilation of notes, lectures and poems; Norman Skillen for guiding me to the new book by Andreas Suchantke and Peter van Alphen for guidance, questions and editing.

As reference for my drawings, I used the beautiful drawings of the octopus and the fish eagle from Andreas Suchantke, as well as The Children's ANIMAL WORLD Encyclopedia that provided me with many lovely detailed pictures. As usual, I have learnt hugely from the whole experience!

Catherine van Alphen

The East African Waldorf/Steiner Teacher Development Programme

The East African teacher development programme was started by the late Adeline Mlai, a Tanzanian, in Dar-es-Salaam in 1997. Adeline recognised the developmental value of Waldorf education and invited Peter van Alphen and Ann Sharfman, teacher educators with experience working in African settings in Cape Town, South Africa, to start a teacher development programme in Dar-es-Salaam. This programme was set up for teachers from Tanzania, Uganda and Kenya.

After the first year, difficulties securing the funds for continuing the programme were experienced, and in 1999 the programme was relocated to Nairobi, Kenya, as a more central venue for the three countries. The Rudolf Steiner School in Mbagathi was able to secure funding for its continuation, and in the eleven years that followed an ever-increasing number of teachers from East African countries joined the programme.

Our grateful thanks go to GLS Zukunftsstiftung Entwicklung (Bochum, Germany) and Freunde der Erziehungskunst Rudolf Steiners (Berlin, Germany) for their continued support of the programme from 1999. We also wish to thank Sanduko a Ndege (Vejle, Denmark), Internationaal Hulpfonds (Amsterdam, Netherlands), Acacia (Basel, Switzerland), Stichting Helias

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About this Manual

This manual answers the need for teachers (or student-teachers) to have notes on the modules they attend. This manual is written for Primary School teachers doing the module on Human and Animal Studies for Waldorf Grades 4 to 6, which follows as Module 6 on the second module of the program in which a detailed study of Rudolf Steiner's concept of child development was given.

The second module included details of curriculum, to show how all teaching needs to grow out of an understanding of the developmental stages of the children at each age. Although there is a brief section on the developmental changes that take place in children around the year they turn 10 years, teachers wishing to use this manual are asked to first study the manual on Child Development, so that everything written here can be seen in the light of a broader understanding.

This manual is intended to guide teachers through the teaching of the Animal Studies curriculum. It is written to assist teachers new to Waldorf Education to see examples of how the educational principles given by Rudolf Steiner can be applied in daily teaching.

Everything written here needs to be seen as possible examples, rather than "this is the way we teach the Waldorf curriculum." Every teacher needs to adapt the suggestions given here according to the children in his or her class, their cultural background, the local environment, etc., so that the needs of the children are served, rather than following an imported curriculum.

This manual is intended to be handed out at the end of the module for revision and further study. The suggestion is that participants study together in groups in their respective schools.

We trust that the material provided will be useful in Waldorf training programmes in many countries around the world. Comments and suggestions are welcomed, and can be sent to Peter van Alphen on peterva@mweb.co.za.

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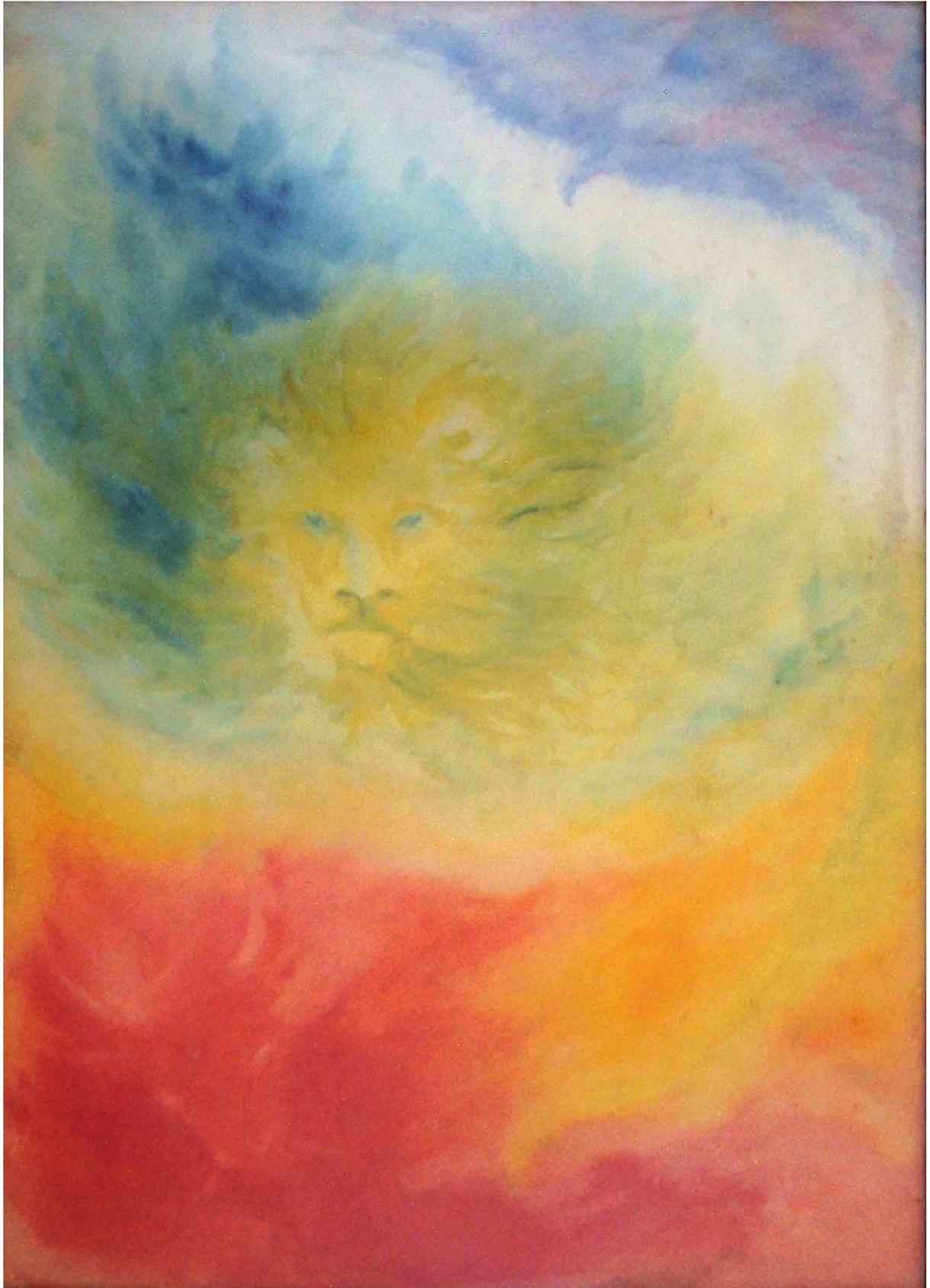
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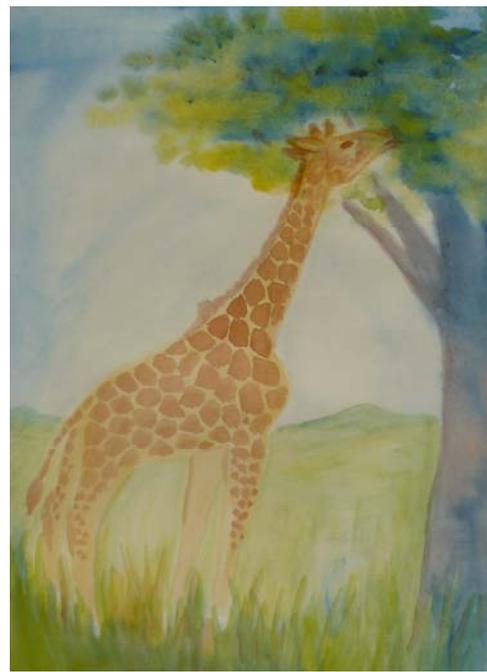
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Eagle, Lion and Bull

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Human and Animal Study Paintings



Section 1

Human and Animal Study in the Primary School

The One Life

God sleeps in the mineral,
 Dreams in the plant,
 Stirs in the animal
 And wakes in Man

Rumi

Our wonderful creation is classified into four kingdoms: mineral, plant, animal and human. Yet each kingdom is related and interlinked with the others to form the “one life” of creation.

The questions and discussions below are presented in a way that the teacher could use for introducing the human and animal study in Class 4 to develop the children’s ability to observe and make connections between the four kingdoms of nature.

A simple way of demonstrating this to the children is to ask them, “What can a rock do?” This is the teacher’s opportunity to let the children come up with their own ideas rather than the teacher telling them the answers.

With a little guidance the children will soon discover that the mineral world of rocks does nothing out of its own will but allows human beings to build houses, walls and roads for their needs and purposes.

The next question to ask the children is: “What can a plant do? In what way is the plant different from a rock?” The children will find this easy to answer because they can see that a plant can grow while a rock cannot. What is similar between the rock and the plant? It cannot move around; it is held firmly in place by the earth that protects it.

“Can we see how a plant grows?” The plant germinates from a seed that holds the ability to become just like the parent plant. It grows, putting out roots, stems and leaves. The plant is fed by the minerals and the water in the earth and by the rain that falls. It takes in the air and develops in the light and warmth of the sun. Finally

it produces flowers that are pollinated by insects and these flowers will develop seeds to become future plants in their turn. Thus we can observe the life cycle of the plant; their ability to breathe, provide food and reproduce.

The next question to ask the children is: “What can animals do? How are they different from rocks and plants and human beings?”

The animals can move around freely whereas plants remain where they are growing. What variety of movement can be seen from the birds that fly across the sky, the fish that swim in seas and rivers and the animals that roam on land! Each one is so individual! How different is the movement of a leopard stalking its prey to a herd of zebra and wildebeest galloping across the grassy plain! There are so many different shapes and colours to all the animals, each distinctive and original. Their skin, scales, feathers and fur are so different to the touch of a soft green leaf or the rough bark of a tree.

The many different sounds and cries of the animal world also distinguish them from plants: the song of birds, the buzz of insects and the vast range of noises from the mammals, whether wild or tame.

Like the plants, the animals can breathe and produce young cubs and kittens and foals. Some animals eat grass and plant matter while others catch insects. Those animals that hunt feed off the prey they have killed.

Both the plant and the animal are strongly connected to the environment in which they live. However the plants grow upright between the sun and the earth that supplies them with nourishment, while the animals move on four legs with their spines parallel to the earth because they must look for grazing or hunt for their food.

“What is similar between the animal and the human being?” We share freedom of movement. “Yet what movements can humans do that the animals cannot?” Human beings walk upright with heads facing forward, choosing their own direction. Their hands are free. “What opportunities are given to them through having their hands free?” We can choose to learn new skills with our hands, we can help and heal others or destroy things and hurt people and we can choose what we want to do in life. What will it be?

“And what is different between the sounds of animals and human beings?” Where the animals have their characteristically different noises, the human being has speech. Humans can make sounds and groans and noises, even imitating the animals but they communicate with each other through words and language. They can discuss ideas and write books. People can sing, not as the birds do with a particular rhythm and call, but they can create music and sing in harmony together.

The greatest difference lies in the freedom of thought that human beings have. The animals have instinctive knowledge and incredible skill of movement but little choice. They cannot disobey their instincts or they die. This freedom of choice enables human beings to be creative; to change things in the environment to suit their needs and wishes. “But are we able to choose what is best for everyone, not just ourselves?”

In considering all four kingdoms of nature, we see that each kingdom carries a gift that it hands on to the next kingdom. So the mineral world has physical form, while plants have physical form and life energy. But every kingdom adds a new dimension, a new quality that brings about a total change on every level. Animals have inherited physical form and life energy from the rocks and plants and the gift that the animals have is instinctive feeling. The human beings have physical form, life energy, feelings and their particular gift is the ability to think. Only human beings possess the unique gift of self-consciousness, the ability to be aware of one’s self. In all else humans are connected to and supported by the other kingdoms of nature.

The Human Being and the Universe

Rudolf Steiner said that each and every human being is like a small world within the vast universe, containing “all the laws, all the secrets of the world.”¹ Just as we looked at the connection between the minerals, plants, animals and the human being, we may also look to see the connection between the human being and the universe and especially with the wonderful sun, moon and stars that light up the sky.

We can lead the children into thinking about the human being in his threefold nature. Here follow suggestions on how the teacher can speak about the human being in an imaginative way, leading the children to understand in pictures rather than facts. The teacher will present one idea at a time, allowing the children to discuss each idea with him or her, so that there is ‘breathing’ between teacher and children.

It is important to go deeply into each idea, taking time to describe it and stimulating the children to participate in building up each picture. The suggestions that follow are given in summary form, which the teacher needs to expand².

¹ Rudolf Steiner, *Man as Symphony of the Creative Word*, 1923, Lecture 1.

² See, for example, Francis Edmunds: On the Animal Teaching in the Fourth Class, in *Science in Education – Waldorf Curriculum Studies*; Online eBook www.waldorflibrary.org/Journal_Articles

The Head

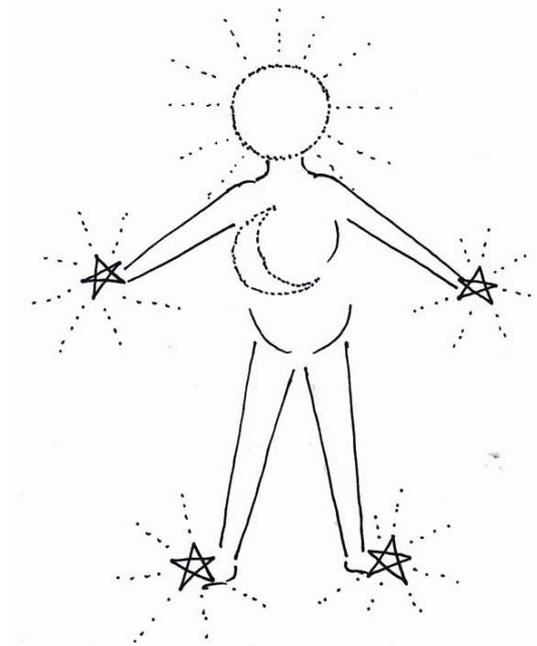
The sun is round, radiating its life-giving warmth and light to everything on earth. The head of the human being is also round in shape and we look out into the world expressing our interest and our love through our eyes and our smiles. No wonder young children draw a happy smiling face on the sun in their pictures!

We send our thoughts raying out in every direction and we express those thoughts, feelings and intentions in our speaking. Our head does not move very much, calmly observing everything like the sun as it travels steadily across the sky each day.

The Trunk

Our bodies are long, yet rounded with curved, flowing muscles and we can twist and move our bodies gracefully. We need only look at the curve of the spine, our rounded muscles on shoulders and chests, our curved ribs and rounded stomachs to recognise these shapes. These curves are like the shape of the sickle moon when the moon is young and slender in the sky.

Our ribs expand and contract with the in-breathing and out-breathing of our lungs just as the moon waxes and wanes, growing larger and smaller. We also feel the regular pulse of our heartbeats that keep us alive from birth to death. Here too we experience the ever-changing moods of our feelings that are hidden in our hearts. These observations show us that our trunk is connected to the moon.



The Limbs

Our arms and legs are long and straight, yet very agile and mobile³. We can run, climb and dance with our limbs and our able hands can learn many different skills whether it is playing a musical instrument, working with fine surgical tools like a doctor or dentist, or any other task we wish to do. Our limbs are reaching out to help us achieve everything we wish to do, as directed by the mind.

Through our deeds we develop our strengths and express our inner potential⁴. Thus we prepare for the life we wish to lead in the future, either consciously or

³ Agile and mobile = can move freely, actively and in definite ways

⁴ Potential = the possibilities to do things that lie hidden in us, waiting to be developed

unconsciously, as we also learn from our mistakes. Like the stars that guided sailors and travellers on the way to their destination in earlier times, our arms and legs lead us to follow our destiny⁵ in life.

Head and Limbs

We can see that our quiet, calm heads are quite opposite to our very active limbs. The hard rounded skull is like a helmet that protects the soft sensitive brain underneath while the limbs have long bones on the inside, surrounded by flexible muscles that make it possible for our limbs to run, jump and move quickly!

Our mind is like a chief that orders his servants to do his wishes and the limbs are the willing servants that rush around to fulfil the orders of the chief!

The Soul

But the human being is not just a body. If you look into someone's eyes you see a person and each person is different from the next one. What shines out from the eyes is that person's soul. The body is the house that makes it possible for the soul to live here on earth.

When talking about the soul as having three parts, we could ask the children: "what can the head do?" [The head has the ability to think.] "What do we do with our hearts?" [In the heart are the feelings of love, of caring, of joy, etc.] "And what can we say about the limbs?" [Here we have the will to do things.]

We may say that the body lives surrounded by the soul, because we can feel the energy, feelings and thoughts of a person in the atmosphere everywhere around the body.

Thinking

We can think so many things, and our minds are always busy. [The teacher could ask the children what things they think about.] We think about everything that happens to us and we have a wonderful memory that holds all our impressions and experiences, even the ones we think we have forgotten. [Maybe ask children in pairs to tell each other one of their memories.]

So we are able to remember pictures in our minds of people and things that have happened in the past. Thus our memory makes it possible for us to learn by gathering knowledge and through thinking to develop understanding.

⁵ Destiny = purpose in life, what each person is supposed to do or experience

Feeling

We experience not only the feelings in our soul, but also the feelings of others. We can sense when another person is happy, angry or sad and we can respond to this. We can be happy when someone else is happy but we can also choose not to be angry when someone else is cross, especially if we can understand why that person is angry. [Perhaps the teacher can ask the children if they were able to do this once or twice]. We can make things worse by reacting negatively or we may be able to help that person to overcome their angry feelings and do the right thing.

We have many feelings in our hearts and we often compare these qualities to animals. We can ask the children, when someone is brave, what do we say? [As brave as a lion] When someone runs away from facing something? [As cowardly as a hyena] What do call someone who is very quick? [As swift as an eagle] Or how do we describe someone who is very shy? [As timid as a mouse] So we see that the characteristics of the animals live in our souls: while each kind of animal has developed one instinctive characteristic, we carry the qualities of the whole animal world within us.

When someone is sympathetic and kind-hearted, people love them. When someone is hard and unkind, people fear them or dislike them. The best person is the one who is able to follow the truth in their own heart at all times. They can inspire others.

Willing

The human being can choose to do many things but this depends on his or her will power. If we want to do something very much, we will achieve it in spite of many difficulties, whether it is climbing a mountain or learning to play a musical instrument. [One could ask the children how strong their will power is when they are faced with something that is not so easy e.g. going to bed early on Sunday evening to be ready for school on Monday].

We find it very hard to do things we do not like doing, but a person who has a strong will and much determination can even choose to look after an old grandmother instead of playing outside with their friends. We can choose to destroy things or to build things up, to hate or to love. When we develop our will power to help others and not only ourselves, we develop good character. [Perhaps ask the children whether they have examples of helping others and not only caring for themselves].

Thinking, Feeling and Willing

Thus these three aspects of the soul - thinking, feeling and willing - all work together and cannot be separated. Whatever we think influences our feelings and directs our will e.g.

Our feelings deepen our thinking, helping us to understand others better, and have kind and loving thoughts about them. [Ask the children for examples]. If we have good feelings towards everything we do, we will have enthusiasm and this gives us strong energy to carry it out. [Again the teacher should involve the children in discussing this].

Our will gives purpose and satisfaction to our life. When thinking, feeling and will work together for the best in ourselves, even when we have to learn from our mistakes, then we discover and fulfil our destiny.

The Universe and I

My head is round as the smiling sun
That gives warmth and life to everyone
It calmly watches the world go by
And thinks about it all – and why?

Like the sickle moon my body curves
And in and out it breathes and moves.
My heartbeat pulses night and day
While feelings of joy and sadness sway.

My limbs are straight as the stars' bright rays
That guide the traveller on his ways;
Agile and active, they work for me
To find and follow my destiny!⁶

⁶ © Catherine van Alphen, 2011

The Senses: Windows to the World

There was once a little girl called Mary who lived with her family in a town that lay close to a mountain. She had an older brother and sister called Jim and Leanne and they used to all play together in the back garden where a few fruit trees were growing.

Jim was very quick on his feet and loved to run, so he often called to his sisters, "Race you to the tree and back!" Leanne also liked to run races and so she ran after him as soon as he called. But Mary would call out, "What tree?" And as she was smaller and slower, the other two ignored her. But Mary felt left out.

One day Mary heard a loud noise in the sky overhead and she cried, "What is that horrible noise?" "It's an aeroplane!" shouted Jim, "Look, it's flying over the mountain!" "What is the mountain?" asked Mary. "Don't you know anything, silly girl?" answered Jim. Hearing these words, Mary felt so stupid.

Then another day the children were sitting in the grass under one of the fruit trees having some lunch when Mary heard the most delightful sounds. "Listen," she said to them, "What's that little song? It is so pretty!" The other two stopped eating and listened carefully. "Oh, that is a bird. It is on the branch just over your head," said Leanne. Mary looked up. "Where is it? I can hear it, but I can't see it." Her sister pointed out the bird to her but she still couldn't see it clearly.

When they went inside, Leanne told their mother what had happened. The mother went up to the Mary and put her arm round her. She asked her what she could see in the room, what the other children were wearing and she soon realised that Mary could not see properly. A few days later Mary was taken to the eye specialist who tested her eyes and then arranged to have spectacles or glasses made for her.

How exciting it was for Mary when she went to try on her new glasses! She had to be tested inside the eye specialist's room and then she had to wear her glasses all the way home. Suddenly she noticed the make of their car, the wooden gate into their garden and the shutters on the windows of the house. How wonderful it was to see the fruit trees and even the birds sitting in the branches. But best of all was when Mary looked beyond the trees and saw the beautiful mountains! "Oh!" she cried, "This is the best day of my life! I can see the whole world!"

We take it for granted that everyone can see, hear, taste, smell and touch; in other words to be able to use the senses of the body that allow us to experience and to learn about the world around us. We are often surprised to find out that someone cannot smell the scent of a flower or taste the difference between tea and coffee.

Just as in the story of Mary, people who do not have the use of one or more senses, feel lonely and lost. Imagine if we had no senses, we would feel like a prisoner in a cell, unable to experience the world around us. We would be unable to relate to other people and unable to learn.

Touch

After a baby is born, it sleeps much of the time and when it is hungry it drinks milk from its mother who cuddles it in her arms. Thus the baby feels the touch and the smell of her body, the taste of the milk and the sound of her voice as she sings it to sleep. A baby does not see very well in the beginning.

What else might a baby feel in its first days and weeks? [Ask the children!] It feels the soft blanket around it, the hands of a brother or sister stroking its face and a thumb when it sucks it. This sense of touch increases as the baby gets bigger and begins to grab on to everything and tries to put it into its mouth. The baby experiences and learns about the world through the sense of touch.

What would it be like if we were blind and had to go around touching everything to find out what it was?

Games for the Sense of Touch:

1. Divide the children into pairs. Give each pair a scarf. One child must be blindfolded and the other one must lead them very carefully on a journey around the classroom, the school and even the garden. It is best if the leader puts an arm around the other child to steady them so that they do not fall or trip on a step or hurt themselves. Some children are quite frightened when they cannot see where they are going, while others may be quite confident. The leader takes the child and gets them to touch different objects and guess what they are. They talk to them, telling them when they are coming to a step or a bumpy path in the garden. The child might even be able to guess where they are being guided! After a time, the children have to come back to the classroom and then it is the turn of the leader to be blindfolded and taken on a walk and to discover things through touch.

The teacher then asks the children how they felt while they were blindfolded. Was their partner a careful leader who helped them to feel safe? What did they experience, touch, sense?

2. Several small objects familiar to the children are placed in a bag. Each child takes one without looking inside the bag and hides it in their lap or covers it

with a cloth. Each child takes a turn to describe their object without telling the others what it is. (It is round and firm, the size of an orange, you can throw it, it can bounce. Answer: a ball.) Only when the child has finished describing the object can the others try to guess what it is. No interruptions!

3. On a tray are several objects, each one with a different quality of texture or touch. The children each take turns to touch them and then they must decide how to describe the feeling e.g. rough, smooth, slippery, sharp, prickly, fluffy, sticky, soft, etc.
4. Go into the garden for five minutes and find five things that have a different feeling when you touch them. Sometimes a leaf may be hard on top and soft underneath. Also find things in the classroom to touch: wood, plastic, curtains, paper and the blackboard. Touch your hair, teeth, cheeks, tongue and hands. Touch your clothes. Different clothes may have different textures: wool, cotton, nylon, leather. Can we describe the different sensations?

Hearing

As little children grow bigger they hear many sounds all around them, even before they know what they are. They make lots of noises even before they start speaking.

Games for the Sense of Hearing

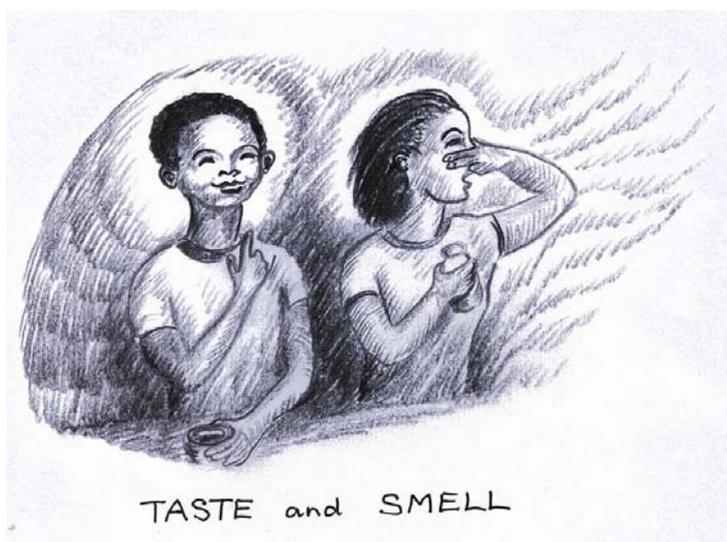
1. Sing a song or say a verse. Listen to the sound. Do you like it? Can children distinguish between sounds with a low pitch⁷, a middle range or pitch and a high pitch?
2. Can the children tell the difference between a violin and a guitar, a flute or recorder, two different sounds on a drum or tambourine?
3. The teacher can explore other ways of distinguishing sounds e.g. clapping and stamping different rhythms.
4. The children close their eyes and listen to the sounds inside and outside the classroom. After a few minutes let them tell each other what they heard: someone breathing or fiddling under the desk, a car going past, a bird chirping in a tree, etc.
5. Each child gets a turn to make a noise with their body or a sound with their voice that is NOT language or singing. Afterwards they must say what the sound was. They can help each other to find the words e.g. snap fingers,

⁷ Pitch = how high or low a sound is

stamp a foot, scratch your head, laugh, sigh, whine, hum, etc. No repetition is allowed.

6. Each child gets a turn to make a sound using some other object e.g. tap the table with a pencil, write on the blackboard, ring a bell, snap an elastic, etc. No repetition is allowed.
7. Each child makes the sound of an animal or insect e.g. they can roar like a lion, neigh like a horse, honk like a goose, whine like a mosquito. Some children are very good at imitating animals and the teacher should encourage the children to learn how to make the sounds properly. It is great fun!

Taste and Smell



Children begin to explore the world of taste from the moment they are born. As we have said, babies put everything into their mouths. As they get older, children tend to have strong likes and dislikes around food. Some like sweet things, others like salty chips and many children are brought up on fast foods that have such strong tastes that they lose their ability to differentiate between one taste and another. Some children are lucky and have

a mother or father that love to cook food with herbs and spices and a variety of taste and texture in the food. These children grow up with a good sense of taste.

However it is not only important what we put into our mouths; it is also important what comes out of them! Everything we say comes out of our mouths. Are our words sweet or bitter? Do we make people happy by what we say to them? Are we critical and rude or kind and truthful? We can choose what we want to say. We can also make the world a happy place by singing or speaking beautiful poetry!

The range of smells increases as children move into different realms of life e.g. the bathroom smells different from the kitchen or an art studio. A grocery shop is different from a chemist or a hardware store. Flowers have different scents, and allowing children to experience the finer variations is important. Children tend to have very strong likes and dislikes in the world of smell.

Games for the Senses of Taste and Smell

1. Get each child to bring examples of taste from home. They could mix some food, raw or cooked, into a blend so that another child will not be able to recognise it from the shape. Others then close their eyes (or be blindfolded) and can dip their finger into a bowl or tub and guess what it is after tasting it. Try not to have things that are horrible to the taste or no-one will want to try.

If you are passing the tubs round the room, do three or four at a time and only allow them to give the answer at the end. Then send the next batch round for tasting and guessing. Make sure that you include the four basic tastes of sweet (sugar, honey), salt, sour (lemon juice) and bitter (vinegar). The teacher should notice which children have a good sense of taste and enjoy the game and which do not.

2. Get each child to bring examples of different smells from home. They should put them into small bottles or tubs to hide what they are. They should have both natural smells (honey, marmite, oils, herbs and spices, etc) and man-made (soap, paint, polish, shampoo, etc.) Pass the objects round in small batches, like the tasting game. Let them smell each in turn and try to recognise them. The teacher should notice which children have a good sense of smell and are able to recognise the differences easily. Also if there are any children who dislike the smells intensely or who cannot smell at all.

Sight

The sense of sight is often our dominant sense as human beings. It is well known that people who lose the sense of sight or have impaired vision tend to develop their other senses to enable them to get all the information that they need to live in the world.

Therefore it is very good to notice which children have other senses well developed. Actually all our senses should be developed and these games improve our use and awareness through other senses.

Observation skills should be developed at all times. Children who watch a lot of TV may not notice people and things around them as well as they should.

Observation Games for the Sense of Sight

1. "I spy [can see] with my little eye something beginning with the letter B". This well known game can be done at all ages and encourages children to observe objects in the classroom. The child sees something in the classroom and gets everyone to look around and then guess what he or she has chosen. The answer could be book, box, blackboard or another object

visible to the class. The winner gets the next turn to find an object. Sometimes the teacher has to give turns to children who tend to get left out.

2. Describe the clothes on the child sitting next to you. Do you remember what they were wearing yesterday?
3. Look at this picture. Name the objects in the picture. What are the people doing? Why is the dog barking? Why is the child crying? More questions can be asked to involve the children in observing the picture closely. Let children help each other to discover details.
4. Look at this painting. Which is the darkest colour? Which is the palest colour? What feeling does this painting give you? This exercise should be done with every painting lesson so that the teacher can discover if every child responds correctly. It also trains the children to look at a painting more consciously and with greater observation.
5. A number of objects are placed on a tray which is covered by a cloth. The cloth is removed and the teacher carries the tray round slowly so that everyone gets a chance to see all the objects. Then the cloth is put over the tray and the children must now write down all the objects that they can remember.
6. The teacher moves some object to another place in the room before the children come inside in the morning. The children are asked to look around and find what has been moved and say where it belongs. A variation of this game is when a child is sent out of the classroom and the children move something or change clothes with another child. When the child comes in again they must say what has been changed.
7. Each child chooses an object from their desk or classroom and describes it in detail without saying the name. They could also be asked to describe an animal or each other. When they have finished describing it the other children must guess what it is.

It is good for the teacher to allow the children to express how they felt with the different games and exercises to experience the senses. Which senses are strong in each child? Which senses are weak and need to be developed?

Then the teacher can compare the senses of human beings with those of the animals, talking about the wonderful senses of the animals, especially the sense of smell and how it tells the animals everything about the world around them.

In the animal world the dominance of the senses is seen in the forms of the different creatures. Many animals like the hyena (or wolf) and buck (or deer) have

long noses; the hyena for scenting the prey they will find for food, the buck to scent the predator and flee from it.

Many creatures have long ears showing their keen sense of hearing. Feelers, antennae, the long arms of the monkey for picking fruit from the trees, the long, fine beaks of birds for pecking seeds; all connect to the sense of touch or vibrations coming through the air.

In the human being this is opposite: sense openings hardly protrude⁸ from his or her face in comparison to the animals. We may admire the eyes of a beautiful man or lady but they cannot compare to the large dreamy eyes and long eyelashes of a cow or buck.

The human being has partially withdrawn the senses because they are not needed for survival as in the case with the animals. This shows in the smaller head and flatter face of the human being. The withdrawal of the senses allows the human being a more inward and personal response to the experiences of the world.

There is so much to be experienced with our senses! We can choose to shut our eyes and even our ears if we do not want to listen to somebody. [Ask the children.] Can we do the same with our nostrils? [We need to breathe in and out to keep us alive!]. Can we control what we smell? [We are forced to smell both the good smells like fresh food and the poisonous fumes from the exhausts of cars]. And what sense do we feel with our skin? [It is sensitive to touch whether it is a cool breeze on the forehead, a slap on the cheek or a kiss on the mouth!].

For the teacher, not the children

Every impression experienced through the senses has information that is sent up to the brain through the nerves. The mind keeps it in a memory bag and this affects how we respond to life. Those children who are hurt by people hitting them or shouting at them will have memories of pain and suffering that will make them fearful or aggressive. If they are bored by their teachers they will close their ears and stop listening. When a child is very unhappy, he or she turns inward and shuts the senses, becoming hardened to the world around them like a tortoise with a scaly body, hiding in its shell. Their senses will become dull and they will struggle to learn.

If children are treated lovingly by the people around them, their memory bag will be full of kindness and they will be open and happy people. If their teachers are interesting and imaginative, the children will be eager to learn. The happier the child, the more open will the senses be and the easier it will be for that child to learn everything in life. They will become like birds flying freely on wings of joy!

⁸ Protrude = stick out

Each person has certain senses that are strong and now he or she can choose to cultivate those senses that they wish to develop. Someone who has a good sense of hearing may wish to be a musician and one who enjoys the sense of smell and taste will use it for becoming a good cook! But how wonderful it would be if all our senses were well developed!

For the Children again: Animal Senses

Having explored the human senses, we can now introduce the children to animal senses. Again, here are suggestions in summary form; the teacher will describe more fully and expand the ideas that follow. Little stories describing situations are useful here.

Animals have far keener senses than human beings and this helps them to stay alive and safe from any enemies or predators. Cats and dogs can hear sounds from far off and so they often notice when someone is coming to the house before the people are aware of it. This is one of the reasons why people train dogs to protect the house against intruders⁹.

Dogs and most other animals have an excellent sense of smell. Smells can tell dogs if someone is a friend or an enemy, if food is good for them to eat or will disagree with them, and where to go in order to find their way home. Smells give the animal an immediate 'knowing' about the person or place in many more ways than one can describe. Fishes do not see very well under water but they can hear sounds from quite a distance through the waves of the river or sea. Animals also sense vibrations or movements in the air or the ground through their bodies and especially their whiskers. They can often sense danger or fire in this way and this gives them time to hide or get away. Bats are well known for their "radar" ability to sense other creatures in their environment from a distance.

Animal Expertise

The animals are specialists at everything they do. Look how swiftly and gracefully the birds swoop and fly overhead! How often has someone wished that they could fly from place to place like the birds? How much easier would it be if we did not have to use cars and buses and trains and taxis but could just fly there instead?

But human beings are very intelligent and creative. They have many practical ideas! Someone looked at the birds and eventually invented the aeroplane that even has a body, wings and a tail made of metal. And now people can travel across the world by air just like the birds do!

⁹ Intruder = a person who comes into the house without being invited

There are many other inventions that have been made through the human being observing the amazing skills of creatures in the animal kingdom. Let the children make a list of animals and see how many ideas they can find out for themselves. Here are some examples.

The elephant's trunk can suck up water and squirt it out again. Human beings use a vacuum cleaner for sucking up dirt in the house and a hose pipe for watering the garden. What about the elephant's tusks? What machine has been invented to do the work that the Indian elephant does with its tusks for human beings?

The owl can turn its head around to see what is behind it. Human beings have invented the rear-view mirror. What do we have instead of feathers that keep us warm and waterproof? What do we use for picking up small objects where a bird uses its beak?

The woodpecker pecks a hole in a tree with its beak. Human beings have invented an awl or drill to make holes in wood.

The tortoise carries its house on its back. Human beings have invented the caravan for travelling from place to place when going on holiday.

Every creature has a speciality that human beings have observed and used to invent tools and machines for their use. Can we find more of them?

The Threefold Human Being and the Animal Kingdom

If we look at the human body, we can see that there are three quite different sections: the head, the trunk and the limbs, each with their characteristic shapes and functions. Different aspects of the animal kingdom can be connected to each of these sections and this brings a deeper understanding of the animals we study and also of ourselves.¹⁰

Remember, the suggestions that follow need to be built up in discussion with the children, getting them to discover and think about these ideas, rather than the teacher telling too much:

The Head

The head is more or less round and almost spherical, especially over the top and back. If we feel the skull, it is hard and bony, protecting the soft 'grey matter' of the brain inside. This withdrawn, hidden brain inside the house of the skull has a mind that thinks and is very active. That is why the head needs to be still and quiet so that it can do its work of thinking about everything that the human being experiences.

The face is also rounded, especially in young babies. Parts of the face are hard, like the forehead, cheekbones and jaws but the eyes, ears, cheeks and lips are soft. The nose has a bit of bone and a soft tip. These softer areas are where our senses open up like windows to let us experience the world. That is why we say they are sensitive and eager to experience everything!

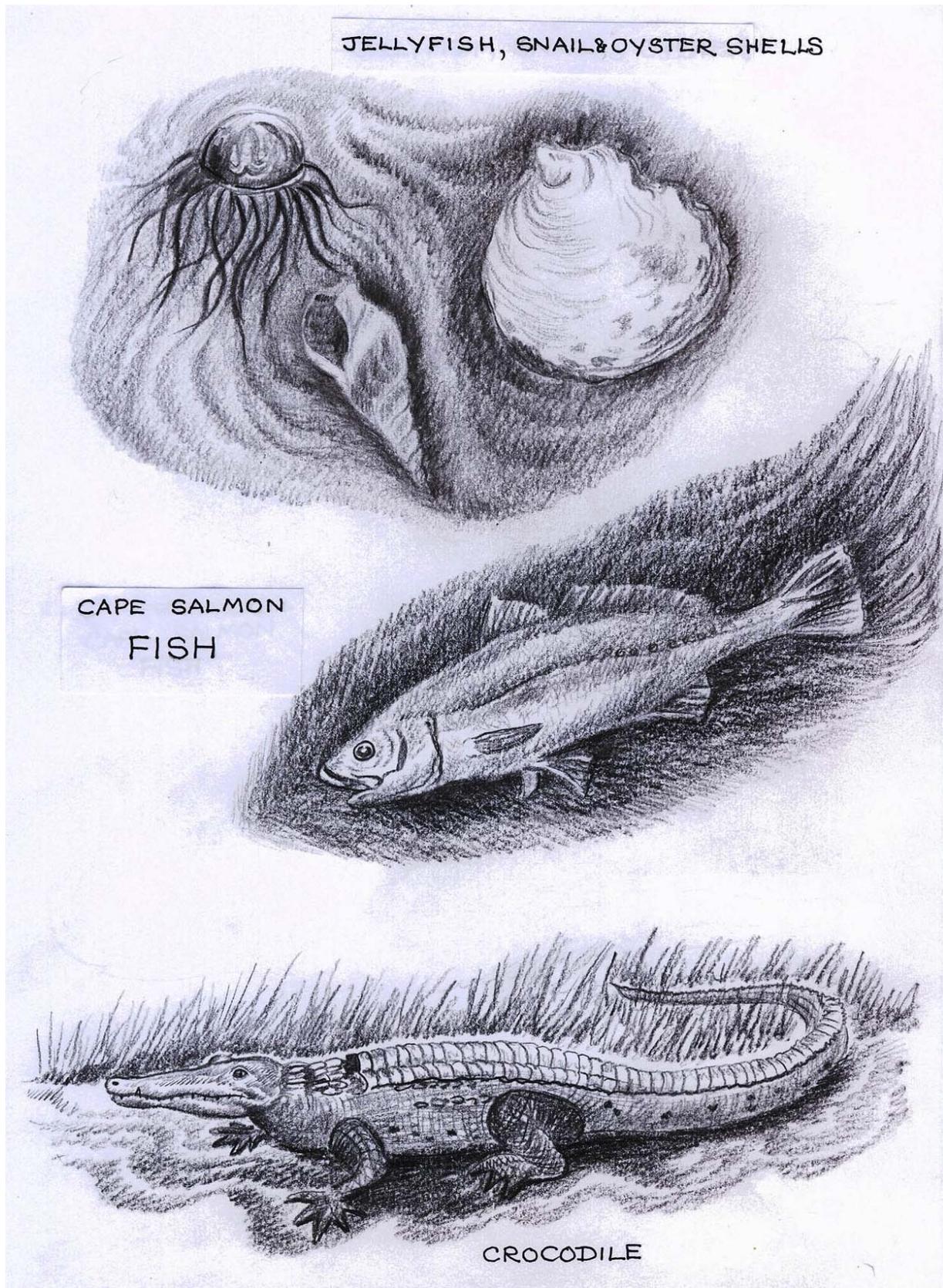
The Lower Creatures

If we observe the lower creatures that swim in the sea, we notice that the top of the jellyfish is round like the human head. There are also sea oysters, clams and mussels that have shells to protect their soft bodies containing all the delicate organs. There is no separate head and in fact the creature is 'all head' or shell with the soft parts hidden underneath, illustrating the tendency to be quietly withdrawn like the brain inside the skull.

The opposite creature is the cuttlefish or octopus with no shell at all and a large soft head with expressive eyes. Its senses are extended in long tentacles, like arms or long lips that reach out to catch food. Neither the octopus nor the cuttlefish looks like a human head but illustrates the quality of eagerly reaching out

¹⁰ Dr. Herman Poppelbaum, *A New Zoology*, 1961, Ch 5. This section is largely based on Chapter 5 of this book.

of the senses that we find in the human face. But they do have a dome-like head shape.



The snail balances the two aspects of the head. The part that protrudes from the shell is a sort of soft 'foot' to help the creature move around in the water or cling on to rocks. The snail combines the withdrawn quality of living in its shell and the sensuous reaching out quality in its soft foot.

We see that all the earliest creatures in the sea show characteristics of the human head.

The Trunk

If we look at the shape of the trunk, that part of the body below the neck and excluding the limbs, we observe a completely different form from that of the head. The round, almost spherical shape of the head has elongated¹¹ to the rounded shape of a large tree trunk, which is why it is known as the trunk.

We can feel the collar bone and shoulder blades almost like armour protecting the top of the trunk. The ribs start at the top of the chest and are attached to the spine at the back. They curve round to protect the lungs and heart in the front of the body. The ribs are able to expand and contract with the breath. The spine with its long chain of small bones in the centre of the back provides us with strength to stand upright and flexibility to move with ease and grace. Below the ribs there are no bones until you reach the pelvis, only the muscles and organs of the stomach. The further down the trunk you go, the finer the bones and the softer and more flexible the body becomes.

Invertebrate and Vertebrate Creatures

When we see the worms with their many segments joined together like a long chain, we may think of the human spinal column. Some of these lower creatures have little appendages like feet or sense organs like eyes attached to the long trunk. The insects, spiders, millipedes and crabs are also made up of segments, but some of these segments are concentrated together in places to form a head or thorax or abdomen. It is as if the bony spine inside the human being has been placed as a protection on the outside of the invertebrates. So insects display a secondary 'head' quality through the hard exterior skeleton. But primarily they fall into the 'trunk' section.

When we come to the fishes and especially the eel, it is easy to see the spine with the ribs attached. We may say that the fish is a creature that is 'all-trunk' as there is no separate head and no limbs, just little fins and a tail.

A snake is also a long worm or 'trunk' creature. Following the line of the reptiles, we see the evolution through the agile lizards to the powerful crocodile where the trunk becomes heavier and stronger and the skin hardened into scaly armour¹².

¹¹ Elongated = been made longer; the trunk is as if it has been stretched to become long, still keeping a certain roundness as in the head

¹² Armour = like humans who put on metal plates to protect their bodies in battle

As the trunk becomes shorter, thicker and harder, the contracted form of the tortoise shell can be seen. With this hardening comes a lack of life force and energy.

With reptiles, the legs are short and insignificant as they barely lift the creature from the ground. The real power of movement lies in the trunk and tail. Both head and tail are merely extensions of the trunk. Only in the dinosaurs did the back limbs develop so that the body was lifted from the ground; some of them were mainly trunk with a small head and short front limbs. These creatures became extinct.

Thus the characteristics of the human trunk may be seen in the various stages of development of insects, fishes and reptiles.

The Limbs

When we observe the arms and legs of the human being, we see that the legs raise the human being into an upright position. This affects every aspect of life.

The human being can now move and turn with ease: walking, running, dancing, climbing and gymnastic movements, whatever he or she chooses or learns to do. With head and gaze uplifted to view the world on all sides he or she has considerable choice in all affairs of life: where to live, what work or study to pursue, what aims, ideals and opinions to hold, etc. The arms and hands are free to be used in many ways: they can hold, manipulate and create many things or be trained for different skills.

The Mammals

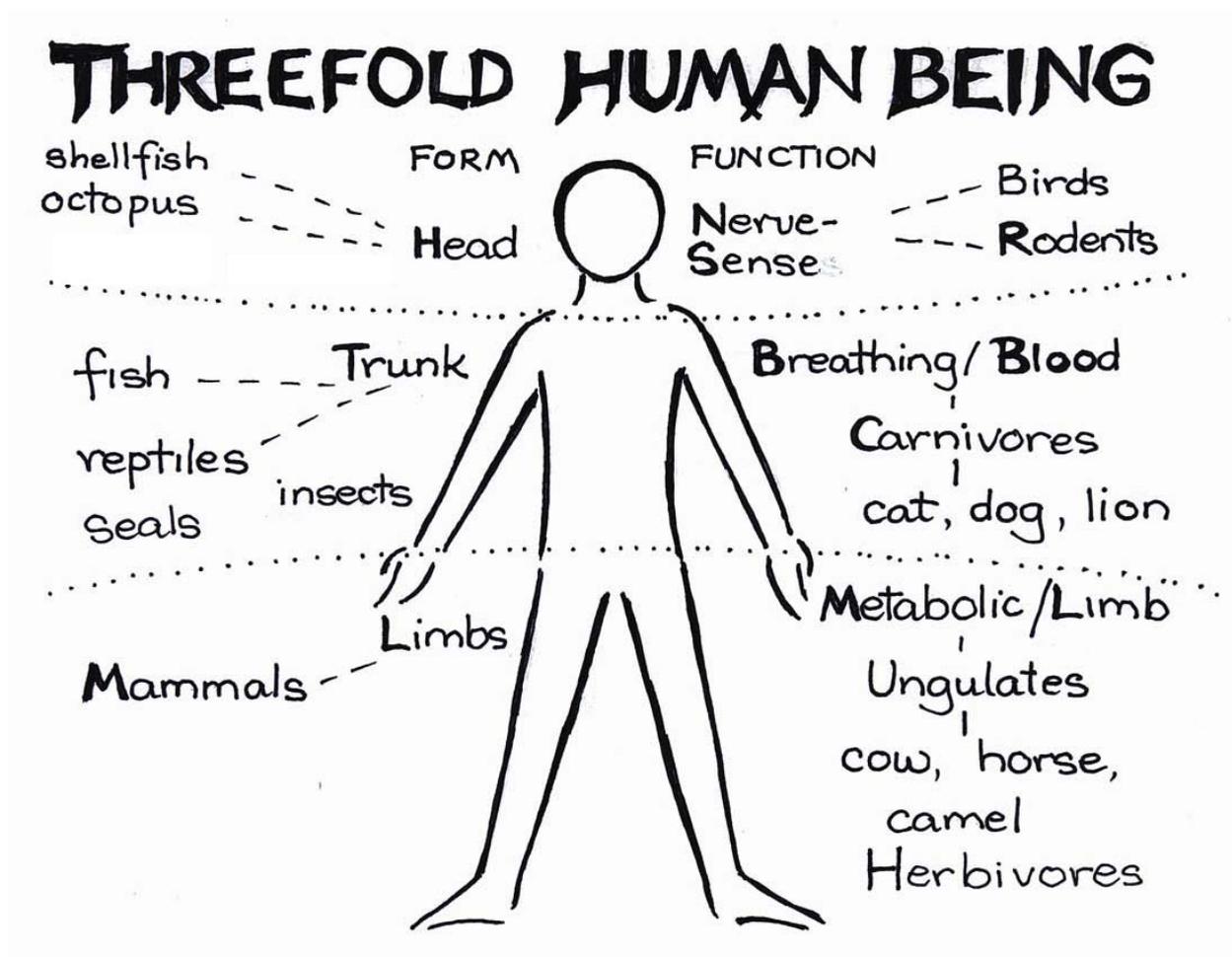
The warm-blooded mammals and the birds are the only species with limbs that lift the body above the earth. In this way the mammals can be compared with the limb system of the human being although they walk or run on four legs, not two. The birds, however, run on two legs, like the human being.

Like human beings, these animals also have freedom of movement but it is limited to the instinctual nature of each creature. Thus the monkey swings through the trees with four arms and a tail, while the cheetah hunts the buck at incredible speed and the elephant wallows in the muddy river. Each animal species is finely adapted to their environment with perfect ease and skill, but cannot choose to do anything outside of their particular nature. Only the human being has free will. It is for this reason that Steiner has said that the human being is the only true 'limb animal.'

Thus we may see, as illustrated in the diagram, that just as a baby is born head first and slowly develops the trunk and limbs, so in the evolution of creation the 'head' creatures in the sea came first, then the 'trunk' creatures like the fishes,

insects and reptiles and finally the 'limb' animals in the mammals. The different creatures are specifically linked to the form of the human being.¹³

On the opposite side of the diagram we may see a different division of the animal kingdom whereby the creatures are linked to the human being through the functions of the three areas of the body.



¹³ Dr Herman Poppelbaum, *A New Zoology*, 1923, Chapter 5.

The Threefold Division of the Mammals

The huge variety of animal species that fall under the mammals or warm-blooded creatures cannot be over-simplified and merely classified as being connected to the limbs of the human being. Wolfgang Schad has researched a division that relates to the threefold systems of the human body¹⁴: the nerve-sense system of the head, the breathing and blood-circulation of the trunk and the limb and metabolic (or digestion) systems. However he also shows that animals that belong to a certain system may have tendencies towards another system as well.

The Nerve-Sense System of the Head

The nerve-sense system gives us the ability to become aware of everything that happens in and around us. It consists of three parts: the brain, the spinal column with its vast network of nerves, and our sense organs (ears, eyes, tongue, nose and skin). With every moment, we experience sensations of touch, smell, taste, sound and sight like a huge feast, too much for us to take in consciously. Every impression travels via the nerves to the brain and receives an instantaneous¹⁵ response: if we touch something hot, for example, we will cry out and take our hand away immediately! Some people are slow to react while others are alert and notice things straight away, showing that their senses are wide awake! It is this awakensness, this awareness that is the gift of the nerve-sense system.

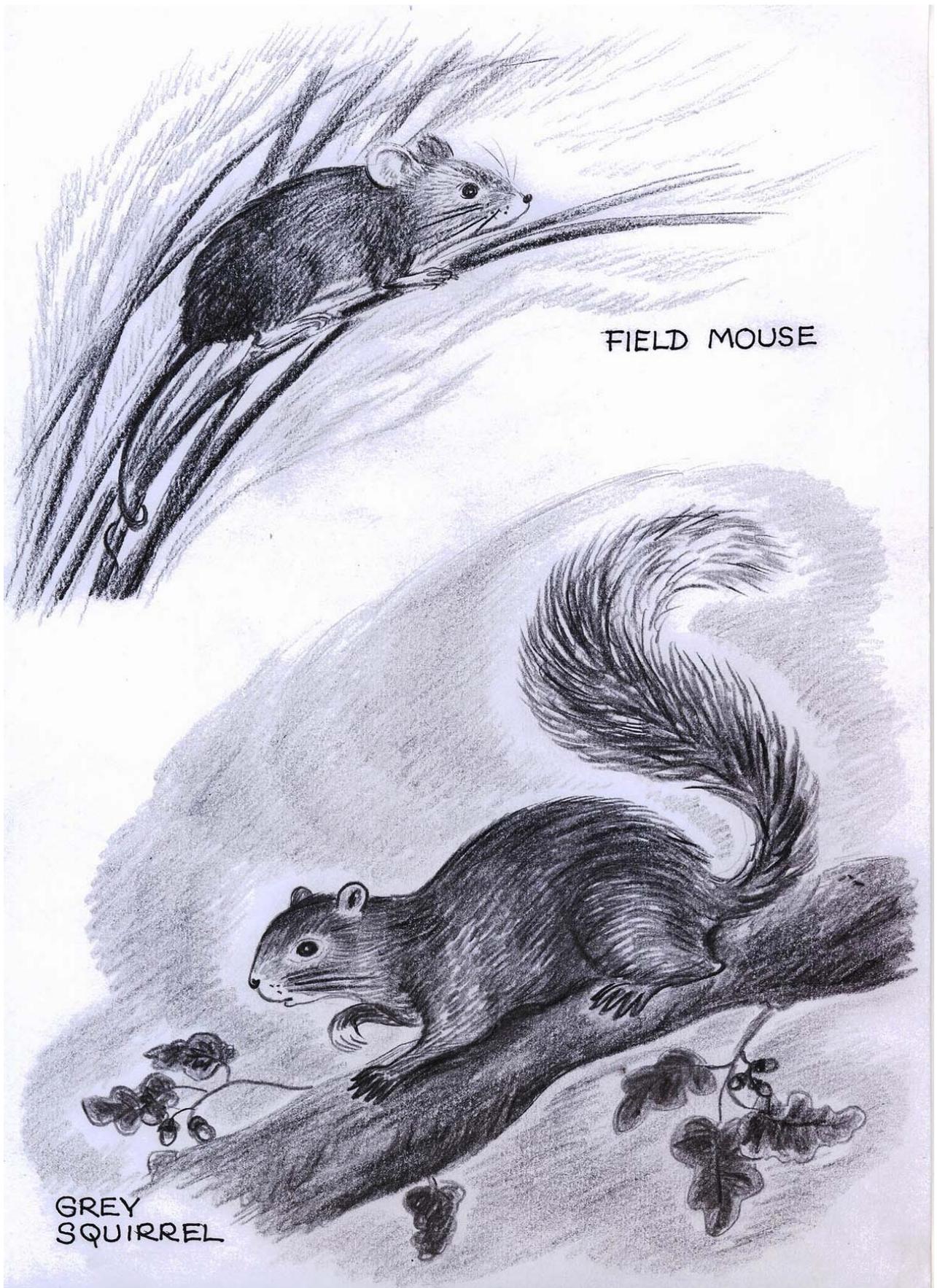
The Rodents

All animals have strong senses to protect them against predators. However, certain creatures are particularly alert and quite nervy, feeling quite vulnerable in their environment. The rodents fall into this category: mice, rats, shrews, squirrels, rabbits and hares. Although they have long trunks and we might think that they are 'trunk' animals, they have bright eyes, long whiskers, sometimes large ears and they move very quickly, scampering or scurrying away at the slightest sound. Very often they also have long expressive tails that are used for communication in many ways, as well as 'limbs' for balance when leaping, etc.

The rodents have large front teeth called incisors, and they are nibblers, grazing on grass, grains and nuts, except for the beaver which gnaws the bark of young trees. They nibble or gnaw quickly and nervously, always on the watch-out for the slightest danger. These characteristics show that the nerve-sense system is dominant in their way of coping with the environment. So, we can regard them as 'nerve-sense' animals.

¹⁴ Wolfgang Shad, *Man and Mammals*, 1977, The Waldorf Press, New York

¹⁵ Instantaneous = immediate, without consciousness



The importance when presenting an animal is to characterise the qualities of the animal and to try to create an image e.g. the cheeky, show-off quality of the squirrel as opposed to the shy, timid mouse. The beaver, on the other hand is a solid fellow; he is a builder, down to earth, not upset by danger but quick to organise an escape to safety. So we may see that even among the rodents there are different temperaments. If the teacher can recognise and act out the temperament of each animal, he or she will characterise it well!

The Birds

Another group that belongs to the nerve-sense system is that of the birds.

Birds live in the realm of the air and every part of their bodies is adapted for this need. Their senses of sight and hearing are very keen; they see far and wide, especially the birds of prey. Their bodies are stream-lined for flight from the fine, sharpened beak, the slim trunk and delicate legs with clawed feet that are all contracted for minimum weight.

The wings and feathers are large in comparison to the body, extended out to assist the bird in flying through the air.

There are many different types of birds and the teacher will entertain the children by presenting different temperaments and characters from among the birds e.g. the proud peacock, the peaceful swan, the moody marabou stork, the sociable starlings, the chatty parrot, or the aggressive bird of prey. (The birds as a species could be studied in a main lesson or become a source for projects in Grade 5 or 6)

The Systems of Breathing and Blood Circulation of the Trunk

In our trunk are hidden the wonderful systems that keep us alive: our lungs that breathe in and out from the day we are born to the day we die, and the heart that makes our blood flow to every part of the body.

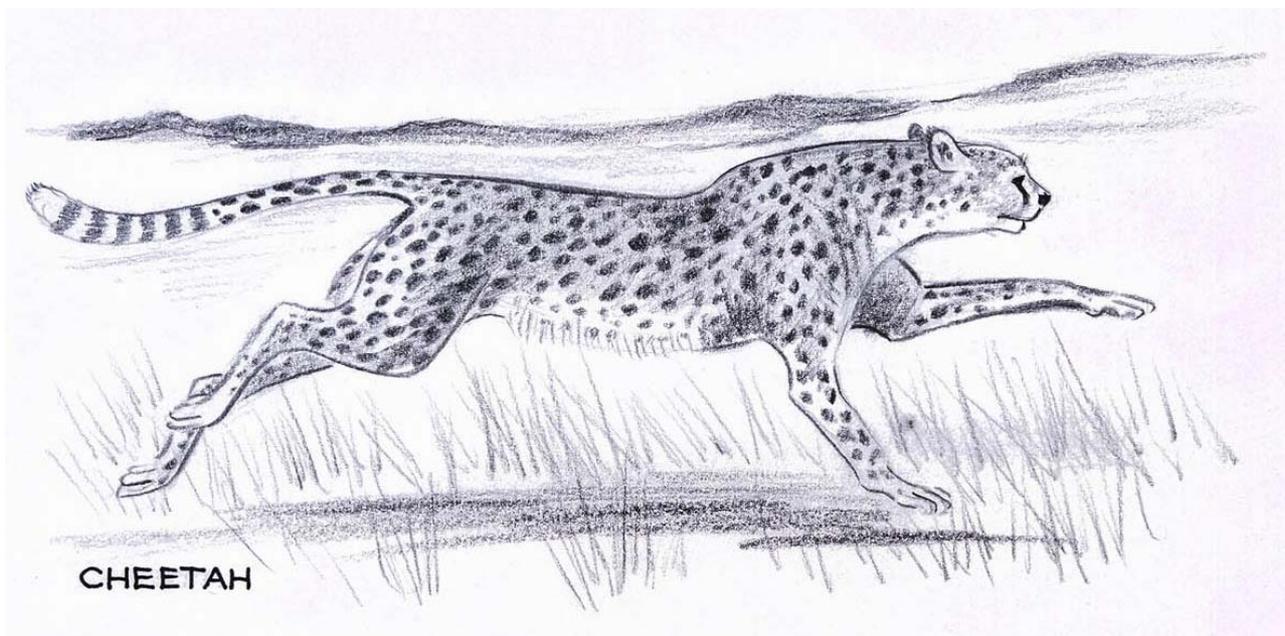
Sometimes we breathe more quickly, when we are excited or we have been running fast and sometimes we breathe slowly, when we are resting. If we get a fright we may hold our breath for a short while and then we have to start breathing again. We can feel the rise and fall of our chest as we breathe, in a beautiful rhythm that goes on-and-on.

Inside the rib-cage, close to the lungs lies the heart. The heart sends blood through the arteries and veins that are like rivers flowing to every cell in the body. The heart never stops beating its regular pulse until the day we die. We can feel it in our chests, in the veins in our neck, or on the 'pulse' of our wrists. Yet they never get tired unless we are ill with a disease of the heart or lungs. The heart and the lungs are like loyal servants that never stop working to keep us alive and healthy.

The Carnivores

The mammals that are connected to the breathing and blood circulation systems are the cat and dog families, known also as the carnivores or meat-eating animals. These are the hunters of the animals that walk the earth. The teeth that dominate the carnivores are the canines which are the sharp teeth like fangs for tearing the flesh of the animal's prey. Most carnivores have all their teeth sharpened like the canines.

The cats range from the domestic cat to the great wild cats like the lion, tiger, leopard, cheetah, puma, jaguar and smaller wild cats. The long-legged cheetah, fastest of all mammals, shows a similarity to the 'limb' creatures in its ability to run. Among the dogs we have the devoted dog that guards our homes and the foxes, jackals, wolves, hyenas and other wild dogs found in different countries.



All the wild varieties of these hunt for their food; only the domestic pets are fed by their owners. To assist them in their hunting, they have developed large strong hearts and lungs and incredible stamina for the chase so they have more air in their bodies to keep running or chasing for a long time.

We can see that these belong to the breathing/circulation animals in that the cat family can purr, while lions roar. In the dog family they can growl and pant – something that happens in the lungs.

Other carnivores are found among the seals and sharks of the sea and these creatures have bodies that are all 'trunk' in form, without proper limbs, just having flippers.

The cat and dog families, both wild and tame, all demonstrate strong changes of feeling in their faces and in their body language, including their tails. Whether they are being protective, playful or aggressive; whether they are being lazy, affectionate, in pain or completely contented, human beings can recognise their different moods and respond to them. We see our cat hiss with anger at an intruder or purr with the pleasure of being stroked. This is one of the reasons why humans keep cats and dogs as pets; we can relate to the feelings of the animal and they do the same for us!

The Limb and Metabolic Systems of the Body

In our stomach lies a secret and amazing system, our organs of digestion. We are aware of the saliva in our mouths when we smell and taste delicious “mouth watering” food. Then the food disappears down into our stomach and the different organs get to work very quietly to process all the food we eat. The digestive juices change our food into human substances and life energy that are carried through our blood stream to all parts of our body. Anything the body does not need is discarded through our intestines. We do not notice what is happening unless we have eaten something that disagrees with us. Only when we feel pain in our stomachs do we realise that something is wrong! Mostly we experience a good feeling of health and energy.

The Ungulates

The animal that is connected to the metabolic or digestive system is the cow with its wonderful capacity to make milk not only for its calf but for many other people as well. The animals that belong to the metabolic and limb systems of the human body are the ungulates or animals with hooves. They are divided into the odd and even-toed animals: the horse having one toe or hoof on each foot (odd-toed) and the cows, sheep, goats, pigs and buck having two toes on each foot (even-toed). Rhinos have three toes.

The horse’s limbs are developed for running at speed but the head of the horse shows its nervous sensitivity and keen senses of sight and hearing because it needs to be aware of where it is going. Thus we see in the horse the combination of limb and nerve-sense systems.

The cows and other even-toed animals are ruminants¹⁶, with several chambers for digestion in their stomachs, showing their connection to the metabolic or digestive system. The cow has a wonderful capacity to make milk not only for its calf but for many other people as well. Several other ruminants are also tamed and kept in herds for their milk e.g. the camel, reindeer, goat, etc. All these animals except the camel have horns of different shapes on their heads. These horns are not mere

¹⁶ Animals that chew the cud and have several digestion chambers in their stomachs

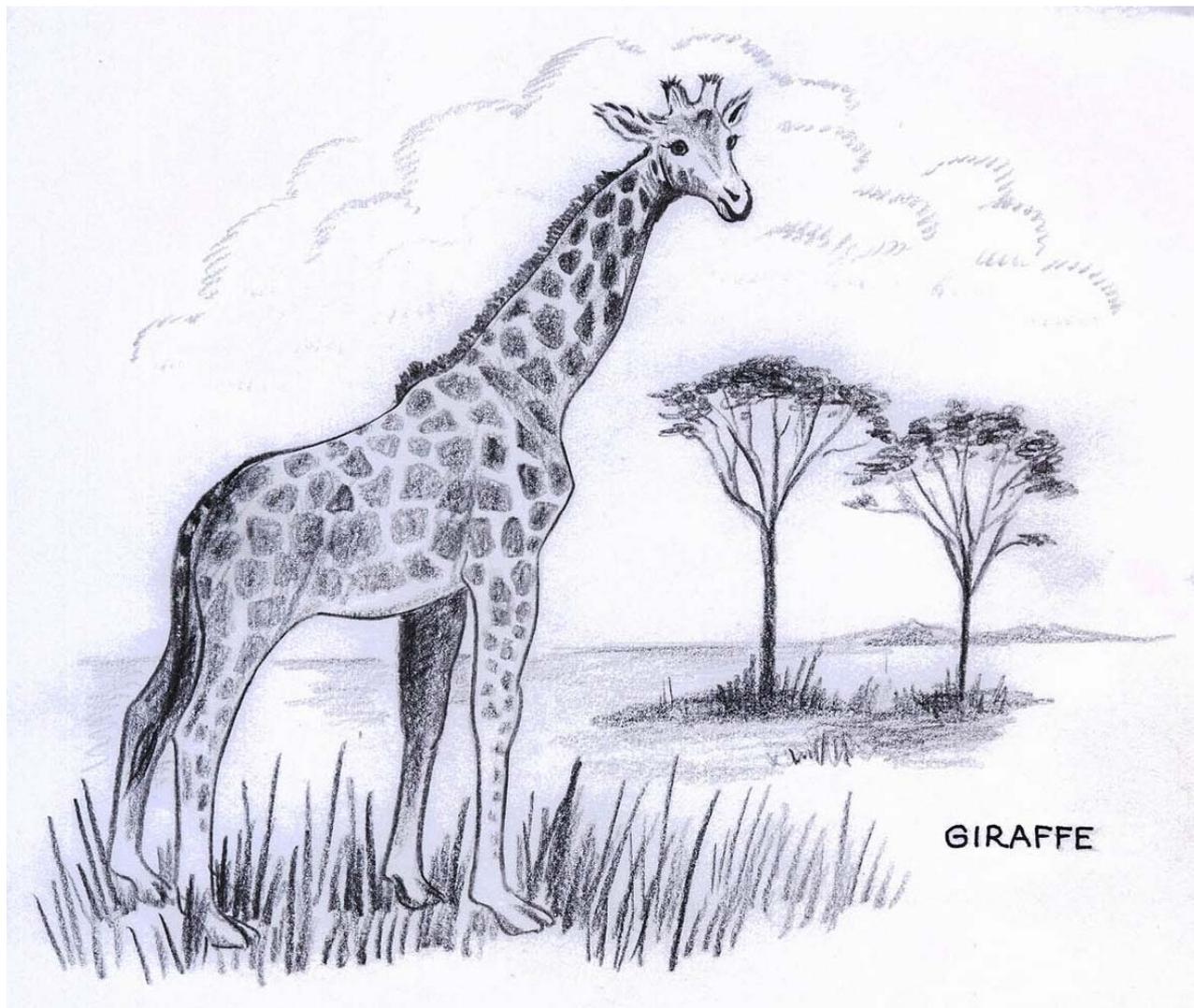
decoration, but are used as tools or limbs whether it is for defence, digging up roots, or for challenging other males at mating time. Even the elephant, which is also a ruminant, has highly developed 'limbs' on its head, i.e. its long trunk and ivory tusks.

These animals are herbivores or grass and leaf eaters and the teeth that are developed for chewing the grass (and the cud) are the molars. One can see a gap between the incisors and the molars where the canines are either underdeveloped or missing. An absence of certain teeth in the upper jaw is compensated by the presence of horns in these animals e.g. buck and other ruminants that grasp the grass with their tongues and jerk it off instead of biting and then settle down to chew it up with their molars.

Only the pig is not a ruminant and it has canines. The wild boar or warthog has tusks that are canines which curve out of the mouth. The pig is in fact omnivorous¹⁷ and even eats small creatures like worms and mice although it feeds mostly on vegetable matter. So the pig is an ungulate with a link to the carnivores.

The giraffe is a true ruminant, but its upright stance and long neck that lifts its head high into the air show that its senses are strongly developed. It has huge eyes, large ears, sensitive lips and a long tongue for grasping leaves, all of which indicate that it is very alert to its surroundings. It even has three to five horny growths on its head with tufts like antennae open to the surroundings. Thus the nerve-sense system is very important for the giraffe as well as the metabolic system.

¹⁷ Omnivorous = eats every kind of food



The buffalo of Africa and the water buffalo of Asia have heavy horns that weigh down their heads. Even their eye-sight is poor, showing a reducing of the senses and the emphasis on the metabolic system. The horns of the cow curve inward and the hooves do as well. This shows that the energy of the cow is directed inward to emphasise the dreamy quality of milk-making that totally occupies the cow. The cow is completely embedded in the metabolic system.

The African gazelle on the other hand has highly developed senses with keen eye-sight, large ears and upright head on a slender neck. This shows an emphasis on the nerve-sense system as well as the metabolic system of the ruminant. Added to this, the lively tail communicates information to the rest of the herd and the rear view shows a patterned 'mask' similar to the markings on the head!

When a teacher wishes to decide where to place an animal, they need to first look at the form. If the animal clearly fits into a certain category e.g. the fish is a trunk creature, this is easy. However, when one comes to the mammals, one may

realise that there is a combination of the form and the function OR of more than one function in the behaviour and adaptation of the animal.

Much of this section is to assist teachers in Grades 5 and 6 with the presenting of a greater variety of animals, although there may be some creatures that the teacher chooses for Grade 4.

It is up to the teacher to observe the characteristics of each animal and sense what other system is functioning strongly in that particular creature. With every animal it is important for the teacher to use these characteristics to create an image that will help the children to understand and picture the animal in its relationship to the human being.

The Instincts: Natural Behaviour Patterns

Our instincts are the way we respond naturally to everything in life. We all have instincts but we are not very aware of them because we use them quite automatically and without thinking about them. We can learn to understand what our instincts are by playing a game to see how people react to each other in different situations.

Let the children sit or stand in pairs. One child will go first and must choose one of two actions. They can act in a friendly way, putting an arm around the other child or they must pretend to hit them. On no account must they really hit or hurt them. The second child does not know which action will be done to them. How do they react?

Then it is the second child's turn to choose one of the two actions. In which way did the other child react?

The two children sit and discuss briefly how they felt and why they reacted in that way. Did they think before acting? Did they enjoy a hug from their friend or did they step back and avoid it? Did they dodge the blow when the other child tried to hit them or did they want to defend themselves and fight back? The teacher asks for feedback from all the children.

When we respond naturally without thinking, we call this instinctive behaviour or following our instincts. Both humans and animals have instincts that cause them to respond naturally in certain ways depending on the situation. Let us look at different instincts in humans and animals.

The most basic instincts are found in every living creature from insects, reptiles, mammals, birds and humans. These are the instincts used for survival or keeping alive. They can be seen in three ways.

1. When an animal is hungry or thirsty, they naturally hunt for food and drink. When they have eaten enough they stop. If they are sick they stop eating. Human beings also eat and drink when they need to but they can also choose when and what they want to eat. They do not always know what is good for them or when to stop eating or drinking. Some human beings are able to "listen to their bodies" and sense what is best for them to do.
2. When attacked by a predator or enemy, animals react in different ways. Some will run away like the buck or hide like the mouse, but the lion, wolf or bear will attack and fight to the death. Human beings instinctively tend to fight, hide or run away, depending on their body type and temperament.

3. Every creature has a natural instinct to procreate¹⁸ their species¹⁹. Human beings generally get married and have children but people can choose not to do this.
4. Home Making. Many creatures build nests or dig holes and create homes for themselves. They may make new ones every spring or keep a favourite cave as a den for life. Here they live with their mate. They will lay eggs or have babies. These animals care for their children, teaching them to fly, hunt, play and to use the instincts of the group or pack in which they live.

Human beings also like to have a place of their own, whether it is a private 'den' or a family home. People in a village tend to have homes that look alike while rich and urban homes are often very different from each other. The important thing is that the instinct to have one's own home is satisfied.

5. Protecting the home and family. Warm-blooded animals and humans will usually defend and protect their home and family even when their instinct is to run away. Cold-blooded creatures do not.

So we see that human beings have the same instincts as animals except that they also have the power of thought and therefore can choose to do a certain action or not. The animal has no choice.

The lion will always respond instinctively like a lion; he will hunt when hungry and relax in the shade when he is full. He never eats more than he needs. The lion is not cruel, killing unnecessarily. He will not attack a buck if he has already eaten. But he will not behave like a hyena or a zebra or any other animal. He follows the instincts of all lions all his life.

If we look at the body of the lion we will see that every part of the lion supports his instincts for hunting. Look at his huge muscles and paws, his sharp claws, all to help him to grab his prey and hold on tightly. His mighty jaws and fierce teeth are to bite the buck and kill it immediately! And his enormous roar like a battle cry strikes fear into the hearts of humans and animals alike.

So the body shapes of all animals are determined or created out of the natural instincts of that animal. Their instincts are what they automatically want to do. It is their will that is activated by their feeling instincts.

Let us look at a strange creature from North America, the beaver, and see how wonderfully his body is adapted to his instincts. The beaver is a medium-sized but solid animal about 1 metre long including his tail. He has a face like a large squirrel and fine brown fur all over his body to keep him warm. He lives in the

¹⁸ They mate and lay eggs or have babies so that their particular species does not die out.

¹⁹ A particular kind of animal, insect, etc

woods close to streams and builds himself a house or lodge for his family in the middle of the stream.

He has large front teeth that enable him to gnaw down trees. [He is a rodent.] These teeth or incisors are very long and grow very quickly so the beaver has to keep on gnawing the trees so that the teeth do not get too long. He drags the logs across to the stream and builds a dam. When he has a whole pile of logs across the river, he takes clay and sticks and makes his little family house in the middle of the wall of logs. The beaver builds the entrance to the home under the water so that predators cannot get in. You see, beaver is a gentle fellow and only eats leaves, bark and shoots but other animals like foxes eat beavers.

Luckily the beaver can swim very well because he has webbed back paws like little paddles. His front paws are also very clever: he has five fingers and the little finger looks like a thumb to grasp on to sticks. The second finger is split into two and looks like tweezers and these help the beaver to clean his fur if it gets muddy. The mother beaver will use these fingers to clean the babies' fur too.



The Beaver has a large flat tail that is like a paddle in the water. The mother will let her babies ride on her tail. But this tail is very useful in many ways. The beaver puts the tail in the sun when he wants to get warm and he puts it into the water when he wants to cool down. So the tail helps to regulate or balance his

temperature. Beavers also slap their tails on the water if they see an enemy and the whole family waddles to the water as quickly as possible. Beavers are slow moving on land but in water they swim swiftly to the safety of their home.

So here too we see that every part of the beaver's body reflects his instincts as a builder.

As humans, our bodies also express our instincts. When we see a slender graceful girl, we may say that she has the body of a dancer, while a strong active young man may have the body of a sportsman. We may look at our hands and one person may have practical or artistic hands and another person may have sensitive hands of a doctor or musician. We can learn to do many things; we can dance, play music and learn as many skills as we wish to. So, because we can choose what we want to do, we are not specialized or limited by our instincts as animals are.

Because humans have similar instincts to animals, they can easily develop certain tendencies that make them a bit like one animal or another.

So we can look at ourselves and observe our instinctive animal tendencies. A 'fun' way of doing this is to play a game. Going round the class, each child must think about the child on their left and imagine what animal or creature would express the character or behaviour of that child. However it is not good to say that someone looks like a pig because they are fat. The children must avoid saying nasty things about each other. Also they cannot say that someone is like an ox because they are strong. The choice of creature must include inner qualities e.g. Anna is like a gentle mother hen because she is always looking after everyone around her and she shares everything with them. She is also tidy and careful with her books, always picking up pieces of paper to keep her desk neat just like a mother hen pecks and cleans up around her nest.

After a short time of thinking about their choice of animal, the children go round the class saying what animal they have chosen and giving the reasons why. It is amazing how perceptive some children are. But it is good if we can recognise other animal qualities or instincts in ourselves, both positive and negative. Then we can become aware of the need to balance ourselves by dissolving the animal and encouraging the human qualities: the feelings of love and trust, honesty and kindness in ourselves.

The Eagle, the Lion and the Cow

The Eagle

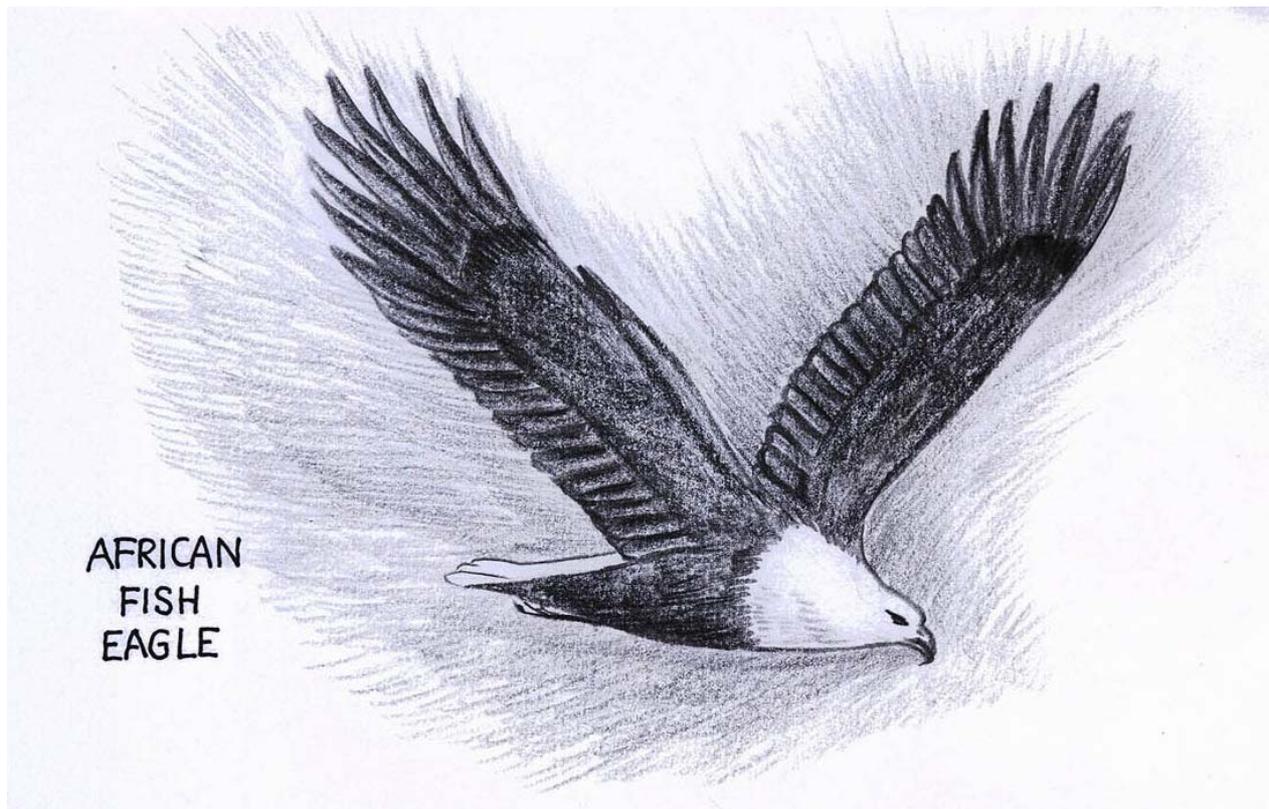
In many ancient cultures, the eagle was considered sacred because it flew higher and therefore closer to the sun than any of the other birds. Wherever there are eagles, one can see them wheeling in huge circles high up in the sky. The eagle is known as the King of the Birds or the bird of the Great Spirit.

Like the sun, the eagle gazes down to earth from a great height. Just like the sun's rays that reach out in every direction, the eagle's sharp eyes can see every movement on the earth below. We may also imagine that the light from the sun's rays stream through the huge wings, creating the beautiful coloured feathers of the eagle and making them gleam as if touched with gold. In this way we may understand that the life forces of the sun stream out and create the colours and patterns of the plumage [feathers] of all the birds, not only the glorious eagle!

What part of the human being can be compared with the eagle that flies in freedom through the air? Our minds with thoughts and imagination can fly anywhere in the world like the birds. So the same sun forces that create the feathers of the eagle, also created our brain to carry or hold our thoughts. On the physical level these forces create beautiful feathers for birds, while on a higher level they form our thoughts. And if we enter imaginatively into the plumage of different birds, we can feel when we are thinking like an eagle or a peacock or a little sparrow!²⁰

Long ago in North America, a Native American Chief would wear a headdress of eagle feathers to show that his thinking was wise and far-sighted like that of the eagle, for him to guide his tribe of people.

²⁰ Rudolf Steiner, *Man as Symphony of the Creative Word*, 1923, Lecture 1.



If we look at an eagle, we can see that every part of it is stream-lined for flight. Like an arrow, the important bit is the head with its sharp point. In the same way, the eagle's body, wings and legs are just supporting the eagle to follow its head. The breathing of the eagle has become light as thought, through the power of the outstretched wings and the air sacs in the body. The body and skeleton are long and stream-lined, while the digestion is short and quick to lighten the body. The thin, hard legs and long claws are easily tucked back out of sight. Thus the whole body merely follows the head with its sharp eyes and beak that flies like an arrow through the air. The eagle is in fact "all head".

The Lion

If we observe the lion, we may see an animal that is perfectly balanced in the trunk area and particularly in the breathing and blood circulation systems. How can we understand this idea?

If we have a cat as a pet, provided the cat is loved and well-looked after, we can see something of the qualities of the lion. There is no animal that can relax as easily as a cat. Whether it is curled up on a bed or stretched out in the sun, it is completely relaxed and contented. It looks as if it has nothing better to do than to

snooze in a comfortable spot! And how it enjoys the life of a cat! It enjoys its food, lazing around, playing with its tail, catching butterflies or mice. It is the perfect life!

Now a lion is similar because it too really enjoys its life. It lives with its family, called a 'pride' and it loves to laze in the grass after it has eaten or play with the cubs and it too is very relaxed much of the time.



But the lion also loves to hunt. When he is hungry, he gets together with the lionesses and, working together like a team, they very quietly creep downwind to a herd of buck or zebra. At the last minute, when they are really close to the chosen buck they want to catch, and it is beginning to get nervous, the lions spread out and suddenly give chase. The lion gives a loud roar to make the animals run, and then the chase begins. The lions close in on the weakest buck. Through instinct, they will always pick the weakest one, as it is the easiest to catch. The herd needs to keep its strongest ones for the safety and strength of the herd. As the lion gets close to the buck, he leaps onto the back of its prey and grabs the buck with his mighty paws and long teeth or fangs. The lionesses around close in, in case the buck gets away. One way or another, they are determined to bring down the buck. And very quickly, that is the end of the poor buck. It is dragged off to a place where the whole family of lions can eat their fill: first the male lions, then the lionesses and finally the cubs. The lion tears off huge chunks and swallows them almost without chewing.

When the lion has eaten well, he walks to a shady tree and lies down in the grass. He will sleep and laze around for a long time while he digests his food and he will not need to eat for a few days. He feels fully satisfied, with a pleasant sensation of having had a good, nourishing meal! But his satisfaction is not just because he has eaten well; “when the lion’s food has passed over into the blood which regulates the heart-beat and when the heart-beat has come into reciprocal action with the breathing”²¹ he feels great enjoyment and “inner satisfaction” in the balance between the two.

When we watch a lion walking, he is as relaxed as a cat, because he is the greatest of the wild cats, the King of the Jungle. He moves as if he owns the whole area; one can feel the power in his walk and also in his huge roar. His yellow eyes do not stare out like those of the eagle; he is not aiming to get somewhere. He is completely contented and satisfied with life whether he is hunting or relaxing, extending his power or completely letting go. He moves between both extremes with great ease and thus comes to a balance between them. There is a wonderful flow and grace about the movements of a lion that gives one the sense that he has complete mastery over his body. One can also see this flow of power in the shape of his mouth, the broad chest, the rippling muscles and the proud swish of his tail. His breathing and his blood circulation are in perfect balance which gives him this feeling of harmony with his body.

The Cow

The cow on the other hand is an animal that is completely involved with its bodily system of digestion. It is not going anywhere like the eagle, nor is it finding a balance between extremes like the lion. It is simply surrendering to the process of digestion in its body.

If we look at a cow, we will see her standing or lying in the grassy field. Her head is stretched out, her large beautiful eyes are dreamy and she is chewing. Nothing else is happening, just this rhythmical chewing where the lower jaw sticks out and actively chews away at the cud²² of grass she is eating. Nothing seems to disturb her; if she hears a noise, she turns her head in a slow and heavy way as if there is nothing as important as this wonderful process of digestion. She seems to live in a misty dream world of milk and the atmosphere and nourishment of the milk seems to flow around her and surround her with peace and contentment.

The overwhelming²³ heaviness of the digestion weighs down the blood circulation of the cow’s body; even the shape of the body is large and heavy. We can also see the weight of the digestion in the shape of the heavy jaw of the cow, and in the way she walks slowly like a noble lady on her thin short legs.

²¹ Rudolf Steiner, *Man as Symphony of the Creative Word*, 1923, Ch 1.

²² Cud = a lump of food that is swallowed and then brought back into the mouth to be chewed again

²³ Overwhelming = feels too much to carry

But something quite magical is happening because the cud of grass is slowly being processed through the four stomachs of the cow until it is transformed into milk. This rich creamy milk is so abundant²⁴ that it can feed not only the cow's calf but many other people as well. This is why the cow is honoured as sacred or holy in India, and in Africa cattle are regarded as a source of wealth. She is seen as sacrificing herself to provide nourishment for others and "this is beautiful, this is grand, this is something of immense spirituality."²⁵



If we look at the freedom of the eagle in flight; this is transformed or metamorphosed into the head and thoughts of the human being. If we look at the harmony and balance of the breathing and blood systems of the lion; this is transformed into the chest and feelings of the human being. If we look at the digestive system of the cow we may realise that it has been transformed into the metabolic system and will of the human being. Thus all three creatures, though specialised in themselves, are combined in the human being who carries the whole of nature within him or herself, working together in harmony. Thus we may say that the human being is a "Little World" within the "Great World".

What can be learned from these creatures?

But the human being can learn more from these three creatures that symbolise the perfect harmony of the systems of the body.

²⁴ Abundant = there is so much of it.

²⁵ Rudolf Steiner, *Man as Symphony of the Creative Word*, 1923, Ch 1.

What can be learned from the eagle?

If the human being imitates the power of the eagle - to dominate the air and to capture and kill his prey - through the powerful faculty of thinking, then he or she becomes less human and more like an animal, but in a cruel way. If on the other hand, the human being imitates the power of the eagle to observe all things with breadth of vision that is the basis of wisdom, then he or she will rise to the spiritual heights of being.

What can be learned from the lion?

If the human being exerts his power over others like the lion, he or she loses the humanity of a compassionate heart. But if the human being allows him or herself to be contented in the moment and find the balance between exertion²⁶ and relaxation, between the opposites of the feeling life, then he or she develops the inner quality of courage. This courage enables one to accept people as they are and life as it comes.

What can be learned from the cow?

If the human being sinks into apathy and lack of exertion or lives entirely in the physical sensations of life, then he or she has become lost in the “dream world” of the cow. But if the human being allows him or herself to surrender to the process of metamorphosis or transformation that life offers one at every moment, then he or she will develop humility and the “milk of human kindness”, that are truly spiritual qualities.

The Sphinx

In Egypt there stands a huge stone statue, known as the Sphinx. It was built or carved many centuries ago; some say 5000 years while others say that it is 12000 years old. It is a strange beast because it is part animal, part human. It has the head of a human being, the wings of an eagle, chest and front paws of a lion and the hind-quarters of a bull. Its large eyes gaze to the east and people say that the Sphinx holds a secret.

As we have been studying the eagle, the lion and the cow [or bull], we know that these three creatures are found in the human being. So the statue of the Sphinx was built to tell human beings that they have the eagle, the lion and the cow inside them. However the secret of the Sphinx is that only when the head of the human being consciously harmonises the three creatures within, will the human being attain to his or her spirituality.

²⁶ Exertion = making a big effort

Section 2

Developing the Main Lessons

Child Development

Class 4 marks the onset of a new approach to teaching, based on the present phase of development of the children. Gone is the dreamy fairy tale world of early childhood and learning through spontaneous imitation. The children's taller, sturdier bodies and stronger muscles indicate that they are more grounded, more connected to the earth. They are heavier, noisier and more assertive.

However the greatest change is an inner one: the transformation of their feeling life. What began in the previous year as a feeling of loss and separation from the rest of the world is steadily developing into strength of ego with qualities of self-reliance and independence. Their earlier vulnerability²⁷ is replaced by a sense of solidarity in the friendship of their peers and they often seem to stand together like a pack of dogs or wolves.

They begin to see the world with new eyes; critically expressing likes and dislikes; noticing, commenting and arguing their points of observation. They enjoy wit and humour²⁸, riddles and jokes, hidden meanings and discovering answers for themselves. In the early grades the children learnt much through nature walks and environment stories. In Grade 3 they experienced nature through the process of cultivating their own gardens. Now they no longer need to learn mainly through 'doing', we can see that the children in Grade 4 are at the appropriate age for learning about Nature Study in a more conscious manner.

The children are now more challenging of the teacher's authority. The trust and acceptance of the teacher, the loving bond of the early years needs to be proved in a new way. The teacher needs to demonstrate a sound knowledge of the subject matter using a creative approach that encourages questioning and dialogue²⁹. A more formal approach is therefore necessary in the relationship between teacher and class. The teacher must also have confidence in him or herself to be able to meet this new phase in the children.

²⁷ Vulnerability = able to be hurt or be very sensitive

²⁸ Wit and humour = funny things said that will make them laugh

²⁹ Dialogue = a conversation between two people, in this case the class discussing with the teacher

In the main lesson the teacher needs to involve the children more actively in the learning process. The children want to experience the world and come to understand it. Instead of introducing everything they learn through the fairy tale story, a new way of learning is now needed. The children still need stories, but these will be told at story time only.

In Grade 1 or 2, the way of bringing scientific facts imaginatively can be shown in the example: “Father Sun and Sister Rain held hands to make a rainbow”. This method needs to be replaced with a clear picture using details of real life. For example, “as rays of sunlight shine through drops of rain in the misty air, they create a bow of rainbow colours. This is just like the rainbows shining in dewdrops that you can see in the early morning or in puddles in the road after rain.” This will enable the children to enter imaginatively into everything they need to learn, experiencing and understanding it through clear visualization. (The exact scientific explanation is not needed here as it will be dealt with in the Physics main lesson block in Grade 6.)

Another aspect of the nature stories of Grades 1 & 2 has to be left behind in this new phase. In these early environment stories, different animals, plants or elements³⁰ could talk to each other almost like humans do. The young child feels that all nature communicates naturally and Father Sun will have something to say to Brother Wind and the nimble little mouse can chat to the slow snail.

In Grade 4 the children must know that animals behave instinctively, relating only to their kind while other creatures will either attack or flee. Their manner of communication is the growl of defence, the purr of pleasure, the playful nudge³¹ and the ritual dance.

However, in teaching we must be careful not to become intellectual, or we shall feed stones to our children instead of bread. Facts without understanding are meaningless and soon become boring. The teacher must provide inspiration and nourishment³² by connecting all ideas and information to imagery³³ and feeling. These images create living pictures in the minds of the children that can grow as understanding gradually becomes knowledge.

“These ideas of things must be rooted in feeling...when the instincts are still alive to this feeling of intimacy with the animals.”³⁴ The children in Grade 4 are still deeply connected to animals as they were in earlier years. The teacher’s use of word pictures containing lively details will help the children to create a bridge or “a fine balance between the instincts and the power of discernment.”^{35 36} For now the

³⁰ Elements = things of earth, water, air and fire

³¹ Nudge = lovingly bumping into each other

³² Nourishment = feeding the children in their souls

³³ Imagery = creating pictures in the mind (same as ‘images’)

³⁴ Rudolf Steiner, *Practical Course for Teachers*, 1919, Lecture 10.

³⁵ Ditto

children begin to understand the differences between animals more consciously, not only through their feelings.

In this way imagination supports the development of the intellect which at this stage is emerging like a delicate bud on a plant. Only after age twelve will the children begin to think more intellectually and be able to start making judgements³⁷ about the things they learn. In high school (secondary school) the children will discover their true thinking abilities. But before the age of 12, the teacher will care for the awakening of these abilities by approaching all learning through the doorway of the imagination.

In Grade 4, we begin with the study of the human being in relation to the animal kingdom, because children naturally love animals and are keenly interested in them. The sphere of the plants is more distant from them and we can see that plants are connected to the earth in which they grow. Therefore the children study the plant kingdom in Grade 5. The mineral kingdom is even further removed from them and is studied in Grade 6.

Grade 4: Human and Animal Main Lesson Block

The Human and Animal Study main lesson aims to build up the picture that every creature in nature can be found in some aspect of the human being. Similarly the human being is like a compendium³⁸ or collection containing qualities of every creature in some transformed way.

There are usually two main lesson blocks allocated for Grade 4. The length of each main lesson block is usually 3 - 4 weeks. A suggested order of teaching could be as follows:

1st Main Lesson

1st week:

The One Life

The Human Being and the Universe

The Senses: Windows to the world (2-3 days)

Animal Expertise

³⁶ Discernment = ability to observe differences

³⁷ Judgements = making decisions about whether things are correct

³⁸ Compendium = a collection of detailed information

2nd-4th week

The Instincts: Natural Behaviour Patterns

The Threefold Human Being & the Animal World

The octopus, fish and the antelope or monkey (head, trunk and limb animals)

The teacher does not need to rush through this material. Themes may need 2-3 days and should be explored with discussions, games and drawings. If there is room for an extra animal at the end of the main lesson, the teacher can choose a creature that is linked to the form of the human being.

2nd Main Lesson1st week:

Revise Threefold Human Being and the Animal World

Threefold Division of the Mammals (This does not have to include all the details given in the chapter, just enough to introduce the animals to be studied,)

The Eagle

2nd- 3rd Week:

Lion and Cow, a comparison between the three creatures studied in this main lesson

Story of the Sphinx

Animal of teacher's choice, related to the functions of the human being

The teacher may decide to limit this main lesson to 3 weeks or continue studying other animals for the 4th week.

These animals can be ones found locally or ones with which the children are familiar. It is still important to compare the animal with the human being. The comparison between the human being and a specific animal encourages the children to build up a compassionate connection and love for these creatures rather than viewing them as a strange species merely fighting for survival in the dangerous world of nature.

An Example of Teaching an Animal: The Octopus

Preparation

The teacher needs to have a clear understanding of the connection between the octopus and the head of the human being.

The teacher needs to research the octopus thoroughly to know and understand the scientific background of what he or she is going to present to the children.

- Detailed physical description (size, shape, colour, etc.)
- Where it lives
- How it moves around and how it gets its food
- How it protects itself in the environment : dangers
- Any other interesting information

Then the teacher must feel and imagine the quality or character of the octopus so as to sense how and why it acts and reacts to the environment in the way it does.

- Vulnerable and very sensitive: soft body and no protecting shell
- Senses: large fearful eyes, constantly on the alert for danger
- Instincts: hiding, change of colour, etc.

All the information collected needs to be changed into vivid descriptions using imagery and examples to explain how an octopus lives, uses his body and how it is specialised for protecting itself.

Anecdotes and stories of real happenings between humans and the octopus could also be told. Imaginative stories based on real life experience are also suitable.

A poem about the octopus could be learnt.

The teacher needs to draw a good, clear picture of the octopus on the blackboard before the lesson begins. The picture should include the environment in which the octopus lives.

Presentation: The Octopus

We have been talking about the idea that all the different creatures in the world are connected in some way to the head, trunk and limbs of the human being. In this way we can see that the human being contains every creature inside him- or herself, while each creature tends to be specialised and connected particularly to one part of the human being.

Today we are going to look at one of the strangest looking creatures in the sea: the octopus. [octo = eight, pus = foot] How big is an octopus? Most of them are about a metre across. There are some really tiny ones as small as your finger and some large ones with tentacles about two to three metres long.



The octopus has a large rounded head with bulging eyes at one end. And attached to the head are eight long arms or tentacles with round suckers underneath. But it behaves like a human head in certain ways. And how does the head behave? The head watches the world around it and takes in the various impressions through the senses. It is as if our senses reach out and pull everything into the head, in the same way that the tentacles of the octopus are reaching out to sense its environment and to take in its food. We breathe in the air; absorb food and drink through the mouth; hear sounds through the ears and feel sensations through the skin. And we look at everything with our eyes; we even say that everything we see, we 'drink' in. So the head seems to suck everything in through the senses, just like a baby sucks everything it can get hold of.³⁹

The octopus is always looking out for food. Then their tentacles can reach out and catch little fishes, crabs and other small shellfish for the octopus to eat. The tentacles pop the food into the octopus's mouth which is hidden underneath the round head and mantle of soft skin. This mouth has a sharp beak to remove the

³⁹ Charles Kovacs, *The Human Being and the Animal World*, 2008, p 24.

shells. Then it sucks the food in and digests it. So the long tentacles of the octopus are just like the senses in our head that reach out to the world.

The octopus has large eyes that are highly developed. These eyes are without lids so that it is always on the alert and they give the octopus quite a human look. And why is the poor octopus always awake, always fearfully looking out for danger? Because it has such a soft and tender flesh and it has no shell to protect it from all the larger fish in the sea that would love to eat the rather tasty octopus. Even fishermen like to catch the octopus as it is regarded as quite a delicacy in restaurants.

Luckily the octopus is not quite as helpless as one might think and in fact it is able to play a few very clever tricks on its enemies. It can disappear when it wants to. Someone who can make things disappear in front of one's eyes is called a magician. One could say that the octopus is like a magician too. How does it play these disappearing tricks?

The skin of the octopus is generally a dull brownish colour, depending on where it is lying. It often hides under a shallow rock and it places a lot of pebbles, shells, seaweed and other rubbish in front of the entrance to its rocky shelter to give the impression that no-one is there. If the rock is also a brownish colour, this suits the octopus very well. If the sand on which it is lying is yellowish in colour then the octopus changes the colour of its skin to match the colour of the sand, just like people who like to wear clothes to match their hair or eyes. But if there is some green or purple seaweed and the octopus lies underneath this, it will change its skin colour to green or purple to match the seaweed and so magically seem to disappear. Then if a large fish comes past it may not notice the octopus lying there looking just like a piece of rock or seaweed. The octopus even changes colour at other times e.g. it may turn pale with fright if it sees an enemy or blush with excitement if it sees a delicious shellfish to eat!

However, the octopus has more magic tricks to play. If a moray eel, (its deadliest enemy), swims past, looking for a tasty meal, the octopus will get a terrible fright and suddenly squirt out a cloud of dark brown 'ink' into the water. The moray eel will no longer be able to see or smell the octopus that has now disappeared completely. The moray eel will be so confused that the octopus will have time to get away and find a new hiding place.

And how does the octopus get away? It has two ways of moving. The usual way is to slowly pull itself across the ocean floor using its tentacles in a flowing or sliding movement. Of course it can also climb rocks or go between them and hide away. The other way of moving is called jet-propulsion. The octopus sucks a lot of water into its mouth and then blows it out again and this shoots the octopus in a sudden jerk through the water with its tentacles streaming out behind it. It is rather like a balloon that has been filled with air and when suddenly released it shoots

through the air. This is not as fast as one might expect but it does help the octopus to get further away from its enemy.

The tentacles can do many things, rather like fingers on one's hands. Not only can they pick up food, they can hold on very tightly too. Even small ones are amazingly strong and this is why people are frightened of the octopus in case it grabs on to them and will not let go! Actually the poor octopus is usually far too frightened of everyone else and so very eager to get away.

The octopus has another magic trick that is really quite amazing. Sometimes people catch an octopus and want to keep it alive in a tank like a pet or to take it to an aquarium. The tank is made of glass and has a glass lid that often has a tiny gap to allow air into the tank. The octopus has such soft flesh that it will squeeze itself through the smallest cracks in order to get away and many an octopus has been known to escape from its tank, even quite big ones.

A story comes from England where a person was observing octopuses for scientific research. Nearby was another tank with some small fish in it and he noticed that one octopus would creep out of its tank at night, which is when an octopus likes to hunt for food, and it would go and help itself to a little fish from the tank next door and return.⁴⁰ Don't you think that is a clever trick? An octopus is really quite intelligent.

THE OCTOPUS⁴¹

Shy, sly, hideaway guy,
 Tucked out of sight till it's safe to spy
 Long-suckered limbs emerge one by one,
 Then out pops a head from under the stone;
 Large wary eyes gaze all about
 For fear of shark with snapping snout;
 Jet-propelled, he shoots along
 Through the weaving waters' whispering song;
 Swiftly hiding in seaweeds green,
 Changing his colour – not to be seen
 A shadowy shape gives him a fright;
 His squirt of ink makes clouds of night.
 He disappears – not saying "goodbye,"
 Shy, sly, hideaway guy

⁴⁰ Reader's Digest, 1964, *Marvels and Mysteries of our Animal World*, p 177.

⁴¹ © Catherine van Alphen 2011

The Three-Day Rhythm of the Main Lesson

Day 1

A picture of the octopus is drawn on the board before the main lesson begins.

Rhythmic section

Recall from the previous day

Presentation to introduce the octopus

Allow time for class discussion

Draw heading and octopus picture into the Main Lesson Book.

Complete any notes from the previous lesson.

Introduce poem if time.

Day 2

Rhythmic section, including learning of the poem and movement to allow children to experience the two ways in which an octopus moves

The children do a recall of yesterday's presentation on the octopus, teacher asking questions where needed, initiating group discussion, etc.

Ask children if they have heard any stories about an octopus.

Tell children a couple of anecdotes about an octopus.

Model an octopus in clay (unless there is a special clay lesson.)

Begin writing of notes on the octopus or write Octopus poem in the Main Lesson book.

Day 3

Rhythmic section: including learning of the poem and movement to allow children to experience the two ways in which an octopus moves.

The children do a recall of yesterday's discussions, the teacher asking further, deeper questions.

Introduce new animal e.g. the fish. (New drawing should already be on the board.)

Read yesterday's notes written in the main lesson book

Complete writing notes about the octopus

Draw heading and picture of the new animal, e.g. the fish, into main lesson book.

Grade 5 Main Lesson Block

The study of animals and their adaptation to the environment is the theme for an animal main lesson block in Grade 5. This offers a wide choice and teachers are free to explore it in different ways. Generally animals in the local or national environment are chosen unless these have been covered in Grade 4. There are so many wild and domestic animals to be observed and studied and the teacher may choose from among the birds, mammals or fish. It would be more meaningful to study insects after the Plant Study main lesson block.

Repetition of Relationship between Humans and Animals

It is very important that the teacher repeats and deepens some of the discussions from the year before concerning the relationship between the human being and the animal world. The essential thing is to keep these ideas alive through questions and discussions so that children remain open to new ways of looking at nature's connection to the human being. There are several themes for discussion further on in this manual.

It is good to study different animals to demonstrate particular characteristics that can then be discussed. Each creature would be studied separately at first and then contrasted in discussion.

An Example of the Contrast between a Horse and a Tortoise

The Horse

“Oh, to ride the flying steed
That challenges the wind for speed!”

One moment the fiery chestnut⁴² horse is grazing peacefully in the green meadow, his red-gold coat shining in the sun, the curves of his muscles rippling while his long mane and tail swish away the flies. Suddenly he hears a noise! Up goes his head, large brown eyes alert, ears pricked and listening! He calls out a deep-throated neigh, tosses his head and leaps into a gallop. Down the field he charges, his long legs thrusting him over the grass, his hooves thundering on the ground. What joy! What excitement to race at such a speed!

Everything about the horse when it moves, gives a feeling of energy and power! There is such a flow about its body from the noble shape of the head, the curved arch of the long neck to the rounded body, shoulders and rump⁴³ and the strong muscular legs. No wonder the horse has been the pride of kings in ages past!

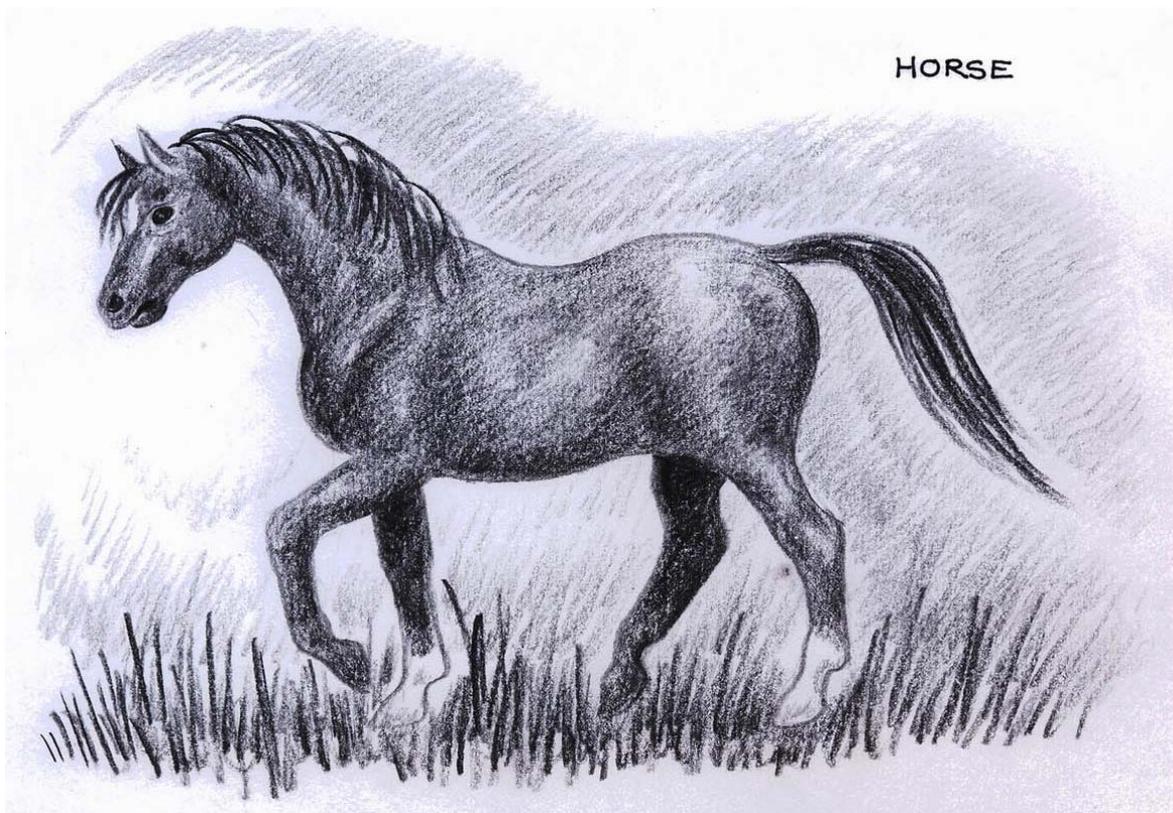
⁴² A reddish-gold coloured horse known for its spirited temperament

⁴³ The backside or hind-quarters

Every part of the horse is adapted for jumping with grace and racing at speed. The horse has wide nostrils that can breathe in plenty of air. The deep chest houses the large lungs that give it stamina⁴⁴, the strong muscles on the shoulders and rump are like coiled springs of energy for jumping and running. The hard rounded hooves help him to shoot forward in leaps and bounds. The beautiful mane and tail are like banners, balancing the flow of movement as he gallops along.

The horse is very rhythmical; you can hear the clip-clop rhythm of his hooves as he walks: 1 2 3 4. When he trots the rhythm changes to 1 2, 1 2 as two feet strike the ground at the same time. Then he moves into a comfortable rolling gait⁴⁵: the canter where the rhythm is 1 2 3, 1 2 3. The gallop is just a faster version of the canter.

We can compare the legs of a horse with the legs of a human being. Look at the back leg of the horse: here is the hock and long bones going to the fetlock that goes down to the hoof. You have a knee and your leg goes down to the heel and your foot with toes. But the horse's hock is really the same as our heel and the fetlock and hoof are the same as our toes. Where is our knee in the horse? Much higher up in the muscles of the rump! So you can see that the horse is really running on its toes!



⁴⁴ The ability to run for a long time without tiring

⁴⁵ Gait = the way a horse (or person) walks or runs

Although the horse has been tamed for human beings to ride, it is the proud spirit of the wild horse that holds the imagination. It is not for nothing that we speak of “horse-power.” The ancient Greeks spoke about the Sun God Helios whose golden chariot was drawn by four horses across the sky each day. This picture shows us the power and beauty of the horse, the freedom expressed in its body.

Whenever one sees beautiful horses racing across the field, one is reminded that everyone wants to be free to go wherever they want to go. Everyone wants to have the grace, power and freedom of the horse in motion. Human beings can move freely and can dance, run or do gymnastics. But their real freedom is the freedom to choose what they want in life. [The teacher would continue the study of the horse and how it lives, etc.]

The Tortoise

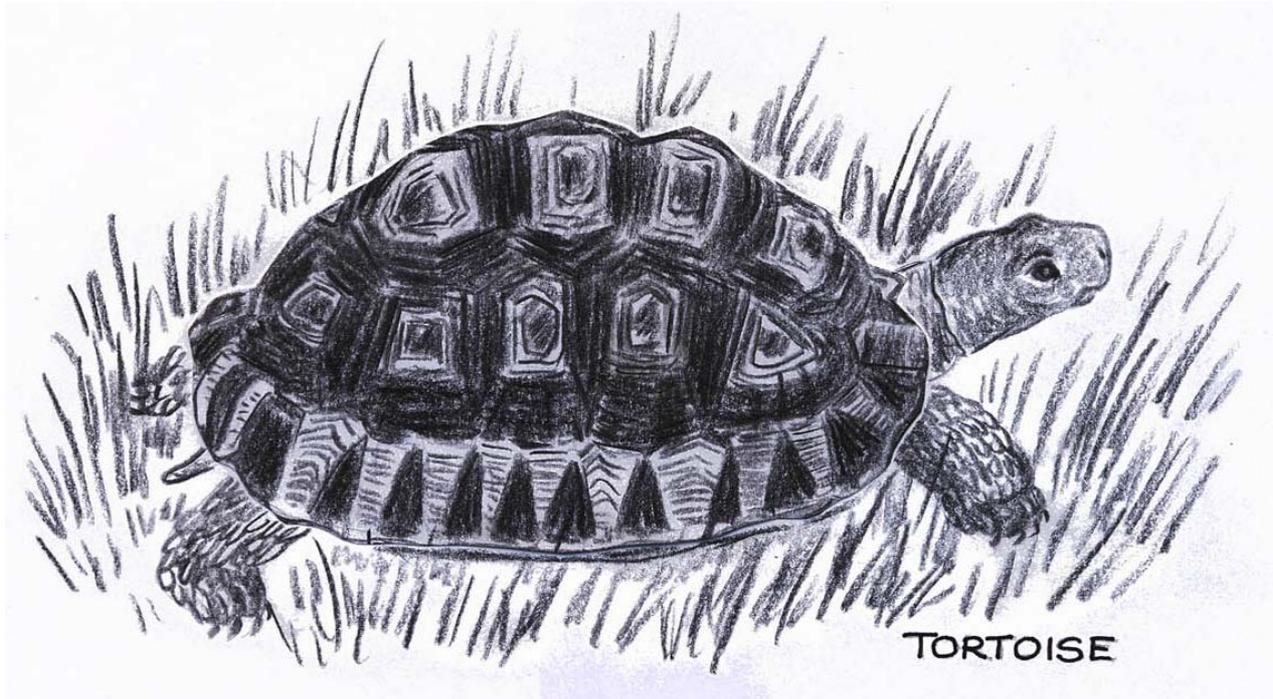
He struggles slowly up the track,
A heavy house upon his back;
Straining his scaly legs and claws,
A scrawny neck and beaklike jaws;
His pitiful eyes just seem to say
Leave me alone, I'll hide away.

A rough brown shell, looking much like a rock lies in the grass. One might easily pass by without noticing it. But it has interesting markings on it. It is a tortoise shell; the tortoise has hidden away inside its shell, hoping that nobody will notice it. The shell has plates all stuck together and it is rounded like a hard helmet. The shell has a pattern of brown and blackish lines on it. The tortoise shell is oval in shape and is a bit smaller than a bicycle helmet. But some tortoises are much smaller, especially when they are young, while there are some really huge and very old tortoises about the size of a medium-sized basket.

Suddenly the tortoise begins to poke its nose shyly out of the shell to see if it is safe to move away. It has dry scaly skin, greenish-brown in colour and perhaps some blackish marks as well. It has two small beady eyes on the sides of its nose and beak-like mouth. This is because the tortoise likes to bite off and eat grass and soft leaves. It sticks its head out further and you can see its scrawny neck like the neck of an old, old man. Then out come two scaly front paws with claws on the ends. These front paws curve round towards the back, almost as if it is swimming, but the claws help it to drag its shell-house from place to place and even to climb over stones. At the back the other scaly paws come out too. These paws are much straighter and are used to lift the shell and push the tortoise forward. And then a little tail sticks out as well.

Slowly the tortoise lifts the shell off the ground and begins to move. What hard work! He is so heavy and so close to the ground that it is a big effort to move over

everything that is in the way. But tortoise is very determined! And once the tortoise gets going it can pick up quite a speed. It is not quite as slow as people have said! Before you know it the tortoise has crossed a piece of ground and found a new hiding place or a new juicy succulent plant⁴⁶ that it wants to eat. But after all that work, the tortoise needs a rest. He hears a sound and suddenly he retreats into his shell and hides away, looking like a rock once more.



The tortoise is a reptile and is therefore very ancient. Originally tortoises came from the sea where they were turtles and swam freely in the ocean. But coming on land their shells became hard and dry, while their body inside the shell became thin and small to allow room for the legs and head to fit inside as well.

So the tortoise is a trunk animal, but the body has become so squashed inside the hard dry shell that it has little energy for moving. It has all become a huge effort for the tortoise to move. It is like an old man with a curved, crooked back, struggling along the road. And like an old person, the tortoise is so nervous and frightened that something will attack it that if you pick up a smallish one the first thing that it does is to wee all over you!

In what way is the tortoise linked to the human being? [Ask the children] In olden times, soldiers going into battle wore armour on their arms, chests and backs to protect them from being stabbed or killed by a sword or spear. The tortoise has a shell to protect himself from being eaten by birds and other creatures. Even today

⁴⁶ Succulent plants = have fat juicy stems and leaves containing water or sap

people who ride bicycles and motorbikes have to wear helmets and miners have hard hats for protection.

But we also know people who like to be alone, who tend to retreat into their room and read a book rather than join a party. That is a bit like a tortoise when it does not want to be disturbed. [The teacher can continue the study of the tortoise.]

Class Discussions

The teacher can also create a class discussion by asking questions about the horse and the tortoise.

It is important that the teacher prepare the questions beforehand but also be open for other questions and issues to arise.

Begin by getting children to work in pairs:

- Make a list of at least ten differences between the horse and the tortoise.
- Choose which the main one is. [E.g. the horse has energy, tortoise has very little energy.]
- What feelings are connected to the horse and the tortoise? [enthusiasm, fear, shyness]
- Does the feeling have any connection to the shape of the horse or tortoise? Give reasons for your answer.
- How is the human being like the horse or the tortoise?
- What can we learn from the horse and the tortoise?
- What inventions have been created by the human being observing characteristics of each animal?
- Any further questions?

Discussions that contrast one creature with another can be used with all the animals studied in this main lesson block.

Creative Class Discussions

Class discussions improve as the teacher learns to handle questions and answers creatively. There should not be fixed answers to every question; in other words there may not necessarily be a right or wrong answer. There may be more than one answer to a question. Sometimes a child comes up with a totally different viewpoint and this should not be squashed. It should be discussed fairly and openly with the teacher inviting the children to find the answer for themselves.

It is important at this age that the children discover that they do not have to depend on the teacher for all the answers. For that to happen, the teacher needs to learn to step back and encourage the children to participate in the discussion. A teacher

might deliberately not answer a question and tell the children to go home and find the answer and bring it back to the class on the next day.

Some teachers handle this kind of discussion naturally while others have to learn the art of creating discussions!

Further questions:

- If you could be any animal which one would you choose? Give reasons for your choice.
- Choose which animal is most suited to the person sitting next to you. Say why.
- Discuss the different instincts of animals and humans and give examples of situations to show how instincts may be observed.
- Which is the most amazing animal/creature in your opinion? Say why.
- Which is the funniest animal? Say why.

Notice that the above questions are NOT intellectual, but combine feelings and observations in order to discover more about the animals and their relationship to humans.

Grade 6: A Variety of Main Lesson Choices

In Grade 6 it is suggested that the Animal Study main lesson block be linked to the study of climatic zones in Geography. This works well for Waldorf Schools in Africa, but it might be just as suited to any area in the world.

A possible choice of animals in climatic zones might be as follows:

The gorilla in the Equatorial Forests

The giraffe on the Savanna Grasslands

The camel in the Desert

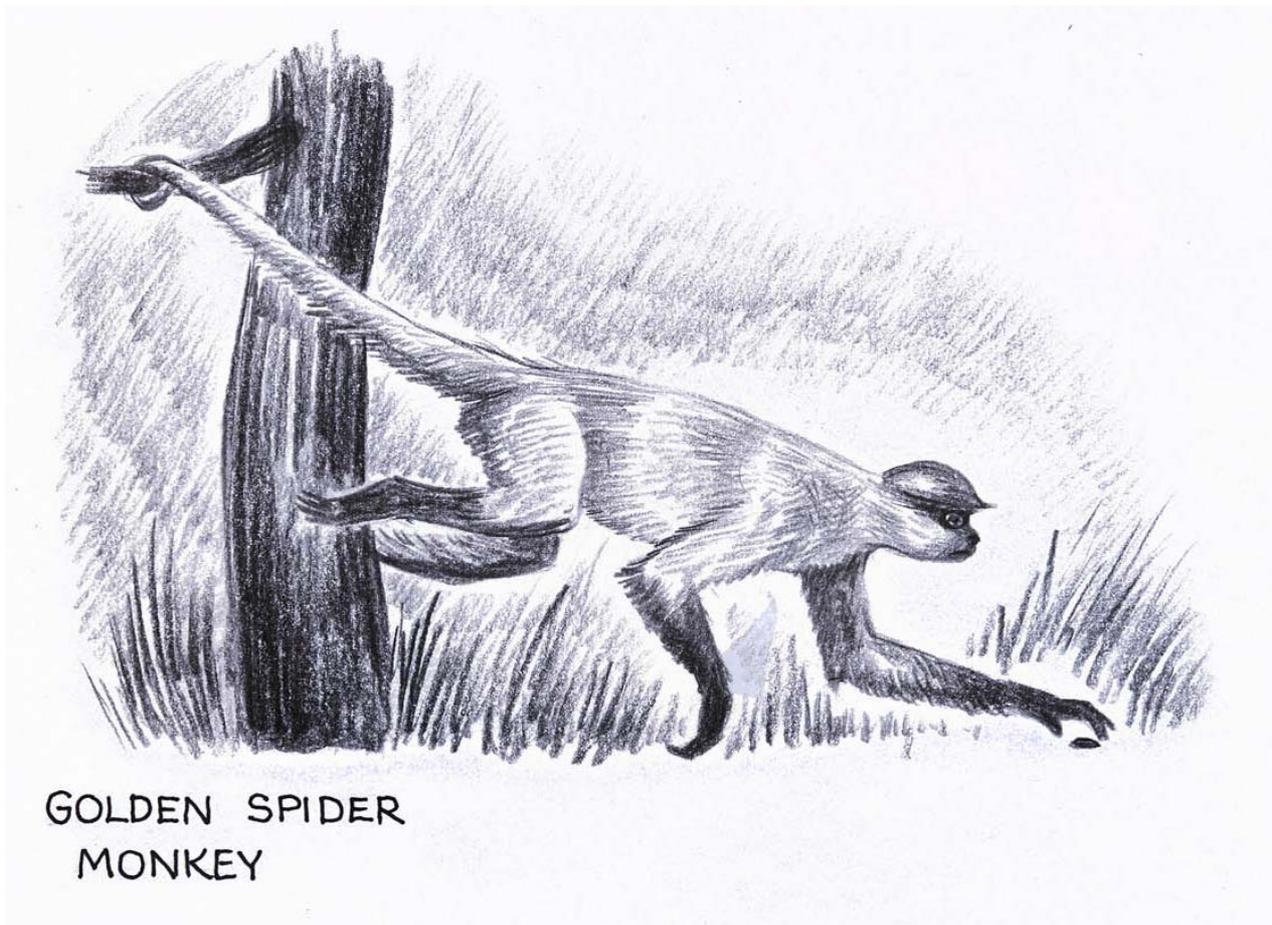
The ibex [goat] in the Mediterranean climate

The bison in the Prairies

The wolf in the Cool Forests

The reindeer in the Tundra region

The polar bear or penguin in the Arctic or Antarctic

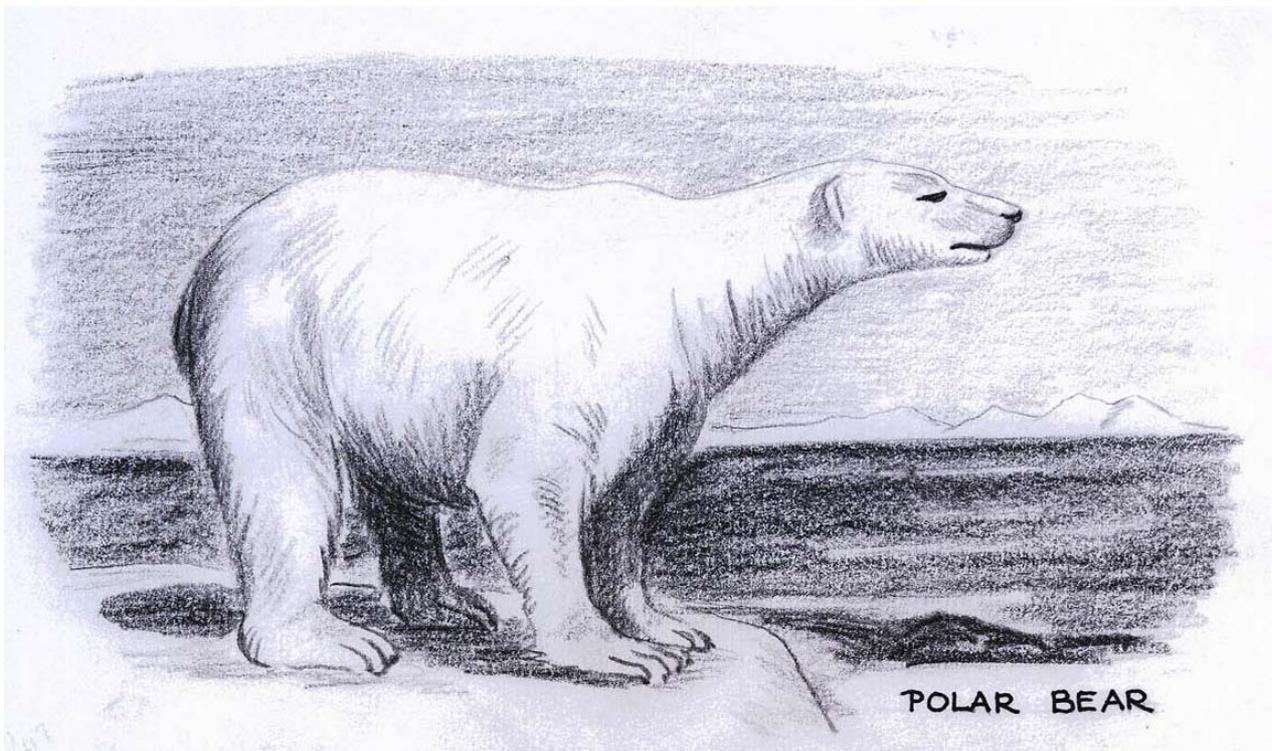
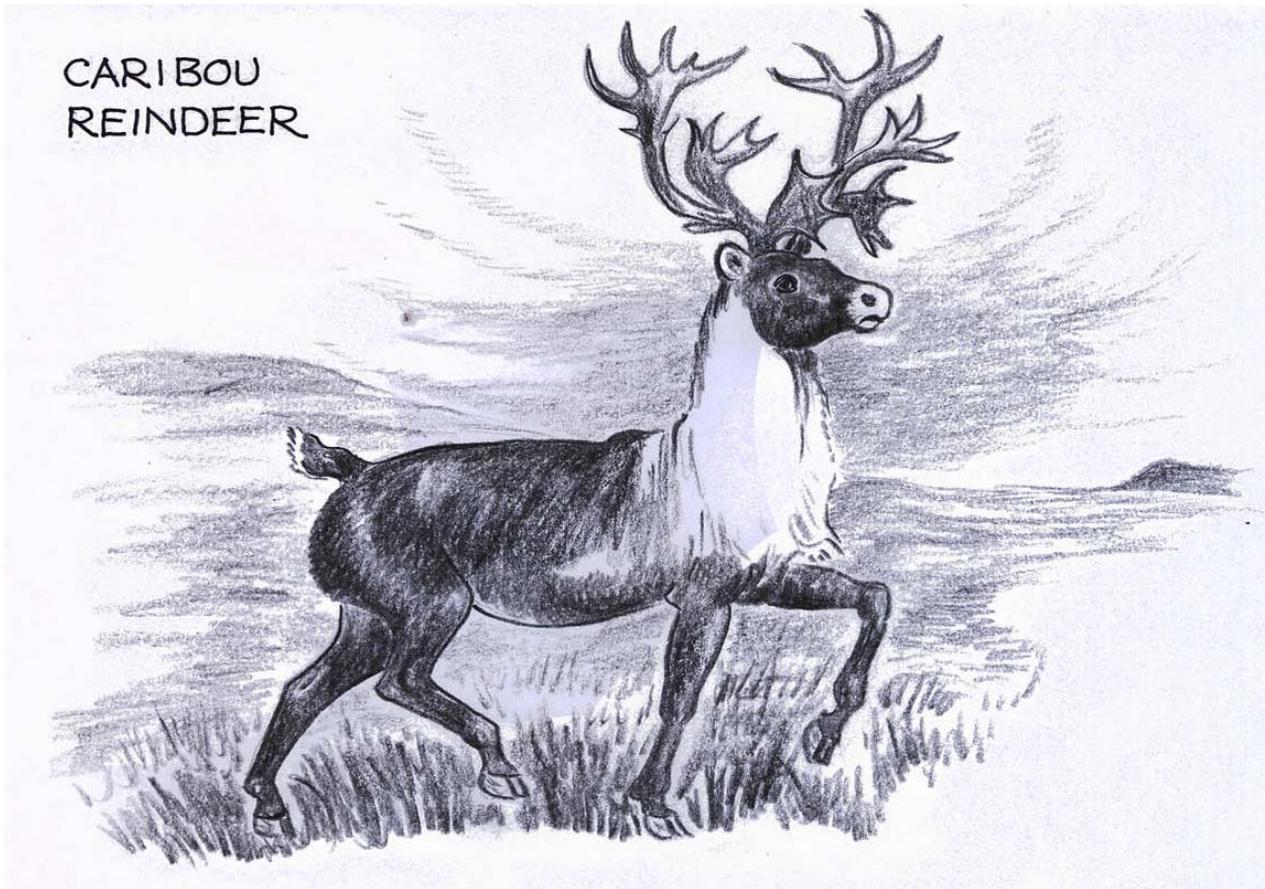


AFRICAN
CAMEL



TIGER

CARIBOU
REINDEER



POLAR BEAR

There are many more choices available in each area. The teacher might adapt this scheme to whatever country the class is studying geographically.

Rudolf Steiner also suggested the study of the three southern continents of Australia, Africa and South America in Grade 6 Geography. These offer some interesting choices for animal study.

In Australia: the kangaroo, dingo and platypus, etc

In Africa: the elephant, warthog and wildebeest, etc [animals from Madagascar, too]

In South America: the llama, sloth, parrot and python, etc

The teacher is free to explore other possibilities for an animal study main lesson block, for example:

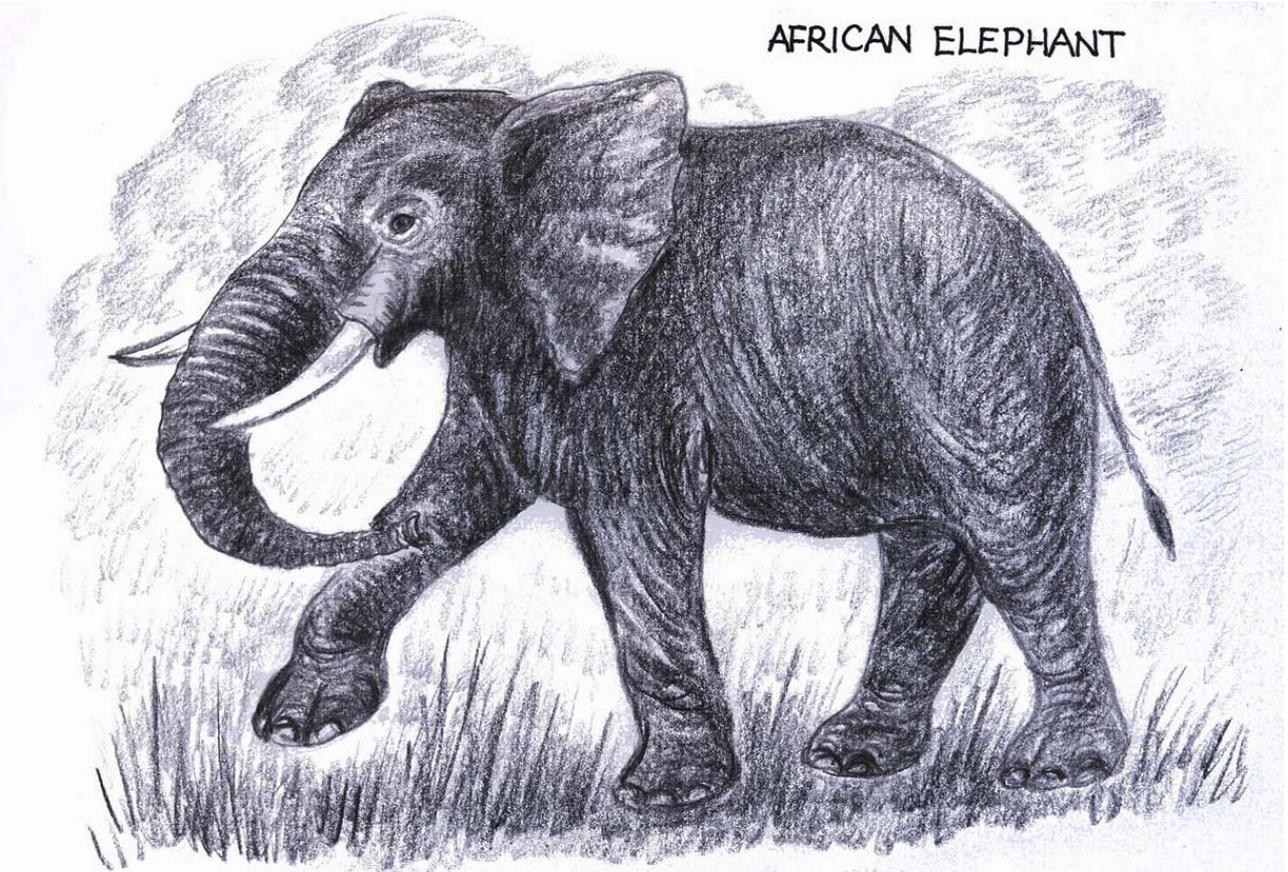
Bees, Ants and Termites

Birds and Fishes

Insects that Pollinate Plants

Sea Creatures along the Shore, etc

AFRICAN ELEPHANT



GREAT GREY KANGAROO

Projects: Grades 5 & 6

In Grade 5 and 6, the children are often asked to work on a project about a specific animal taken from the theme of the main lesson. This project can be very successful if handled carefully by the teacher BUT it is open to much abuse if the teacher does not give clear guidelines and expectations.

Researching Material from Internet and Books

The availability of the Internet through the use of computers for gaining information on any animal a child chooses is a wonderful gift. However, it has resulted in the child downloading large amounts of factual information far beyond the scope of the project and presenting it as his or her own work. A further problem occurs when the parents of the child search for and download the information for the child, thus leaving the child out of the experience of discovering about the animal.

Even if a child discovers a book in the library about a certain animal, they are tempted to rewrite information straight out of the book and hand it in as their own work. This is known as plagiarism or STEALING and the child needs to be trained in how to use research material correctly. If the teacher leaves the children too free, allowing them to “do their own thing”, he or she is inviting trouble as bad habits set in that are difficult to change at a later date.

How can the teacher make sure that the project is the work of the child concerned?

Group or Class Project

The best way to train the class is to begin with a group or class project on a particular animal. Each section of the project is done in class with everyone doing the same thing and working together in small groups. In this way children get trained how to make notes from a book, how to make notes from a group discussion and how to build up an essay in their own words from the information given.

The teacher must give clear guidelines for the project:

- A clear hand drawn picture of the animal in its environment
- A detailed description of the animal in the child’s own words
- A discussion showing the connection to the human being
- A description of the animal’s adaptation to the environment
- Instinctive behaviour
- Food, habitat, etc
- Interesting information about the animal

Work on Sections at School

The teacher may ask children to bring factual information to school and then show the children how to make notes to simplify the information.

The teacher will need to give them a few exercises on writing information in their own words. The best method is to get the children to discuss a small piece of information in pairs and to tell each other what is being said. This gives them practice in using their own words. Then they can work together to write the whole passage in their own words, either together or individually. The teacher will need to correct the children's work to check that it is accurate, in the right order and is written in a good style.

Every section of this first group project needs to be well structured so that the children are trained in how to develop a project of their own, using their own words instead of merely copying information from the Internet or library books. When the teacher is sure that the children are doing the project in the right way, he or she can allow them to work on their own animal project.

Presenting the Project

It is a good idea to get children to present their project at a certain time so that they learn to express their ideas orally as well as in written form. On this day all the projects are handed in or displayed so that everyone can see the other children's work. Then one by one they come up and speak about their project and show everyone their pictures.

Class Discussions in Grade 6 and 7

Children entering Grade 6 go through a deep internal change: reasoning begins to develop. This is because the individuality now connects itself right into the skeleton of the body, bringing about a more detailed, material thinking.

The teacher needs to provide time for more intensive class discussions, so the young people can exercise their reasoning powers. If the teacher does this successfully, they will feel immensely satisfied whenever they are challenged to think for themselves. Here follow some suggestions of the kind of questions one could ask Grade 6 and 7 children.

Why are Human Beings not specialised like animals?

In what ways are animals specialized to live in their environment? Birds have wings to fly; the elephant has a trunk for sucking up water and squirting itself cool; the cat can see at night, etc. [Children can give their own examples.]

Can the dog climb trees like a monkey? Can the fish gallop over the field like a horse? Why not? How does the animal know what to do? [It uses its instincts.]

What about human beings? What can our legs do? What can our hands do? [Children can discuss/ give examples].

How do our feet automatically know what to do? How do our hands know what to do? They do some things, like walking and scratching or touching things instinctively. [Let children give examples.]

Are our feet specialised like the animals? Our feet are not specialised like the animals and so we find that humans need to wear different kinds of shoes to help them do different things. Some examples are ballet shoes for dancing and running shoes for sport. Can you think of other kinds of shoes that we use?

Our hands are also not specialized for one particular use which is what we find in the animal kingdom. Because our hands are not specialised, we are also not limited to only doing one kind of thing. Hence we can learn to do many things with our hands. Why not? [Children can give examples of things they learnt to do.]

Humans can learn to use many different tools. [Children can give examples of tools they learnt to use.]

How does a human being manage when they don't know how to do something like baking a cake or driving a car or designing their own house?

Our minds can tell our hands and feet where to go and what to do.

So why is the human hand not specialised? [Let the children answer with their own ideas.]

The hand is the servant of the human being. As the human being develops his or her thinking, he or she wants to use the hands in new and different ways. The fact that the hand is NOT specialised allows the human being to discover new possibilities and skills, to learn and develop further in life.

The Gift of Being Upright

Animals move on all fours, their spines parallel with the earth. Why? [With their noses down, they can receive all the smells of the environment.] How does this help them? [They can find food, sense where to go, etc.]

Humans stand upright their faces looking out to the horizon. Why? [They can see where they are going, choose where they want to go.]

How does this uprightness help the human being? Would it be better to be running round on all fours like the animal? [Let children discuss in pairs to find answers.]

What does it mean for the human being that their arms are free? [They can do different things with arms and legs. Legs carry the body; arms can be used in many ways.]

What different things can the arms and hands do? [Children think of examples.]

What is the advantage of standing upright? [Humans have the freedom to choose what to do, where to go.]

What does this freedom of choice mean to us as humans? How free are we? Can we as humans choose the life we wish to lead? [Children can say how they feel.]

How is it that some people do many things with their lives, getting educated developing their skills and following their dreams? What are your dreams?

Is the human being influenced by the environment?

Animals adapt to the environment. What does this mean? [Children discuss and give examples.]

Is the human being influenced by the environment? [Children can discuss this and give examples.] In what ways are we influenced? [We react to the weather.]

Humans are able to move to a different environment e.g. nomads moving their cattle to new grazing. They can choose where they want to live e.g. on the plain or on the hill or by the sea. They are influenced by the environment but not bound by it as animals are.

What do humans do when they live in the forest? [They use the wood to build homes, fences, furniture, etc. So they use the gifts of the forest for their own needs.]

What do humans do when they live on the hill or the plain? [Let children find answers.]

Humans build their houses out of stone or wattle and daub, depending on what is available. In other words, humans are creative, using the environment to achieve whatever they want or need for their lives.

[Let children find other examples of what humans do in the environment to make it more suitable for living.]

Why are human senses not as developed as those of animals?

The over-riding sense is that of smell in both cold and warm-blooded creatures, whether in water or on land. Rudolf Steiner says that the earliest creatures were all governed by the sense of smell.

Smell tells the creature that something is good to eat or poisonous; an approaching creature is friendly or dangerous; a place is safe or unsafe. The mammals on land generally have long noses and large olfactory⁴⁷ areas in the brain and receive their knowledge through the smells that come to them through the air. Thus the air around them is constantly informing them of everything in their environment.

Why do humans not use the sense of smell in the same way as the animals?

Humans use different senses according to their culture; some cultures have developed the sense of smell and taste more highly than others⁴⁸. Smell tends to overwhelm us: we like it or dislike it, so we respond in a feeling way.

Which senses affect the children most? [Let the children discuss this in pairs and then give feedback.]

Sounds and vibrations also come to animals through the air. There are stories of animals that sensed a forest fire and left the area days before it arrived. Even the tsunami that shocked the world in 2004 killed many domestic animals but the wild animals had gone to safety ahead of time. How did they know to move away? Their senses told them danger was imminent⁴⁹ and their instincts informed them which way to go. Thus the instincts are a feeling response to information received through the senses.

Animals also use the sense of sight but mostly in combination with smell and hearing.

Do animals think? Their senses give them information and their instincts tell them what to do. The atmosphere carries energy and feelings that automatically affect them. How easily must animals sense these feelings with their highly developed senses? They are so open to everything around them due to the need to stay alive. But this involvement of the senses leaves the animals with no choice but to obey their instincts.

What happens if the animal does not follow its instincts? The animal may die if it eats the wrong food. Usually wild animals obey their instincts. Domestic animals can make mistakes because they are dependant on humans for food and protection.

⁴⁷ Olfactory = the ability to smell

⁴⁸ The French culture is noted for sensitivity to scents [perfumes] and food.

⁴⁹ Imminent = about to happen

What sense is important for the human being? Why? The development of the sense of sight helps people to learn to observe. Humans who tend to use their sense of sight find that it allows them to think about things more objectively.

So why do humans not have such strong senses as animals? Humans use their power of thinking to help them decide what to do. Thinking allows the human being freedom of choice. Choice belongs to the human being.

What if we choose wrongly? We learn from our mistakes.

Nature Reserves or Zoos

What should be done about animals living in the wild? Some people shoot wild animals for food or to prevent these creatures from attacking sheep or destroying fields of corn. What animals are dangerous to crops and farmers? What else could be done instead of killing these animals?

Some people poach wild animals illegally⁵⁰ e.g. the rhino for its horn and other parts for muti.⁵¹

Which do you think is a better solution to the problem of wild animals? Should they be put in Nature Reserves? Is a Zoo a good answer to the situation? This topic needs to be researched before discussion takes place

What can we do about endangered animals where people have killed so many that the species is slowly dying out?

What are the differences between the instincts of cold-blooded creatures, warm-blooded creatures and humans?

Here follows some new information, which the teacher can use to stimulate discussion. Make sure the children participate as much as possible in exploring these topics, by asking about the following, rather than telling them:

Cold-blooded creatures may fight or flee when meeting an enemy. They may go out to hunt their food or withdraw into shells or rocks to hide. Their main instinct is survival of the species. An alternative method of maintaining the species is through the vast numbers of eggs that they produce. The fishes spawn thousands of eggs, leaving them on rocks and sand to hatch, without further care. Most of

⁵⁰ They catch and kill these animals even though it is forbidden by law.

⁵¹ African Medicine

these babies are gobbled up by larger predators but plenty survive to carry ensure that they do not die out.

What are examples of creatures that show features of the crossing over from cold-blooded to warm-blooded animals?

The early reptiles and dinosaurs all laid eggs. The dinosaurs were first cold-blooded creatures, but they later became warm-blooded when they moved on to the land and some species began to give birth to babies [young].

Both reptiles and birds lay eggs, yet reptiles are cold-blooded and birds are warm-blooded. Reptiles like turtles or crocodiles lay eggs in a nest in the sand and cover it up with more sand or debris⁵² to keep them warm. Then the turtles leave the eggs to hatch on their own. Crocodiles stay around to guard the area. Birds however, have feathers to warm and protect their eggs and young from cold and rain. The warm-blooded platypus of Australia swims in the river and lays eggs yet suckles its young.

What instincts do we find in warm-blooded creatures? Give examples. The warm-blooded creatures go out to seek a mate. They also build nests or homes and bear their young. Wolves show loyalty and caring for their family. They protect their young, playing with them and when old enough, train them to hunt in a pack.

Here we can observe the qualities of affection and love as demonstrated in the animal kingdom. The warmth element of loyalty and affection increases as the various creatures evolve from cold-blooded to warm-blooded. The animals are becoming more individual.

Every species in creation belongs to the archetype⁵³ of its kind and therefore has the same shape and also responds instinctively in the same way as others in its group.

Can we find differences between the instincts of wild animals and domestic animals?

Animals in the wild use their instincts for survival. Domestic animals rely partly on human beings for food and protection. We can observe how the animals that have become domesticated and trained for specific purposes like the dog and the horse have become more and more individual in character. Their intelligence has been used and developed in different ways by human beings who train them. Humans have found that these animals are highly intelligent because they combine the instinctive intelligence with the trained intelligence. [Children find examples.] Dogs have been trained to sniff out drugs on people. Dogs and

⁵² Debris = rubbish, whatever is in the area

⁵³ The blueprint or pattern of the species

horses are trained to perform in circuses but wild animals are no longer used in circuses. The white Lipizzaner horses are trained to perform special stunts [like kicking both legs backwards] used originally in battle in the middle ages.

Do human beings use their instincts?

Humans use their instincts but are not always sure if they are doing the right thing, which is different from animals. If Bob annoys Tom by making a stupid remark about him, Tom may instinctively hit him hard. However, fighting is not the answer to every situation. Human beings can use their intelligence. When they have calmed down, the two people can discuss the problem, perhaps with the help of a teacher or adult and this will help them to change their instinctive patterns of behaviour. This requires a conscious decision on the part of both people. So our thinking and intelligence can help us to use our instincts in better ways.

The Gifts of the Four Kingdoms

What does the rock give to us? It provides stability and security for the human being. We can also dig mines and extract metals and precious stones from the earth.

How is our physical body like the mineral world? Our body is our 'home' on earth and our bones that are made of the mineral calcium give us the strength to stand and walk upright. Many other minerals are present in our bodies and give us health and well being.

A.C. Harwood's poem⁵⁴ speaks about the relationship between the earth and the human being:

The earth on which I tread
Lets not my feet go through
But humbly does uphold
The weight of deeds I do.

It is on earth that we must live in, in order to learn the lessons of life, as everything we do has a consequence⁵⁵ in our lives and for everything around us. What happens if we take care of a garden? If we water the plants, they grow well. Perhaps we can eventually pick the vegetables or flowers and feed the family or create beauty in a house. Thus we can improve the lives of those around us and nurture the earth itself.

⁵⁴ The Sun is in my Heart, *The Kingdom of Childhood*, Rudolf Steiner Press, London 1968, page 37.

⁵⁵ Consequence = a result

What can we learn from the silent rocks? [Let the children discover their own answers.]

What do the plants give to us? [Let children discuss this question in pairs and find their own answers.] Plants beautify the earth and feed animals and human beings. They provide medicine for healing, though some are poisonous or prickly and painful to touch. Trees provide for human beings in many ways: shade from the sun, fruit to eat, wood for buildings and furniture. They even attract rain to the earth. Human beings could not live without the nourishing world of plants.

The teacher can ask the children what is similar between the plant world and the human being. We too have a life cycle from birth to death; we breathe and grow and are able to create babies. The mother can produce milk for her baby, but the plant kingdom specialises in feeding and nurturing all creation. The sap in the plant can be seen in the many liquids of the human body that support the life of the human being.

What can we learn from the living plants?

What do the animals give us?

[Let children discuss this question in pairs also.] The cow has many gifts: milk from which we get cream and cheese and even yoghurt. We use the hide, horns and flesh of cattle for food, medicine and other uses. Oxen were used for ploughing the field in the past. What about the horse, sheep, goat and donkey? How do the dog and cat help us? What other domestic animals are there?

It is a good idea to discuss the domestic animals first, as the children will easily tell the teacher what their gifts are.

What can we learn from the wonderful world of the wild animals? Do they also have gifts for us? Have we any gifts for the wild animals?

How will we act when we know that we are part of the “one life” in the family of creation?

There are many issues concerning animals that can be discussed with the children in Grades 6 - 7. These are important for creating a compassionate attitude in the children towards animals. It would be good to use these discussions and issues in drawings, posters and projects with the class in order to deepen their connection to animals.

Section 3

The Arts

The Arts in Human and Animal Studies

With every main lesson it is important to allow the children to experience the content material in artistic as well as intellectual ways. This enables them to 'live into' the learning process and thereby to make it their own. Children come to understand what they are studying in greater depth because they are given time to visualise it and 'feel' it through the artistic medium.

Rudolf Steiner explains this in greater detail, in that if we were to only learn something intellectually, we would become weak-willed people⁵⁶. Learning can develop the whole human being, but then the feelings and will have to be involved. For this, we need to make use of the arts.

Using the arts in learning about animals brings the children into activity. Their will is therefore involved in the process of learning, whether it is creating a painting or drawing, speaking poetry, modelling the animal, participating in songs that are about animals, or dramatising their movements and habits.

Artistic activities do not only stimulate and strengthen the will in children, but they arouse the feelings through combining imaginative thinking and will activities. Said in another way, when the children learn about an animal through a rich description given by a teacher, and then enter into one or more artistic expressions of what they have learnt, deep feelings emerge.

In artistic activities, the whole human being is involved: thinking, feeling and will. A dedicated teacher will, therefore, consider how each lesson can find its expression through one or more of the arts.

Human and Animal Study is an exciting main lesson as it lends itself to the use of many artistic media.

⁵⁶ Rudolf Steiner, *Practical Advice to Teachers*, page 88, 90; Rudolf Steiner Press, London, 1976

Poetry

Poems are a wonderful way of consolidating⁵⁷ information about a creature in an imaginative way. A good poem characterises the creature allowing the children to relive the experience of the animal every time they say the poem. If they are taught to say it with expression, they can get into the mood, the movement and the soul of the creature.

Occasional humorous poems are fun to learn, but to make a clown out of every animal is not a good idea as the children lose the essential qualities of the animal. To see an elephant only as a fat, funny fellow is to miss out on the incredible wisdom, intelligence and loving care of the family that an elephant possesses. This animal also has amazing dexterity⁵⁸ and skill e.g. the ability to pick up a peanut with its long trunk! Humorous anecdotes are often better than a funny poem, for example:

A story goes that a young elephant enjoyed walking a bit too close to the edge of the riverbank. His mother and aunts kept calling him back but he ignored them. Eventually the bank gave way and he fell into the river. Immediately all the female elephants rushed down into the water to rescue him. They hauled him to safety and immediately gave him a good spanking with their long trunks!

It is good to let children learn animal poems about every creature they study and others as well over the year. There are many charming animal poems that will delight the children.

A list of poems can be found at the end of this manual.

Songs

Many songs about animals are just jingles, but can be enjoyed by the children just the same. If the children have many good poems, a light-hearted song is fun for a change.

Movement

Children should always experience the movement of the animal they are studying. This movement can be repeated or extended to include other activities of the animal e.g. the walk of the lion can be extended to show the lion stalking its prey and eventually leaping and catching it. The teacher must demonstrate how the lion moves and hunts so that the children can imitate him or her. It is a good idea for the children to learn to roar like a lion too!

⁵⁷ Consolidate = to make what they learn firm (or 'solid'), so they really 'have it'

⁵⁸ Dexterity = skill of using limbs

Children can also act out the movements of other animals not being studied to contrast a variety of animal temperaments through their movements. This draws on the instinctive connection that children have with animals. It is also good for activating their imaginations and developing their acting abilities.

Children who do not find it easy to move or act will be encouraged and supported by the fact that everyone else is doing it at the same time.

Drawing

Drawing is a very important artistic medium when studying animals as it increases the imaginative and observation faculties.

The teacher needs to find good drawings to copy and use for practising their drawing skills. This is not only so that they can draw well when putting a picture on the blackboard, but also to increase the teacher's own observation and understanding of the creature being studied.

Photos in glossy books about animals are often beautiful, but they tend to 'blur out' a lot of detail, while an artist carefully thinks through their drawing and fills in all the detail. Practice in drawing helps the teacher to improve their drawing and this in turn helps the children to learn to draw well.

If a teacher finds drawing very difficult, they should get help from another teacher or artistic friend. Drawing is something everyone can develop but it requires practice. Practice makes perfect!

In a drawing, the animal must always be part of its environment with colours as close to the original as possible. If the blackboard and chalks in the classroom are of poor quality, it is better to do a large drawing that fills the page of an A3 or preferably bigger. This can be stuck to the blackboard or wall so that children can see it easily.

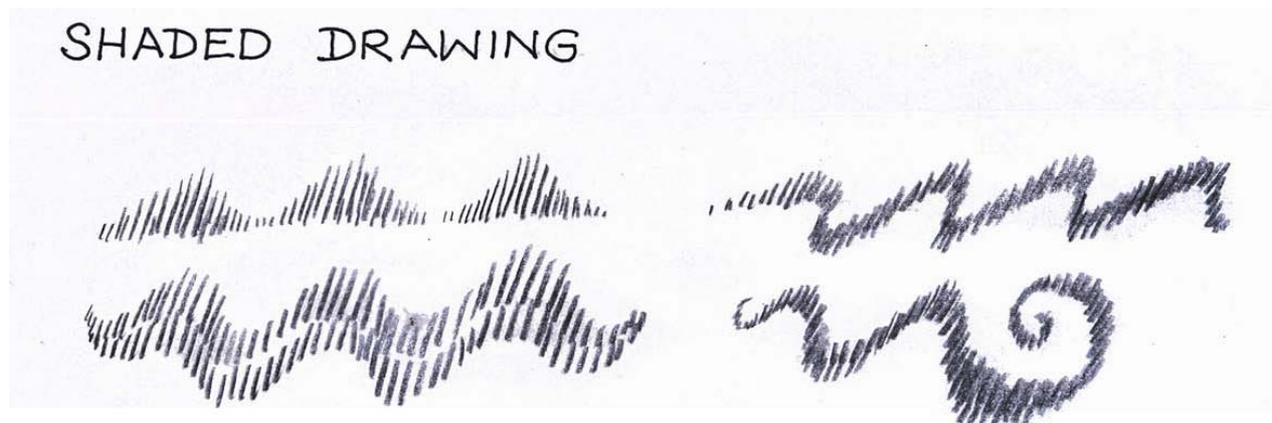
Methods of Drawing

1. Shaded Drawing

Many Waldorf schools train the children from Grade 3 to use the controlled method of shaded drawing with coloured pencil crayons in preference to line drawing which is then coloured in. This method develops a flow of colour through using shorter and longer strokes. Each stroke is made at a slant of 45 degrees from right to left, unless the child is left-handed. The strokes may change slightly to follow the movement of e.g. the wind, or the animal's fur, but generally they should be parallel and close to each other so that the effect is like embroidery on cloth. They

can be overlapped to make the colours darker or to blend colours together. The children practice the stroke in waves to create beautiful patterns for borders and headings and then learn to create drawings using the shaded drawing stroke.

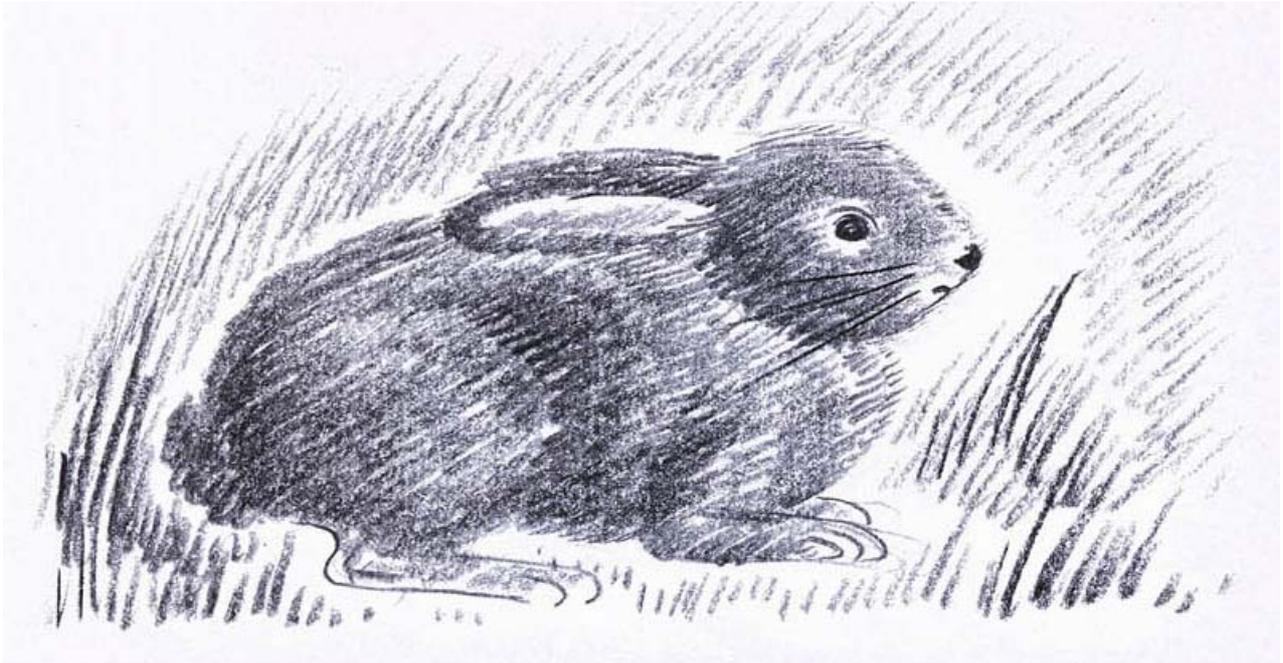
Some examples for practising shaded drawing strokes:



When creating drawings, the shaded drawing method allows the drawing to be developed slowly and therefore it can be changed if the drawer wants to make the object bigger e.g. they can add more grass, fatten a trunk and fill out an animal or human being. This also allows the drawer to get into their imagination as they go.



The teacher can use the shaded drawing strokes to show the texture of the animal's fur, the blades of grass, the wind through the trees and the curves and rocks of the mountains. However, these drawings using pencil crayons take quite a long time to complete, so it is best to select a smaller area for the drawing rather than expecting the child to fill a whole page of A3 or A4. Wax crayons need larger paper, fat colour pencils A4 paper and normal colour pencils generally use about half a page.



The teacher needs to demonstrate and practise with the children how to develop clouds in the sky or leaves on a tree so that the child does these imaginatively and does not just scribble the shaded stroke in a rush to cover a large area.

The key with animal drawing is to choose a small and simple creature to begin with; draw it fairly big (in about half a page) and create the environment softly around it. It is best to begin by sketching in some of the environment in which the animal is placed e.g. the grass, to make sure that there is enough space underneath the animal.



Learning to draw lightly

The key to all good drawing, whatever method is being used, is to begin very lightly. Even with shaded drawing, the main figure may be sketched in softly using the slanted shaded stroke and the correct colours can be developed later. The significant details like noses, eyes, hands and feet must be avoided at this stage.

When the child begins to see the picture in the mind's eye or the imagination, they start to fill in the animal, improving the shape and colour, developing the lie of the fur or the body. The animal may be drawn in one colour but then the child may begin to bring in some darkness under the body or on the inside of the legs. It is also a good idea to have lighter colours towards the front and darker colours to the back of the animal so that one can see the head clearly. Children from Grade 4 onwards become more aware of the effect of using dark and light in the shapes of the body and the surroundings.

If more pencil crayons are used, the children should be encouraged to blend different colours to improve the picture e.g. two different greens in the grass or leaves; orange, different browns and greys to create the best colours for the animal's skin or fur. It is always good to have the ground colours darker and heavier and the sky or background colours lighter.

Colours that support the feeling quality of the animal should be chosen for the background. This may be only a colour behind the animal or the natural environment e.g. a timid mouse should have soft greens, blues or browns and not a bright red.

Mistakes often occur where something is drawn too large e.g. ears, head. Sometimes the body can be enlarged and this helps the proportion. Otherwise the problem area can be blended into a background of bushes or rocks. But it might have to have a bit of rubbing out first. Take care! Do not make holes in the paper!

Shading in different directions

Although the traditional shaded drawing method keeps all the strokes in one parallel direction, it is also possible to combine different directions in an animal drawing. For example, drawing the sun works well when the rays of the sun face outward in every direction. Also the fur and skin of animals often look better when slanted in the direction that they naturally lie.

However, this does not mean that any slant of shading will look good anywhere. The idea is to encourage children to become imaginative and to explore different kinds of shading, especially varying lengths and strengths of the stroke so that it brings out the natural look of the animal. The more a child experiments, the better the drawing becomes.

It is important that the teacher discusses different ways of developing shaded drawing with the children to encourage them to improve their drawings. This helps the children to become more aware of what works well in a drawing and in this way they also learn from each other. Some teachers just leave the children completely free but this is not helpful as children get discouraged at this age if they do not get things right. The children want to learn how to draw properly, so that something looks good, so the teacher should assist them to observe the animal more carefully and ultimately to create a beautiful picture!

It is also permissible to make the shading so soft and blended that the lines disappear into the background! It is good to have strong lines of shaded colours in certain places and very delicate shading can also work well in the right place. This may be on the edge of the drawing or in the sky or around the head of the animal, creating a space where the creature can be seen well.

All details like eyes, mouth, beak or ears should be kept to last and only put in when the drawing is looking good. These details will bring the drawing to life, provided they are in the right place!

Shaded Drawing Materials

Shaded Drawing can be done with coloured pencil crayons or with a soft lead pencil (2B – 6B). Large coloured pencil crayons are also good to work with. Aquarelle pencils are very successful because the colours are rich and soft, but no water should be added to aquarelle drawing on ordinary cartridge paper as it bends and buckles, spoiling the drawing.

If children are taught the shaded drawing method when they first get pencil crayons, they discover that they do not need to use a rubber (eraser). Rubbers tend to spoil the drawing with smear marks, giving the children a sense of disappointment and failure. Instead, the children should learn to change and improve the drawing as they go and then it is often easier for the teacher to help them.

Shaded Drawing with a soft lead pencil allows the child to use a rubber. However, rubbers still give smear marks, unless the child learns to draw very lightly in the beginning.

2. Cross-Hatching

Cross-hatching is a method of shading in layers where the first layer of shading is at a certain slant. If the drawer wishes to darken a particular area, they put a second layer over the first set of shading. However this time the slant is at a different angle. If a third or fourth layer is needed, they are placed at different slants and so bring about not only depth and darkness, but a three-dimensional quality. This method is very good for texture on rocks and mountains or other solid objects and is best used from Grade 6 onwards.

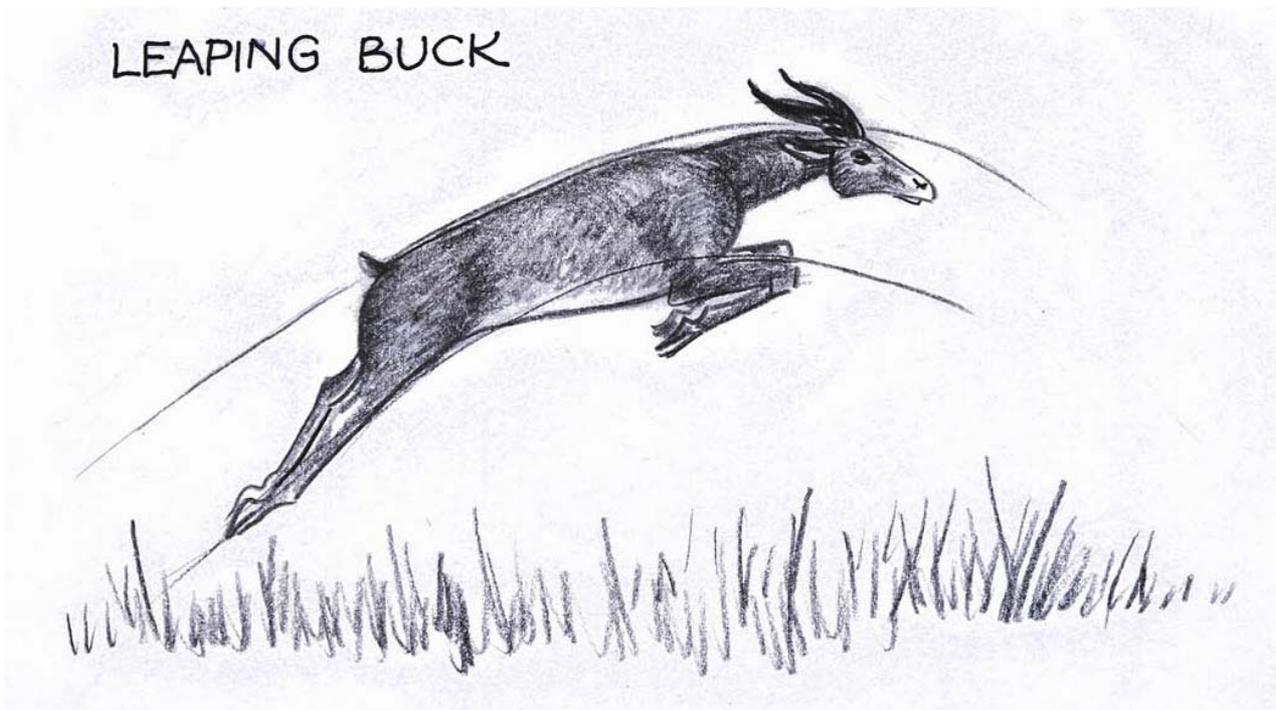
3. Block and Stick Wax Crayons

The Stockmar wax crayons, both block and stick varieties are very effective and attractive for animal drawing. They allow the children to create large bold drawings on A3 paper with strong colours that can be used for dark or soft shading as well as definition with line. The shading method may be used but is not essential here as the coloured wax crayons fill in the space with sweeps of light or dark tones and blend well with each other.

A drawing can be done with one or two wax crayons, not necessarily true to the natural colours of the animal. Often it works well if the second colour is close to the first one, e.g. orange and brown, blue and green or red and purple! Combining the two colours helps to strengthen the mood of the animal. It can also be used to emphasise the lines that are correct and to develop dark and light contrasts. In general the two colours give a lively effect!

4. Drawing Animals in Movement

Animals are often moving so it is good to learn to draw them in motion. But that means that the teacher or art teacher must be able to demonstrate and guide them in this method.



If the teacher knows the animal well, he or she will sense the flow of movement in the animal in the form of flowing lines in the air. The teacher and the children begin by drawing the lines in the air in front of them with their hands and arms to get the 'feel' of the animal in motion. Then the teacher draws the first guide line on the board and underneath it draws a second guide line. This line is not exactly

parallel but shows the approximate size of the body of the animal that is moving. Then the teacher puts up a prepared drawing or demonstrates the drawing on the board. The children draw these two guide lines lightly on the page before starting the drawing. These guide lines help the children to imagine how to draw the galloping horse or the leaping buck.

The first thing then to be drawn is the body of the animal and the teacher shows the children how to fit the body into the two guide lines. Often the shape is like a kidney bean with rounded shapes at either end for the shoulders and the rump⁵⁹, with the stomach in the middle. By following the guide lines, the teacher will point out how they can indicate the shape of the neck and also the legs in a leaping buck or lion. The guide lines cannot be used for every thing, sometimes a tail or head will stick out beyond the lines. But they do help the children to imagine the movement of the animal.

Once the children have lightly sketched in the animal, they fill in the details with stronger colours and develop the background. The guide lines drawn in the beginning can now be blended into the background.

5. Keeping a Nature Journal

From Grade 6 onwards, it is good to get the children to keep a nature journal. In this sketchbook that should be around A4 size, the children draw things from the environment. It can be used for geography, plant, animal and mineral study or even regular drawing practice. Next to their drawing they write something about what they saw or how they felt about the object in the drawing. Teachers can also encourage the children to write some lines of poetry about their drawing. Before you know, the simple sketchbook can become a work of art!

Clay Modelling

Grade 4 is a good year to begin modelling in clay with the children and what better place to start than with the Human and Animal Study main lesson!

The children begin by getting a lump of clay big enough to hold in both hands. They begin by shaping this into a sphere or ball. Although they should have a board on which to place their finished object, they are not supposed to roll the clay on the board to make the ball. The human hand is incredibly creative and the children must learn to create a perfect sphere between their two hands. This exercise is repeated daily, so they soon become very good at making a ball.

The sphere represents a 'whole' and the children need to learn to create everything out of the 'whole'. At no point do we add on legs, ears or tails with extra pieces of clay; instead, they are 'drawn out' of the solid body shape in the clay.

⁵⁹ Rump = back end of the animal

This also helps the children to come to understand that the clay which is sticky but dries out easily must be worked into simple, solid shapes. Fine details like horns, ears and tails will fall off when dry if they stick out. They need to be modelled close to the body and be softly suggested rather than strongly defined in the animal model.

When modelling animals on four legs, we work in the following way. Change the sphere into a solid fat sausage shape. Squeeze with both hands to push some clay forward to form the neck and head. Check that the head is not too big or too small. No ears, horns must be made.

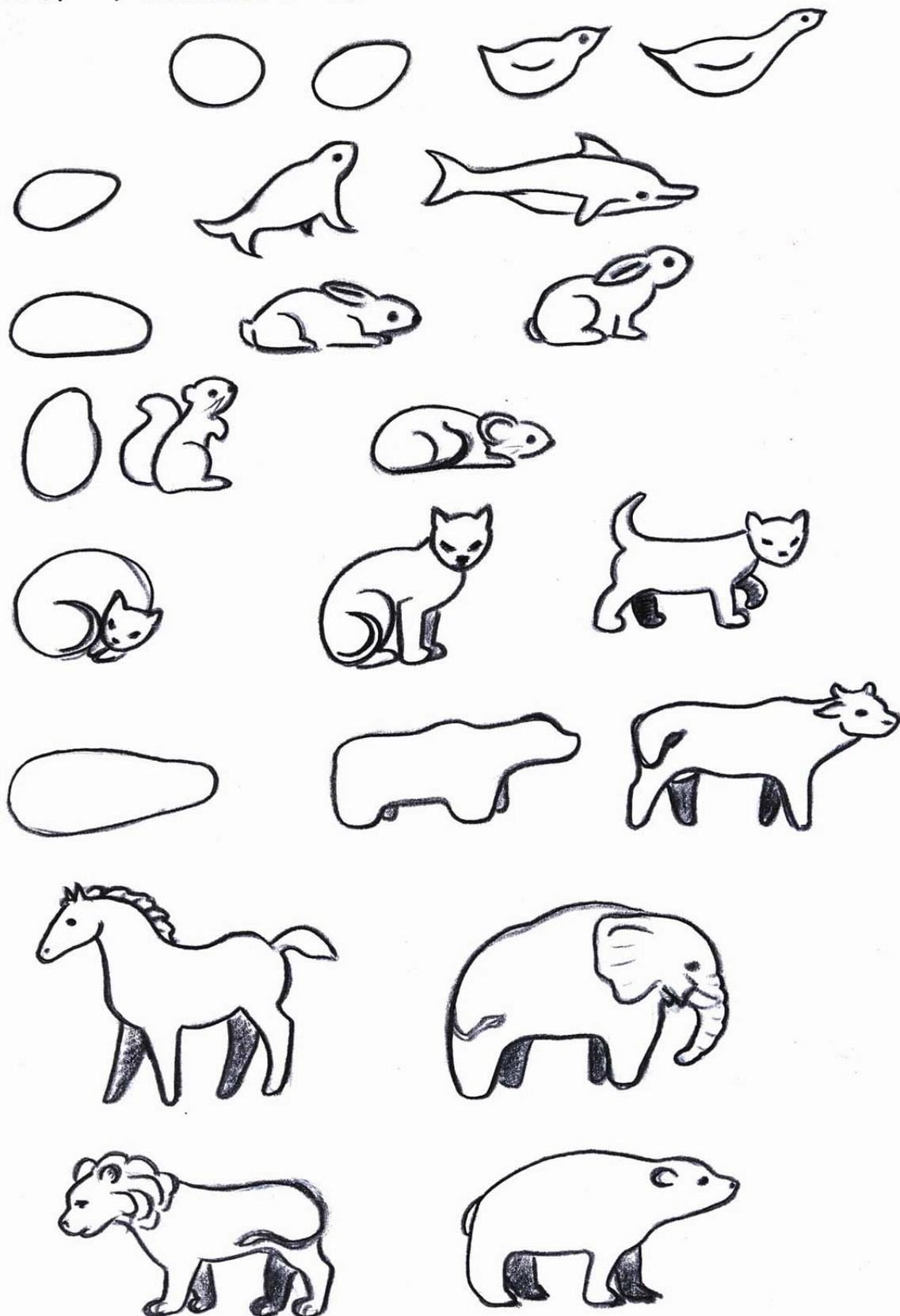
Using both hands, pull the thumbs along the back to form a slight ridge for the spine. From underneath the fat stomach, pull out four fat short stumps that will become legs. These legs must be fatter and shorter than normal to support the animal or else it will not stand. Develop the shapes of the animal, taking care to keep the animal solid and strong. Smooth the clay with a little bit of water if it begins to dry out. Areas that have become too wet and too weak e.g. legs, must be pushed back into the body and done again. Clay is very kind, you can always improve mistakes. When the animal is complete, add the details, remembering to turn the head or body slightly to give a sense of the animal being alive.

Easy Animal Shapes

Easy animal shapes are chosen at first as this will train the children to work simply to achieve the best effect. All animal shapes need to be simplified for working with clay. More difficult ones can be modelled later. Always begin with a sphere.

- From a sphere, create an egg. Then push forward a neck and head of a bird. Complete the back of the bird with wings folded and tail up or down. Slight indentations will show wings and feathers. No legs are needed. The bird can now sit on the board. Tip the bird so that it looks up and slightly to one side as if it is listening to something. Smooth off with water. Use a pen or pencil to gently mark the eye which must be placed in the middle of the side of the head.
- Seal or dolphin
- Rabbit lying down or crouching on hind legs, long ears lie flat against the back
- Squirrel, mouse; tail attached to body
- Cat in different positions: sleeping, sitting or walking.
- Dog in different positions
- Cow lying down, standing
- Horse standing or walking; ears attached to mane
- Elephant; tusks short and close to the trunk
- Bear; remember that the paws turn inward
- Lion
- Tortoise
- Dynamic imaginary animal e.g. dragon, reptile

CLAY MODELLING



After the lesson, group all the animals together and let the class enjoy looking at the different animals. You may choose one to keep but the rest will have to be rolled back into a ball of clay and put in the bag to be used the next time. Send the children outside while you roll the clay together (Don't let them see you destroying their work!)

When they are older, let the children roll their own clay back into a ball. They dislike destroying their clay models in the beginning but soon get used to it. One teacher told the children that when they rolled the clay into a ball, their talent grew much greater for the next clay modelling time.

If you choose to keep any of the animals, first check that there are no little ears, horns or tail that will fall off as soon as it dries. These must be strengthened or pushed against the head or body. Any cracks must be smoothed over with water. Let the model dry out slowly in a shady, cool place. This will allow it to dry out evenly and assist in preventing cracks. It is often nice for the children to take one of their animals home at the end of the term.

Painting

The children will have been doing wet-on-wet water colour painting since Grade 1 and so will be quite familiar with the process. At the same time, painting animals is no easy challenge and must be carefully thought out by the teacher in order to achieve joy and satisfaction.

If the teacher has drawn and modelled the animal with the children already, the whole experience will be far more successful. When the class has been doing quite a bit of drawing and modelling, all the practice helps the children even if they are painting a new and different animal. So long as they are carefully guided by the teacher, who must have a clear idea of the process, the class will manage well.

Here are some tips for the teacher when painting animals with the class.

- Choose colours that suit the mood or character of the animal rather than worrying about natural colours. (Leave that for the drawing lesson.)
- Usually Prussian blue, Vermillion red and either Golden yellow or Lemon yellow will be all the colours that are needed. Working in two colours can be effective, but often it is good to add just a touch of the third colour. The three colours together make different browns, greys and black, depending on the proportions of each colour.
- Allow the paper to drain or dry off a bit before you begin.

- Begin by reminding the children about the animal they are going to paint, describing the shape AND the mood of the animal. This will activate the children's imagination.
- Begin by painting in a wash of colour for the surrounding or environment in which the animal lives. If it is a cow lying in the grass, begin with Prussian blue which will be painted lightly around the place where the cow will lie. Later this can be painted darker for the grass below and kept lighter for the blue sky above. Do not try to differentiate as yet. Later you can add Lemon yellow to make the grass green. Do not paint over the middle of the picture where the animal will be placed but leave it to dry longer.
- As you bring the colour in, imagine how you want the animal to be.
- Still using the Prussian blue, paint in the BODY of the cow (or other animal) first! Paint it darker than the background but not too small! When you are happy with the body, draw out the neck and head. No details yet! The cow can be kept a quiet peaceful blue. It is not necessary to use natural colours with painting. Keep the paint fairly dry to form the shape of the cow without the colours running.
- Check that the head and body are the right size. If the head is too big, make the body bigger.
- Add the legs. Remember to squeeze the water out of the hairs of the brush to make a thin edge for fine areas like the legs or tail.
- Complete the background. Add more colours and details.
- If there is a space around the animal, try to fill it in unless the paper is too wet.
- When you are sure that the paper is dry enough, add details like horns, ears, an eye and a tail.

Enjoy your painting lesson!

Poems for Human and Animal Study

*THE EAGLE*⁶⁰

Broad-winged ruler of the skies
 Sweeping through the cloud-tossed height,
 Gazing far with piercing eyes
 Among the distant veils of light;
 Below, each movement seen and known,
 Each hill and vale, each rock and tree;
 The sky above his rocky throne
 Calls ever upward, wide and free;
 On wings of beauty and of power
 Circling, seeking on and on,
 He disappears into the fire,
 The dazzling brightness of the sun.

THE EAGLE by Alfred, Lord Tennyson

He clasps the crag with crooked hands
 Close to the sun in lonely lands
 Ringed by the azure world he stands.
 The wrinkled sea beneath him crawls
 He watches from his mountain walls
 And like a thunderbolt he falls.

THE ELEPHANT

Great grey elephant, big and strong
 Swings his trunk as he walks along
 Carefully pushing the branches aside
 Slowly and stately his rolling stride
 Hardly a sound he makes as he goes
 On huge round feet each with four big toes

⁶⁰ All poems by Catherine van Alphen unless otherwise indicated

THE LITTLE MOUSE Author unknown

I have seen you, little mouse
 Running all about the house,
 Through the hole your little eye
 In the wainscot⁶¹, peeping sly,
 Hoping soon some crumbs to steal
 To make quite a hearty meal.
 Look before you venture out,
 See if pussy is about.
 If she's gone you'll quickly run
 To the larder for some fun;
 Round about the dishes creep
 Taking into each a peep
 To choose the daintiest that's there,
 Spoiling things you do not care.

THE DONKEY by Gertrude Hind

I saw a donkey one day old,
 His head was too big for his neck to hold;
 His legs were shaky and long and loose
 They rocked and staggered and weren't much use.
 He tried to gambol⁶² and frisk a bit
 But he wasn't quite sure of the trick of it.
 His queer little coat was soft and grey
 And curled at his neck in a lovely way;
 His face was wistful and left no doubt
 That he felt life needed some thinking out.
 So he blundered round in venturous quest
 And then lay flat on the ground to rest.
 He looked so little and weak and slim,
 I prayed the world might be good to him.

⁶¹ Wainscot =woodwork inside a house

⁶² Gambol =move playfully on its legs

IF YOU SHOULD MEET A CROCODILE Anonymous

If you should meet a crocodile,
 Don't take a stick and poke him;
 Ignore the welcome in his smile,
 Be careful not to stroke him.
 For as he sleeps upon the Nile,
 He thinner gets and thinner;
 And whene'er you meet a crocodile
 He's ready for his dinner.

THE TORTOISE

He struggles slowly up the track
 A heavy house upon his back
 Straining his scaly legs and claws
 A scrawny⁶³ neck and beaklike jaws;
 His pitiful eye just seems to say
 Leave me alone, I'll hide away.

THE GOLDEN LION

Golden as the grass he stands
 Looking over all his lands,
 The mighty lion with shaggy mane
 Is ready for the hunt again.

He scents the timid buck that graze
 With twitching tail and fearful gaze
 And slowly stalking down the hill
 The lion creeps towards the kill.

The lionesses move ahead
 To herd the buck that wait in dread;
 Surrounded now, they stamp and flee
 But one of them will not go free.

Suddenly the lion roars,
 He leaps and strikes with powerful paws;
 He grasps the buck with cruel claws

⁶³ Scrawny = thin, like rope

And kills it with his mighty jaws!

The lion is the first to feed
 Before the others fill their need;
 Once satisfied, he rests again,
 The golden king of all the plain.

THE DREAMY COW

Dreamy cow as soft as silk,
 Munching away to make her milk,
 In the lush green grass she lies,
 Swishing her tail at all the flies,
 Raising her head to give a soft moo,
 That's all she does the whole day through.

Carefully she steps her way
 Into the stall to eat her hay;
 The cowherd sits down at her side
 To take her rich milk that is his pride
 And white and foaming rivers run
 Into the bucket till all is done.

LONE DOG by Irene McCleod

I'm a lean dog, a keen dog, a wild dog and lone,
 I'm a rough dog, a tough dog, hunting on my own!
 I'm a bad dog, a mad dog, teasing silly sheep,
 I love to sit and bay the moon and keep fat souls from sleep.

I'll never be a lap dog, licking dirty feet,
 A sleek dog, a meek dog, cringing for my meat.
 Not for me the fireside, the well-filled plate
 But shut door and sharp stone and cull and kick and hate.

Not for me the other dogs, running by my side,
 Some have run a short while, but none of them would bide.
 O mine is still the lone trail, the hard trail, the best,
 Wide wind and wild stars and the hunger of the quest.

THE STALLION

With flashing hooves and eyes so bright,
 His tail cascading to the ground
 He leaped the fence, then poised in flight
 Stood trembling, tense, his only sound
 The neigh that shook his nostrils wide -
 Oh what a horse to catch and ride!

Quite still I stood and watched this steed
 Move slowly closer to my grain
 Until he dropped his head to feed
 And then I softly stroked his mane
 And quickly caught the halter band
 That placed his freedom in my hand.

BUSY BEAVER

Busy beaver in the woods
 Such a friendly fellow
 Builds his house across the stream
 Before the leaves turn yellow.
 Happily he helps his friends,
 Never picks a fight,
 Juicy bark of twigs and trees
 Is what he likes to bite.
 In the water he is safe
 From wolves or other foes;
 How he loves to dive and swim,
 In and out he goes.

THREE IN ONE

My mind is like an eagle,
 My thoughts fly to and fro;
 All knowledge lies before my eyes,
 I grasp what I would know.

My heart is like a lion
 Filled with courage bold
 To do my best and then to rest
 And let life just unfold.

My will is like a cow
 Humble in her stall,
 Milk to give that we may live
 And serve the needs of all.

OH (Anon)

Oh heavy cow
 On earth you plod
 The grass grows greener
 Where you've trod.

Oh mighty lion
 With your eyes aflame
 Your burning heart
 Is hard to tame.

Oh noble eagle
 By the sun you're caught
 Your soaring flight
 Is like my thought.

Oh happy me, good and free
 Cow, lion, eagle are one in me.

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