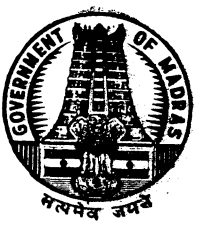
THE CHILDREN'S GALLERY

A GUIDE

by

A. VIMALA

GOVERNMENT MUSEUM
MADRAS



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GUIDE TO THE CHILDREN'S GALLERY

BY

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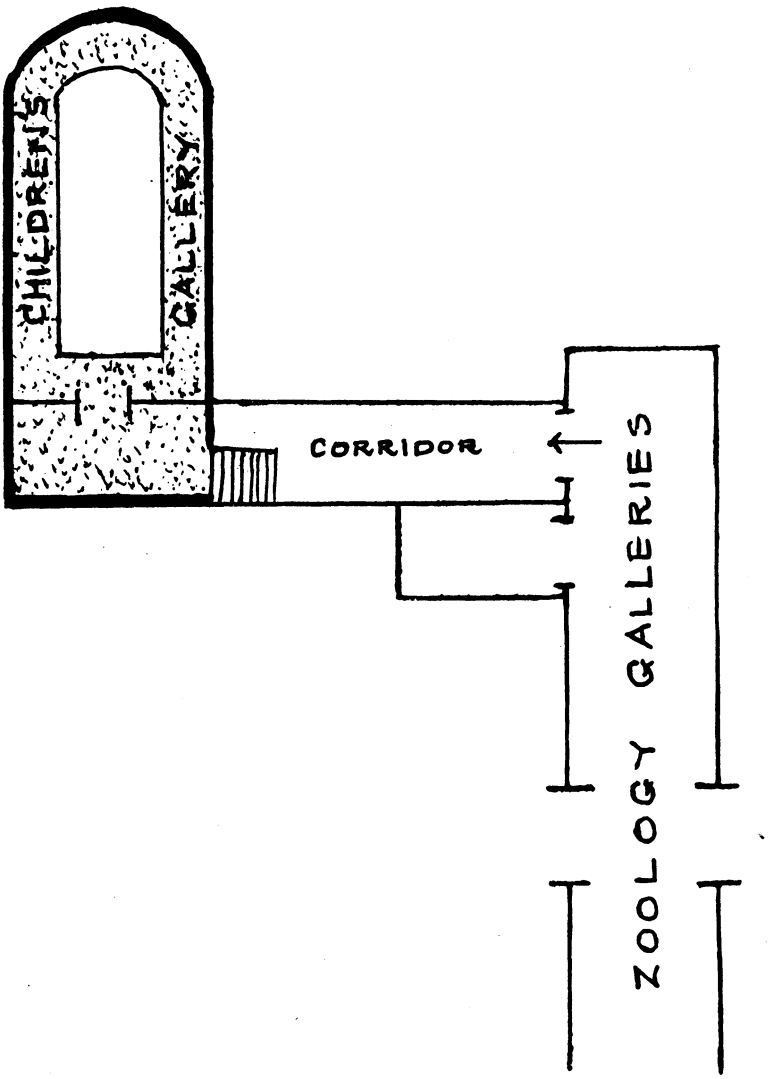

PLAN SHOWING THE CHILDREN'S GALLERY ON THE MEZZANINE FLOOR OF THE NEW ZOOLOGY BLOCK

GUIDE TO THE CHILDREN'S GALLERY

INTRODUCTION

One of the recent developments in the sphere of museum activity, especially in western countries, is the organisation of special museums and galleries that would cater exclusively to the needs of children. In the United States of America such "Children's Museums" have become increasingly popular in recent years, a large number of them having sprung up all over the country within the last decade or two. Such museums serve as lively centres of recreation and creative activity for children of all age groups, apart from being an effective medium for educating children in a pleasant and vivid manner through exhibits that are specially planned for children. Opportunities for handling the actual objects and for educational activities such as painting, model-making and other hobbies are generally provided at these full fledged children's museums, and the whole panorama of life is made as realistic as possible to the children through special displays, film shows, lantern lectures, demonstrations, dramatic performances and other cultural activities.

In India, unfortunately, very little progress has been made in this direction so far, although, in the very recent past it is heartening to learn that commendable efforts have been made to establish a National Children's Museum at New Delhi and one or two other children's museums in other places such as Amreli and Lucknow. However, in South India, the Madras Museum has made a pioneering effort in setting up a Children's section, and during the past few years several specimens, models, dioramas and other exhibits of special interest to children have been collected and prepared and these have been assembled and organized into a Children's Gallery, which although still in its formative stage, forms a nucleus around which, it is proposed to build a regular, full fledged Children's Museum in the near future.

Although this small collection of exhibits, as it stands at present, may appear to be a somewhat random assortment of miscellaneous objects, it would be possible to

fit them into a well planned and intelligible series, so as to tell connected stories illustrating specific themes in History, Ethnology, Biology and the Physical Sciences which would appeal to children, as further material is gradually added.

The Children's Gallery of the Madras Government Museum, which was thrown open to the public on 14th November 1960, consists of a series of about eighteen modern illuminated show cases containing exhibits which have a special appeal for children of the school-going ages. Each exhibit has been carefully prepared and labelled both in English and in Tamil and has been made as attractive and instructive as possible. The arrangement of the exhibits is such that a certain continuity of sequence is maintained, each exhibit having a story of its own to tell the child.

The Children's Gallery is at present provisionally accommodated in the mezzanine floor of the new Natural History Block, but eventually it will be shifted to the separate Children's Museum building which is proposed to be constructed in the near future.

S. T. SATYAMURTI,
Director of Museums,
Government Museum, Madras.

GUIDE TO THE CHILDREN'S GALLERY

THIS EARTH OF OURS

Have you ever asked yourself how the world began, and how the plants and animals appeared on the Earth? Scientists too have asked themselves these questions. They have searched the seas and the rocks for answers, and have put all their discoveries together, to tell us what could have been the story of the first days of the Earth.

The story has its beginning millions and millions of years ago, when there were no planets, no sun or moon and space was empty. There was darkness everywhere. Then a great cloud of " cosmic dust " started spinning through space. Slowly the cloud started separating into bigger and smaller whorls. One of these whorls became white hot. This was the sun. As time went on the smaller whorls pressed together to form the Earth and the other planets, which travelled round the sun in different paths called orbits. All these planets along with the sun formed the " Solar system ".

At first the Earth was white hot and molten. But through millions and millions of years it cooled down gradually. As it did so, there formed on the outside an uneven crust about twenty miles thick, made up of different kinds of rocks. Scientists now tell us that under this crust is the " mantle ", made up of solid rock extending down to a depth of 1,800 miles. Below this lies the earth's core composed mainly of iron, molten for the first 1,400 miles and then solid to the centre of the Earth.

EXHIBIT 1:

This exhibit illustrates by means of coloured diagrams " The cosmic dust " theory of the origin of the earth and the formation of the Solar system. A model of a section of the Earth is also exhibited here to show the different layers under the Earth's crust. An illuminated globe gives one an idea of the present day land formations.

THE EARTH'S TREASURES

To an unknown depth below the surface of the Earth are miles and miles of rocks which are a store house of minerals.

Now, what are minerals ?

Chemists tell us that everything in this world is made up of combinations of simple substances called elements. Some of these elements combined and recombined to form certain natural substances found in the Earth's crust. These are minerals. Up to the present day about 1,200 of these minerals have been discovered by man.

These minerals, most of which are found in the form of ores, yield precious gold and diamonds, iron and aluminium, coal and mica, which are so useful to man.

EXHIBIT 2:

This exhibit gives an idea of the vast mineral wealth of India. Specimens of some of the more important mineral ores found in India, are mounted against a coloured background. A cut out plywood map of India on one side shows the different places in India where these ores are mined.

ANIMALS OF THE PAST

Even after the Earth had cooled, for millions and millions of years it was a ball of dry, bare rock. Then it rained for years and years, and the waters filled the hollows in the uneven surface of the earth. Thus the oceans came into being. Ages passed and the rocks were still bare. About 500 million years ago there appeared the first plants and the small animals in the seas. Later on came the fish-like creatures and the land animals.

About 200 million years ago, the dinosaurs or " Terrible Lizards " made their appearance on the earth. They were dull, slow creatures. Some dinosaurs were just about two feet in length, while others measured 80 feet from the head to the tip of the tail. Some of them lived on land, while others made

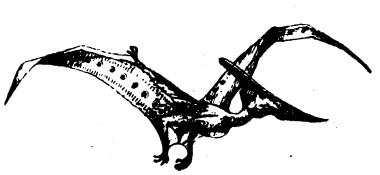

FIG. 1.

Fig. 1—Pteranodon, A giant toothless glider of North America.

the sea their home. There were a few unusual forms like the *Rhamphorhynchus* and the *Pteranodon* (Fig. 1) which could even glide through the air. There were Dinosaurs which were plant-eaters like the huge *Brontosaurus*, which disappeared when the fierce flesh-eaters appeared on the scene. These animals lived for about 100 million years after which they disappeared from the face of the earth. They have left behind only their fossilized skeletons to tell us what manner of animals they were.

When these cold-blooded animals, the Dinosaurs, disappeared, two entirely different kinds of animals—the Birds and the Mammals—started evolving, probably from their reptile predecessors. They had feathers or fur which protected them from extreme cold or heat, and their bodies always maintained the same temperature, unlike those of the Dinosaurs.

About 70 million years ago the mammals became the new masters of the earth. They were intelligent and fast moving. As time went by these mammals grew in numbers, variety and size.

EXHIBIT 3: ANIMALS OF THE PAST—DINOSAURS.

This Diorama takes you back to the times when Dinosaurs reigned supreme on the earth. Exhibited here are miniature models of six different Dinosaurs. They are mounted on ground work with a background of contemporary landscape showing the typical vegetation that flourished during that remote period. A short description of the animals exhibited in this Diorama and the two following ones—with models of extinct mammals—is given below.

TRICERATOPS.—Means "three-horned face". It lived about 160 million years ago and measured about twenty to thirty feet in length. The skull alone was six feet long. It was a plant-eater.

STEGOSAURUS or the "Roofed Lizard" (Fig. 2) was about thirty feet in length. It had the smallest brain in proportion to its size, of all land animals. On its back it had two rows of horny triangular plates and its powerful

FIG. 2.

Fig. 2—The Stegosaurus.

tail had sharp spikes like spears. This was also a plant-eater and lived about 150 million years ago.

BRONTOSAURUS or the "Thunder Lizard" lived about 125 million years ago. The length of the body from the tip of the nose to the tip of the tail was about 65 feet. It must have weighed about thirty tons. It lived for most of the time in water and was a plant-eater.

RHAMPHORHYNCHUS was a primitive flying lizard which lived about 125 million years ago. The average wing spread was about four feet. Judging from the available evidence, it seems quite probable that it lived near water, and fed on fish.

DIMETRODON or the "Sail Reptile" lived about 160 million years ago and was a flesh-eater. It was about 11 feet in length.

LAELAPS.—This was a huge flesh-eating monster which was responsible for the disappearance of some of the plant-eaters.

EXHIBIT 4: BIRDS OF THE PAST.

In this small case between the first two Dioramas of extinct animals are exhibited miniature models of *Archaeopteryx* and *Aepyornis* along with a model (natural size) of the egg of *Aepyornis*. This bird was noted for the enormous size of the egg it laid.

AEPYORNIS was a running bird about sixteen feet in height—the largest bird that ever existed. It lived in Madagascar about one and a quarter million years ago.

ARCHAEOPTERYX.—This bird was only a little larger than a pigeon and lived about 120 million years ago. It was a very bad flier. So far three skeletons have been found in Bavaria. This was the earliest bird that ever existed and had many primitive, reptile-like features.

EXHIBIT 5: AGE OF MAMMALS.

BRONTORNIS.—This was one of the birds which existed in the lower Tertiary age—70 million years ago.

SIVATHERIUM.—This was a short-necked giraffe-like animal with branched horns. At the shoulder it was seven feet tall. It is the only extinct mammal whose bones have been found in the Indian region.

MOERITHERIUM was the first member of the elephant family and lived about 70 to 45 million years ago. It was of the size of a pig and stood three feet high at the shoulder. It had no trunk or tusks. It fed on marsh and aquatic vegetation.

TETRABELADON was the forerunner of the modern elephant. It lived about 35 to 15 million years ago and was a plant-eater. It had four tusks and was much bigger than the elephants of today.

EXHIBIT 6: ANIMALS OF THE PAST—AGE OF MAMMALS.

DINOCERAS was a herbivorous mammal which lived about 40 million years ago.

MEGATHERIUM.—This giant sloth lived in the forests of America from about one and a half million years ago till quite recent times. It was about eighteen feet in length. It fed on the leaves of trees that it pulled down with its strong forelimbs.

GLYPTODON.—This extinct mammal which lived during the Old Stone Age (about 500,000 years ago) was a carrion-eater (i.e., it fed on dead animals) and might have been related to the Armadillo of South America. It was about five feet high and measured ten feet from the head to the tip of the tail.

ELEPHAS PRIMIGENIUS (The Mammoth).

This is the best known among the animals that lived during the Old Stone Age. This huge elephant was about twelve feet in height. Its body was covered with thick hair, which together with a thick layer of fat under the skin, protected it from the severe cold of the Ice age. It had very well developed re-curved tusks. The large hump on its back was perhaps made up of fat on which the animal lived in winter, when all vegetation was buried under the ice (Fig. 3).

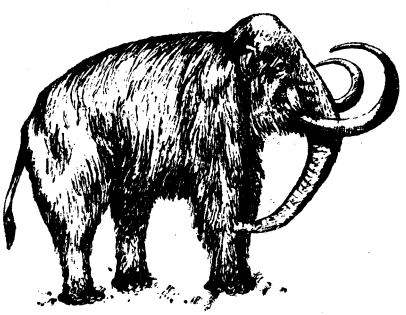

FIG. 3.

Fig. 3—The Mammoth.

EARLY MAN

No secret has been so closely guarded by nature as the appearance (emergence) of man on the earth. The story of man as far as we know begins about 500,000 years ago. In the beginning he was nothing more than a food gatherer. Later he made use of crude stone implements to help him to collect food to keep himself alive. As years passed he discovered that he could hunt and kill animals like the sabre-toothed tiger and the mammoth with bows, and arrows with chipped stone tips. To protect himself from the extreme cold he took shelter in caves and kept himself warm with a fire that he started by knocking two pieces of flint against each other. He covered himself with the skins of animals that he killed, and lived by the side of streams and rivers and that provided him with fresh water.

EXHIBIT 7:

This exhibit is a very instructive one which tells the story of early man. Here, paintings in the background show a typical dwelling of early man and scenes illustrating the hunting of the sabre-toothed tiger, the bison and the mammoth. Against this background are mounted stone tools, axes, spearheads and pieces of flint used by these early cave-dwellers. The gourd and bamboo vessels exhibited here give an idea of the storage vessels that might have been used in those early days.

THE PLANT KINGDOM

One of the most interesting features of the plant world is the great variety of size, form and behaviour that we come across. There are plant forms which are about 1/50,000 of an inch long and also trees which grow to a height of 300 feet or so like the Red-wood trees of California. There are at present about 350,000 species or varieties of plants. Some of these lack roots, stems and leaves, while others possess these parts. Some bear flowers and seeds while others do not. Certain varieties of plants grow to be big trees while others are vines, shrubs or herbs.

EXHIBIT 8:

A few select and representative models, dry painted specimens and paintings of different types of plant forms

have been grouped together and exhibited here to illustrate the major groups in the plant kingdom. Starting with the most simple of plant forms (the algae, bacteria, etc., which belong to the group Thallophyta) and ending with the two major groups of flowering plants—the Monocots and the Dicots—some of the well known plant forms of each group are represented. Short explanatory labels give the distinguishing features of each group.

THE ANIMAL KINGDOM

The variety of animal life is really amazing. There are in this world more than a million different kinds of animals. They walk, crawl, hop, swim, fly or burrow. In size they vary from the one-celled creatures like the amœba which can be seen only through a microscope to the great Blue Whale which sometimes reaches a size of nearly a hundred feet. More than 45,000 varieties have skeletons inside their bodies and about 800,000 have a horny skeletal covering on the outside. There are countless others which have no skeleton at all. All these animals have been grouped together on the basis of certain common characters.

EXHIBIT 9:

Here each major group of the animal kingdom is represented by a few well known animals, in the form of stuffed specimens, dry painted ones and enlarged models. These are mounted against a background of different colours. Brief labels give the special features of each group of animals starting with the Protozoans (one celled animals) and ending with the Mammals, the most highly evolved among the vertebrates.

EXHIBITS 10, 11 *AND* 12: LOOKING INSIDE ANIMALS

These are a series of enlarged labelled models, of a dissected earthworm, a fish, a frog, a garden lizard, a pigeon and a rabbit. These models serve to illustrate the different organ systems in these important animal types, which represent the invertebrates and the five classes of vertebrates, namely, Fishes, Amphibians, Reptiles, Birds and Mammals.

THE DIGESTIVE AND RESPIRATORY SYSTEMS IN MAN

Food and water are absolutely essential to keep us strong and active. But the food we take in cannot be directly absorbed by the body and used to produce energy. It must first be broken down into simple substances which can be absorbed into the blood stream, and also separated from those substances that the body does not require. This is the work of the digestive system.

The body requires oxygen to produce energy and warmth. Oxygen is present in the air around us along with other gases. A group of organs—the throat, the wind pipe, the bronchial tubes and the lungs—do the work of taking in air, and separating the oxygen from the other gases. They also remove the carbon-di-oxide which is a waste product. These organs form the respiratory system.

EXHIBIT 13 :

Enlarged models of the digestive and respiratory systems in man are exhibited here with all the different parts labelled. The first model shows clearly the path that a morsel of food takes from the time it enters the mouth, to the time it leaves the body after all the nourishment has been absorbed.

The second model is that of the respiratory system showing the trachea or the wind pipe leading from the mouth and branching into two before entering the lungs.

THE CIRCULATORY SYSTEM IN MAN

We spend a great part of our life moving about and working. The energy to do so is got from the food we eat, and the oxygen we breathe in. The oxygen is drawn into the lungs, and there, passes into the blood stream, through the walls of minute blood vessels called capillaries. The oxygen is then carried by the blood to the heart from where it passes to every single cell in the body. Here the oxygen combines with the food substances which have been absorbed into the blood stream and produces warmth, energy and carbon-di-oxide. This carbon-di-oxide which is of no use to the body is carried back to the lungs by the

blood stream from where it is expelled, into the outside air. This never ending movement or circulation of the blood through the veins and arteries is controlled by that wonderful muscle, the heart, which is just as big as your fist. In a single day the heart of an adult human being beats a hundred thousand times and pumps more than 17,000 pints of blood through the blood vessels. The heart, veins, arteries and capillaries form the circulatory system.

EXHIBIT 14:

Exhibited here are (1) an enlarged model of the heart which can be taken apart in four pieces to show the interior with its four chambers and valves which control the flow of blood in one direction and (2) a working model illustrating the circulation of blood in the human body.

HOW YOU KNOW WHAT YOU KNOW

All we know of the world around us we know through our five senses—of sight, hearing, taste, smell and touch. The proper working of these senses is controlled by the brain which is the great nerve-centre of the body. It is made up of three parts, the Cerebrum the Cerebellum and the Medulla oblongata. The Cerebrum is the seat of intelligence, will, memory, sensation and emotions. The Cerebellum is the part which controls all voluntary actions. The Medulla oblongata governs the involuntary movements like breathing and beating of the heart. The brain is connected by means of nerves with the sense organs or seats of the different senses—the eye, the nose, the ear, the skin and the tongue. These nerves which end as fine branches in the sense organs receive different kinds of impulses or stimuli and transmit them to the brain, where they are interpreted into different sensations.

The eye.—The eye is like a camera. It has a lens, an iris which can expand and contract like the regulating shutter of a camera and a retina or sensitive screen—on which the image is formed. Minute branches of the optic nerve found in the retina pass the image on to the brain.

The nose.—In the nose there are three small chambers each covered by a mucous membrane furrowed by many

blood vessels. The lower two help to trap the dust and disease germs we breathe in. The upper chamber is equipped with olfactory cells, or smell cells which are the tiny branches of the olfactory nerve which leads to the brain. These cells are sensitive to different odours.

The ear.—The ear is not only an organ of hearing but it also helps us to maintain our balance. Sound waves collected by the outer ear reach the ear drum and cause it to vibrate. These vibrations are carried across the middle ear by a chain of three small bones. In the inner ear there is a coiled tube called the cochlea which is supplied with fine nerve endings of the auditory nerve which carries the messages to the brain where they are interpreted as sounds.

The three semicircular canals in the inner ear help us to maintain our balance.

The skin.—The skin consists of two layers—an outer one, the epidermis and an inner one, the dermis. The dermis is supplied with nerve cells which are sensitive to heat, cold and pressure.

The tongue.—The tongue covered with many protrusions called taste buds each of which is supplied with nerve endings which are sensitive to different flavours—sweet, salt, bitter and sour. The different parts of the tongue specialise in perceiving flavours. The front of the tongue, for instance, helps us to appreciate sweet flavours and the back, bitter flavours.

EXHIBIT 15 :

Exhibited here are enlarged dissectible models of the brain, eye and the ear, an enlarged model of a section of the skin, and enlarged coloured diagrams of the nose and the tongue with all the different parts labelled. Short explanatory labels explain the different functions of each organ.

TRANSPORT THROUGH TIME

The Evolution of Water Transport

In pre-historic times man may have moved through water, clinging to a log and paddling with his hands and

feet or with a branch. This later on gave him the idea of joining together logs of wood to form a raft. Soon after man learnt to make the first stone tools, he started improving these very primitive means of transport. The early boat was made by burning the inside of a tree trunk and chipping away the charred wood. This boat was made to move through water by means of oars. Some boats had a single sail which was used when there was a strong wind blowing. This led to the making of single-masted sailing ships. As centuries passed the single-masted sailing ship gave way to the three-masted ship of the 15th century and the fully rigged sailing ship of the 18th and 19th centuries.

The next important development in water transport came with the discovery of steam power. This made it possible to drive huge ships through water at considerable speed, by means of the power supplied by steam. The first steam-ship was made about the year 1790, and was made of wood. But later, in the 19th century iron and steel were used for making ships, instead of wood.

EXHIBIT 16:

Miniature models of a raft, a canoe, a boat with a single sail and a fully rigged ship are exhibited here. The last is a scale model of the fully rigged sailing ship "Privateer Flame" (Fig. 4).

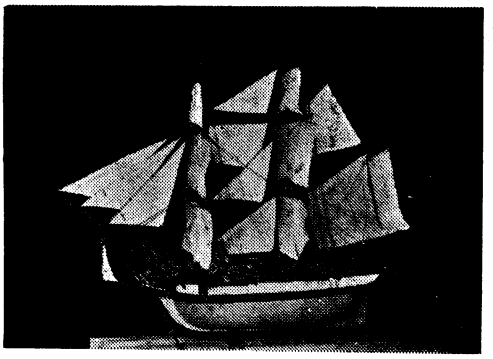

FIG. 4.

EXHIBIT 17:

This is the last in the series of models illustrating the evolution of water transport. It is a small scale sectional model of the steamer "San Francisco Xavier" built by the Green Oak and Grangemontn Dockyard, Scotland.

Fig. 4—"Privateer Flame".

Evolution of Land Transport

At the beginning of human history, man travelled on foot. He carried his loads, or dragged them behind him on the ground. Very soon he discovered that by using a simple sledge (Fig. 5), he could move heavy things very easily, as long as the ground was not very uneven. The next and the most important change in the mode of transport came with the invention of the wheel. This wheel which was at first a flat disc fixed to the axle, later on took the form of the modern wheel with its many spokes. Different kinds of vehicles fitted with wheels and drawn by either man or domesticated animals like the horse or donkey became quite common.

FIG. 5.

The mechanical age in transport was to come much later on, in the 19th century. The invention of the steam engine led to the building of locomotives which moved on rails. The Rocket (Fig. 6), one of the earliest locomotives, made its maiden run in 1829 at 14 m.p.h. These locomotives were improved upon and new ones which could travel faster and drag heavier loads were built. (The efficiency of the steam locomotive has been increased greatly and even electric traction is being employed these days.) Then fifty years later, in 1875, Daimler invented the light, high speed petrol engine (internal combustion machine) and Carl Benz had the honour of putting the first motor car on the road, fitted with one such engine. The discovery of the pneumatic tyre (air-blown tyre) a little later on made road transport faster and more comfortable. To-day the automobile is the vehicle of the road.

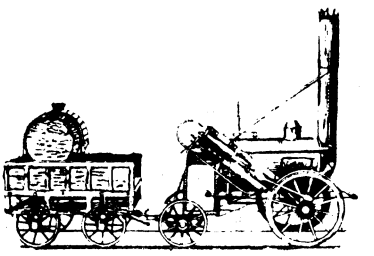

FIG. 6.

Fig. 5—Sledge drawn by Dogs. Fig. 6—The Rocket (1829).

EXHIBIT 18:

This exhibit illustrates the evolution of land transport from the day man started using a sledge. Miniature models of wheeled vehicles, locomotives (Fig. 7), automobiles, bicycles (Fig. 8) and motor cycles (old as well as modern types) are exhibited here. Models of the Rocket (one of the earliest locomotives to be used) and the T. Ford (one of the first automobiles to be put on the road), exhibited alongside their modern counterparts give a vivid idea of the great progress made in the construction of locomotives and automobiles.

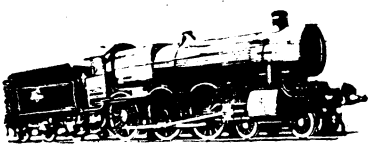

FIG. 7.

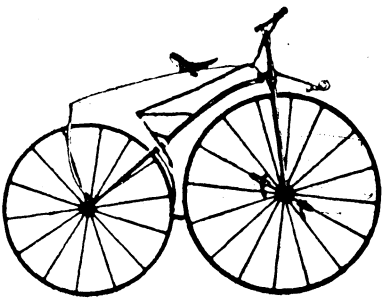

FIG. 8.

THE EVOLUTION OF AIR TRANSPORT

Until about two centuries ago, man was bound to the earth. He could move over land and water but he could not soar into the air. Man's earliest attempts to fly ended in disaster and many lives were lost (Fig. 9). But he was to succeed years later. It was in 1783 that the two brothers, Jacques and Joseph Montgolfier made a huge balloon, filled it with hot air and made the first successful flight in the world. This balloon had one drawback. Once it was in the air it was at

FIG. 9.

Fig. 7—A locomotive engine. Fig. 8—An early bicycle.

Fig. 9—Lilienthal Gliding Pioneer 1848–1896—In fantastic contraptions of wooden wings.

the mercy of the winds, because it lacked a steering device. This type of a balloon later on gave way to the huge air ships (Fig. 10) which were filled with hydrogen and could be steered in any direction.

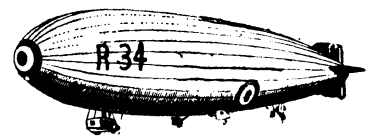

FIG. 10.

While these lighter than air machines were being sent up into air, people in different parts of the world were trying to make a machine, heavier than air, which would be capable of flight. Even as early as the 15th century Leonardo da Vinci had made designs for one such machine, but it had lacked the power to propel it. The invention of the internal combustion machine at the end of the 19th century, solved this problem. But it was left to the careful experimenters, the Wright Brothers to overcome the difficulty of controlling an aeroplane in flight. In 1903 they made their first flight at Kitty Hawk in a heavier than air machine (Fig. 11) to which they had fitted a petrol engine. (It will be of interest to note that this first flight lasted only for 12 seconds, but on the same day after a few trials the machine flew 852 feet in 59 seconds.) Since that day aviation has taken rapid strides, and the first plane powered by jet engines which was invented by Sir Frank Whittle took to the air in 1939.

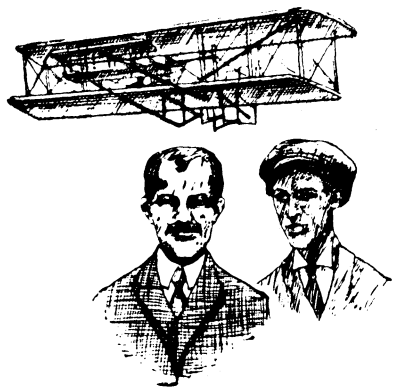

FIG. 11.

Today jet and turbo jet air liners carrying hundreds of passengers across continents in a matter of a few hours are very common.

Fig. 10—The 'R34' Airship first to cross the Atlantic.

Fig. 11—The Wright Aeroplane and the Wright Brothers.

EXHIBIT 18:

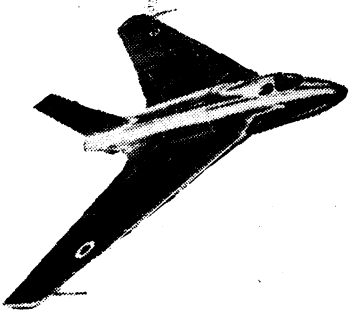

FIG. 12.

Suspended from the top of the show case to give a realistic effect are miniature models of an Airship, a Twin Engine Propeller Aircraft and a Jet Air Craft (Fig. 12).

SPACE TRAVEL

For many centuries space travel was considered to be a dream which would never come true. But now with the great advance made in science, specially in the field of air travel, the time has come when man's desire to travel to and explore other worlds in the universe, is possible.

Scientists first succeeded in sending up an artificial satellite, Sputnik, on 5th October 1957. Since then they have launched other satellites which have circled round the earth and even the sun. They have sent animals and men into space in these satellites and have brought them back alive.

EXHIBIT 19: THE EARTH'S SATELLITE.

This is a working model showing an artificial satellite in orbit round the earth, which can be set in motion by means of a switch. This is the last in the series of exhibits illustrating the evolution of air transport and represents the advent of the " Space Age " in the history of mankind.

COSTUMES OF INDIA

EXHIBIT 20:

Here dolls about 30 cms. in height, dressed in the different regional costumes of India are arranged round

Fig. 12—The 'De Havilland 108' (1947). The first British aircraft to exceed the speed of sound.

a cut out plywood map showing the different Indian States. This exhibit is intended to illustrate the characteristic manner in which people dress in different parts of the country and emphasizes the amazing diversity in Indian costumes.

INDIAN CLASSICAL DANCES

Indian classical dance had its origin in mythology—when Shiva himself is said to have danced the cosmic dance—and was passed down to us by that great sage, Baratha, who can be called the father of Indian dances. In the beginning classical dance in India must have followed the rules laid down by Baratha in his "Natya Sastra" but in course of time it seems to have been influenced by different cultures, giving rise to the four modern schools of dancing, namely, Barathanatyam, Kathakali, Kathak and Manipuri.

BARATHANATYAM.—Among the Indian dances, Barathanatyam, as it is practised today, very closely follows the rules laid down in the Natya Sastra. The origin is very ancient and dates back to the 3rd century A.D. or even earlier. It is India's most brilliant dance and is popular in South India.

KATHAKALI or "Story play" which originated in Kerala is really a dance drama. The themes are based on the Mahabaratha, Bhagavatha, Sivapurana and Ramayana. Elaborate facial masks, glittering head dresses and fantastic costumes are characteristic of this dance.

KATHAK.—This dance had its origin in Uttar Pradesh about three hundred years ago. It was then a court dance and flourished under the patronage of the Moghuls.

MANIPURI DANCE.—Manipur in Assam is another home of artistic dancing in India. Dancing among Manipuris is considered an amusement and a religious ceremony. The Rasa-lila is the most popular dance there. The theme of the dance is the story of Krishna and the Gopis. The costumes of the Gopis which are attractive and picturesque add to the beauty of the dance. Krishna, the only male character, wears a special head dress.

EXHIBIT 21 : DANCES OF INDIA.

Here ten dolls dressed in colourful dance costumes illustrate some of the poses of the four classical dances of India—Barathanatyam, Kathakali, Kathak and Manipuri.

EXHIBIT 22 : KATHAKALI.

Exhibited here are seven miniature models made of papier mache of some well known characters seen on the Kathakali stage. They represent Rama (Fig. 13), Sita (Fig. 14), Hanuman, Ravana, Kattalan, Thadi and Krishna. The costumes consist of many pleated billowing white skirts, long sleeved tunics with ornamented breast plates and yards of cloth garlands ending in rosettes. The different shades of colour used in the make up of the actors indicate the basic qualities of the person who is portrayed. For

FIG. 13.

FIG. 14.

Fig. 13—Kathakali doll—Rama.
Fig. 14—Kathakali doll—Sita.

example green and amber signify the noble types like Rama and black with protruberances on the nose and forehead represent a villain like Ravana.

YUGOSLAV DOLLS

EXHIBIT 23 :

The twelve dolls exhibited here are dressed in the different regional costumes of Yugoslavia and form a nucleus for the proposed exhibit " Costumes the world over ".