

READING # 1

COMMUNICATION

Communication is the basic function of society. It is a force of social organization. Where there is social organization, there is communication. Where there is no communication, there is no society.

Communication is the transmission and reception of energy. There are three general types of communication: physical communication, animal, and human communication.

Physical communication is the transmission of energy from one object to another, or the exchange of energy between two or more objects. An adequate example of this type of communication is the force of gravity.

Gravity is an exchange of energy in space, between two or more objects. Objects in the same gravitational field are subject to a direct exchange of energy. Therefore, one planet in the solar system is subject to the gravitational attraction of the sun, and at the same time, to that of all the other planets in the system. All objects in the solar system are, therefore, in direct or indirect communication with all other objects in the system. This exchange of energy (this communication) is the immense, basic and essential "social force" in all parts of the universe.

Atomic energy is a medium of physical communication similar to the force of gravity. The attraction of the positive protons in the nucleus of the atom for the negative electron is the force of "communication" essential to the existence of all atomic material: that is, all matter. Therefore, the force of physical communication is the basic and essential force in all substance and matter, animate or inanimate, in all the universe.

THE EVIDENCE OF PHYSICAL COMMUNICATION

Communication among the elements of matter, and among material objects is essentially a transfer or an exchange of energy. The earth, then, is in communication with the sun via the force of gravity and solar radiation.

With reference to solar radiation, the sun is a transmitter, and the earth a receiver (or receptor) of energy. In this context, the two objects: sun and planet, are in physical communication. It is important to observe that both the sun and the earth are subject to modifications and changes, as a result of this communication. The temperature, humidity, chemical composition of the terrestrial atmosphere and the geophysical formation of the planet and a multitude of other physical conditions are subject to direct change or modification as a result of solar radiation.

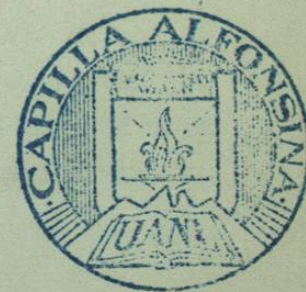
With the generation and emission of immense quantities of atomic energy, there is a constant internal process of energy transfer and exchange, chemical action and reaction and atomic disintegration, within the sun.

For this reason, the final evidence of communication is the modification of attitude, position or condition of all objects or members of a system.

ANIMAL COMMUNICATION

All animals are capable of some type of communication. In simple form, animal communication is a response to a stimulus. The stimulus, is, in some cases, a simple change or modification in the environment of the animal; for example, a modification of the temperature or the humidity of the air, a change of atmospheric pressure, and combinations of these and other natural phenomena in the environment. Thus, when the response to these environmental changes is a modification of behavior on the part of the animal or animal species, a type of "ecological" communication is complete.

The annual migration of some species of birds is an example of a group response to environmental change. Environmental changes are information to these birds: "It is time to migrate". The birds are "in communication" with their environment, and a perceptible and characteristic pattern of behavior is the result.



READING # 4

ANIMAL AND HUMAN COMMUNICATION

Among some species, communication is a definitive social function. This type of communication is the basis for the organization and division of labor, the social stratification, and, in general, the relatively complex social structure -- notable among ants and bees.

Finally, there is no doubt that the individual members of some animal species are capable of direct communication. There are numerous examples of this. There are exchanges of information among dolphins; there is extensive current research to establish human communication with this aquatic mammal. Certain tribes of monkeys are capable of direct vocal communication with a rudimentary abstract vocabulary, representative of primitive language symbolism. Many species of animals are capable of the transmission of a variety of abstract ideas and complex emotions in direct communication.



READING # 5

SPACE FACTS

WE ARE ON EARTH

From out in space, the planet Earth looks like a bright blue and white ball.

...SPINNING AROUND THE SUN ...

Earth is part of a system, a group of planets spinning around a star. The star in our system is called *Sol* the sun. So we live in the Solar System. Solar means "about the sun."

THE SUN IS ONE STAR AMONG MANY STARS....

Our star, the sun, is near the edge of a cloud full of stars called the Milky Way Galaxy. A galaxy is a really big group of stars. How big is big? Most galaxies have billions of stars.

BEYOND ONE GROUP OF STARS, THERE'S ANOTHER GROUP... AND ANOTHER

There are many, many galaxies. All of them — and all of space — is called the Universe.

TWINKLE, TWINKLE, COLORFUL STARS

All stars don't shine white. Our sun gives a yellow light. The hottest stars shine blue, and the coolest ones shine red. Every star has a little bit of all these

colors, but each star has one color that outshines the rest.

A SPOT THAT'S HOT

The hottest place in our solar system is not on the sun! A cloud near the planet Saturn hits temperatures 300 times hotter.

EARTH!...

The Earth turns a little bit slower each year. It's only a teeny tiny bit slower, but all those bits add up. 600 million years ago, it turned so much faster, a day lasted just 21 hours.

SNOWBALLS IN SPACE....

How is a comet like a snowball? It's made of ice and dust, just like snow. Comets zoom through space, trailing thin tails. They look like stars with ponytails. Comet is a Greek word that means "long-haired star."

A FOOTPRINT IS FOREVER...

When astronauts walk on the moon, they leave spacey footprints behind. There's no wind on the moon to brush the tracks away, so they'll probably be there forever. Unless someone shows up with a broom....

