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Ever since man became curious about his surroundings so too did his imagination soar and while we were thousands of years away from learning how to fly, we first braved the seas and oceans. It was by instinct when they realized that they had to come up with a standard unit of measurements to determine the length, width, height, volume of certain objects as well as the distance that they had to travel in order to approximate the time it takes to travel from one spot to another. As we look through the history pages we find that our ancient counterparts were innovative and brilliant when they first constructed modes of transportation.

Boating

It is now believed that boating was conceived in pre-historic times as far back as 45,000 years ago and that it was the Pacific Northwestern indigenous peoples that first developed the crude dugout canoes. However, systematic maritime navigation was not achieved until 5,000 years ago in the ancient Mauryan Empire in the Indus River in what is now known as the country of India. Meanwhile in Mesopotamia the ancient Sumerians, Egyptians, Kingdom of Punt, Babylonians, Persians and Phoenicians developed river boating for fishing and trade. Among the system of measurements that they had developed were:

Sumerian basic length units:

â€¢ Grain which is approximately 0.0025 meter

â€¢ Finger which is approximately 0.015 meter

â€¢ Foot which is approximately 0.333 meter

â€¢ Cubit which is approximately 0.497 meter

â€¢ Step which is approximately 1.000 meter

â€¢ Reed which is approximately 3.000 meters

â€¢ Rod which is approximately 6.000 meters

â€¢ Cord which is approximately 60.000 meters

â€¢ Cable which is approximately 360 meters

â€¢ League which is approximately 10,800 meters

Egyptian basic length units:

â€¢ Royal cubit is roughly 52.5 centimeters

â€¢ Standard cubit is roughly 45 centimeters

â€¢ Remen is roughly 37.5 centimeters

â€¢ Djeser is roughly 30 centimeters

â€¢ Span (large) is roughly 25 centimeters

â€¢ Span (small) is roughly 22.5 centimeters

â€¢ Fist is roughly 10.75 centimeters

â€¢ Hand is roughly 9.38 centimeters

â€¢ Palm is roughly 7.5 centimeters

â€¢ Finger is roughly 1.88 centimeters

â€¢ Khet (rod) is roughly 52.5 meters

â€¢ River measure is roughly 10.5 kilometers

Judging from their skills in formulating these basic length units, it can be said that they had a certain level of sophistication. Modern marine navigation uses various measuring equipment such as radar, sonar and global positioning system (GPS). This allows them to measure their shipâ€™s cruising speed (which is in knots or the metric equivalent of 1 nautical mile), the depth of the water (which can be measured in feet, meters or yards), to determine their exact position on the globe and to determine their relative bearing (distance) from their point of origin and their destination.

Aerial navigation

According to modern history it was the Wright brothers who first braved the skies when they created an airplane that flew for about 6 minutes. From that time on aircraft development soared and the whole world used it for commercial passenger transport, research, and aerial combat for the military. Initially all aircraft navigation adapted the metric (SI) system, but by the 1960â€™s there had been major changes in measuring length, distance and cruising speed for aerial navigation. All aircraft use aviation electronics or avionics to effectively navigate their way through the skies but unlike ships and sea vessels they heavily rely on radar and visibility. Except for the cruising speed of an aircraft all other forms of measurement is done with the metric system. So a pilot may identify his cruising speed of 300 knots (which is literally 345.3 miles per hour) and report his relative bearing at 600 statute miles (basic mile) heading 123 degrees north by north-east. In simple terms it means that the aircraft if travelling at 345.3 miles per hour, 600 miles out from its destination (probably an airstrip or an airport) heading in a direction of north by north-east. Determining the current location of the plane, the speed that it travels and the direction itâ€™s heading is very crucial for its estimated time of arrival (ETA), and the radars and computers in the aircraftâ€™s avionics help makes this possible. Meanwhile control towers on the ground guide the aircraft to the runway in order to avoid unwanted mid-air collisions and accidents.

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