

Physics for presidents

Business



**ASSIGN
BUSTER**

1. What are the advantages of the “ Metric” system of units over the “ English” system? Are there any advantages to the “ English” system? When using the metric system, it is easier to change measurements than when using the English system (Guenthner, 2008). This is because the metric system uses the powers of 10s. As such, switching from centimeters to kilometers to meter is also very easy. On the other hand, the English system is sophisticated with its set of rules that govern conversion.

Another advantage of the metric system is the simple vocabulary that is easy to use. Every measurement unit has its own base word. For instance, gram is the base word for weight and meter for length. These base word are given prefixes such as kilo, which signifies 1000. The English system has no such vocabulary, which implies that an individual needs to memorize the words together with rates of conversion. However, the English measurement system has an advantage of making calculations easy to perform.

This reduces the chances of misunderstandings and mathematical errors. 2. The U. S. is the only major industrialized country that still uses the “ English” system of units. Why do you suppose that this is the case? Approximately 95 per cent of entire world’s population uses the metric measurement system.

However, the United States still uses the English system of measurement. According to Gupta (2010), the main reason why the US uses the English system is that it is less complex. The metric system of measurement implies that a gram is similar in all nations using the system. Since errors might arise when more than one system is being used alongside another, the metric system seems practical in everyday and scientific uses. The English

measurement system also uses the decimal system, which further makes conversion of measurement easy and seamless.

For example, converting grams to kilograms or millimeters to meters requires one to move the decimal place from left to right. 3. Do you think that the U. S. will ever fully adopt the metric system? Why or why not? The United States will never adopt the metric system.

According to Lewandowsky (2012), the law was never influential enough to push the country into using an efficient and easier-to-understand measurement system. Americans have a form of dual personality as far as this is concerned. The metric system can be used in science but it might fail in other areas. Another reason why America will never adopt the metric system is the perception that it is different from other countries and that the English system is what they have been using. The fact that America is able to depend on itself is also a reason why American will never adopt the Metric system.

America is big nation and does much of its business within its borders. Britain and other countries are small countries that are forced to collaborate with each other. Therefore, there is the need of developing a common measurement system. 4. Do an online search to find examples of situations where a conflict of units has caused some kind of problem.

This should be an example like the crash of the “ Mars Climate Orbiter”. The bumpy blunder encountered by the Tokyo Disneyland Space mountain roller coaster is example of situations where conflicts of units caused problems. The event took place in December 2003. The roller coaster came to an
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instant stop earlier than the end of the ride. The problem encountered by the roller coaster resulted from a broken axle.

The axle fractured since it did not meet the requirement of the design. Due to its inappropriate size, the fissure between axle and the bearing was over 1 millimeter. The design of the axle required the gap to be 0.2 mm. The buildup of excess stress and vibration eventually resulted into the break. The system of units had once again caused an accident.

The requirements for the axle and bearing were converted to metric units in September 1995. However, in 2002, the English unit plans before 1995 were used to order the 44.14 mm axles and not the required 45 mm axles. We use the scientific method to help us gain understanding about how the world works. What is the role of scientific consensus in reaching this understanding? How does the issue of consensus interact with the issue of skepticism in science? Human beings are facing challenges such as food insecurity.

Societies are facing confrontations with many possible dangers, which, if not dealt with, might threaten both the present and future generations. Several challenges require the use of scientific studies and cautious deliberation in order to be resolved. Cognitive science offers some necessary tools needed to comprehend how human beings think about these universal issues. This connection is neither new nor surprising since other researchers have provided similar reports on global issues. Furthermore, the general factor that captures the acceptance of science is correlated with other factors representing the perceived agreement among scientists.

This implies that the degree to which people view consensus among scientists drives their view on science. In other words, scientific consensus shapes the views of people on scientific issues affecting the world. There is a relationship between skepticism and scientific consensus. Sometimes consensus on global issues reached at by scientists can be questionable. This is usually the case when the public's view does not agree with the perceived consensus of scientists.

6. What are some of the dangers when political pressure is put on scientists to change their results? What happens when entrenched political or economic interests are threatened by scientific findings? The involvement of politicians on global issues significantly mounts pressure on scientific findings. Politicians can do anything to serve their best interest. Consequently, they cannot tolerate scientific results that will affect their interest. Scientific results might be correct, but political pressure on scientists might influence them. People usually want to hear what is good, and not what threatens their existence.

Politicization of scientific issues usually attempts to create what is pleasant to people, which is not real. According to Lewandowsky (2012), politicians can make the public to perceive serious issues as simple matters that can be solved by forcing scientists to present wrong facts to the public. When political or economic interests are threatened by scientific findings, politicians often provide convincing reasons to the public to get rid of their fears.