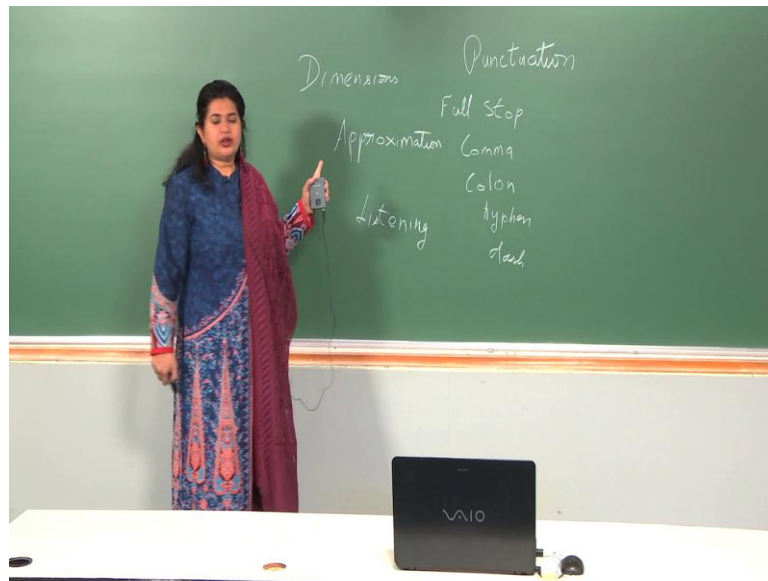


**Technical English for Engineers**  
**Prof. Aysha Iqbal**  
**Department of Humanities and Social Science**  
**Indian Institute of Technology, Madras**

**Lecture - 18**  
**Punctuation**

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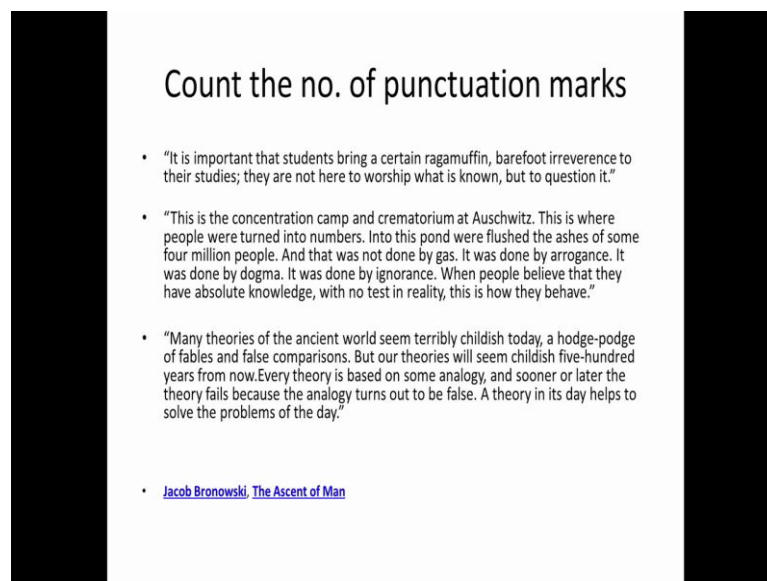
Good morning friends. So, today we are going to do punctuation. This will be the first part of this lecture, punctuation and soon I will have another part of punctuation also. But, let us see what is punctuation and why we need it, when we speak we pause at certain places and that is a sort of verbal punctuation. When we listen and the speaker is speaking something then we also again there are certain invisible punctuations there that may change the meaning of what the speaker is saying. So, punctuations are important; in written language punctuations are of extreme important.

Today, we are going to look at full stop, comma, colon, hyphen and dash. In particular, soon in my next lecture, I will be dealing with brackets and other kinds of punctuations marks that may be of use to you. See, I know that as engineers, as technical writers, you need not have much use for certain marks such as let us say question mark or exclamation mark; question mark you will be needing only when you write or read a straight forward question.

I am now catering more to what you would need and require. So, these are the highlights for today. Apart from that, I will also do a little bit of listening very interesting passage for you and then we look what are dimensions and properties which are extremely important for people in your field. We will also look at approximation the way we express numbers. All these I am sure you would find of great relevance to your speaking, writing and reading.

So, as I was saying before, the main purpose of punctuation is to make the meaning of a written passage clear, when we read and when we write meaning comes across better and more clearly when there is punctuation. Punctuation marks are essential for the exact and accurate communication between the reader and the writer. Punctuations also serve to add a style to your writing. There are great writers, who have made extremely innovative use of punctuations and that adds to their style, but not all of us are creative writers and therefore, we need to follow a set of rules, so in your case, in particular, you need not use too much or too little of punctuation, but in moderation, and wherever required. Today's class is all about how people in your situation can have sufficient understanding of punctuation and how to use them judiciously.

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Count the no. of punctuation marks

- "It is important that students bring a certain ragamuffin, barefoot irreverence to their studies; they are not here to worship what is known, but to question it."
- "This is the concentration camp and crematorium at Auschwitz. This is where people were turned into numbers. Into this pond were flushed the ashes of some four million people. And that was not done by gas. It was done by arrogance. It was done by dogma. It was done by ignorance. When people believe that they have absolute knowledge, with no test in reality, this is how they behave."
- "Many theories of the ancient world seem terribly childish today, a hodge-podge of fables and false comparisons. But our theories will seem childish five-hundred years from now. Every theory is based on some analogy, and sooner or later the theory fails because the analogy turns out to be false. A theory in its day helps to solve the problems of the day."

• [Jacob Bronowski, The Ascent of Man](#)

Let us look at this slide. I am going to read it out for you. I want you to look at the

number of punctuation marks, please look at the slide. Let us read on. This passage is taken from a very influential book, *The Ascent of Man* by Jacob Bronowski. If some of you have not read it, I suggest that you please take a look at it, please do read it. It is a very interesting book, especially for those who are interested in technology and also in history. “It’s important or It is important that students bring a certain ragamuffin, barefoot irreverence to their studies; they are not here to worship what is known, but to question it”.

“This is the concentration camp and crematorium at Auschwitz. This is where people were turned into numbers. Into this pond were flushed the ashes of some four million people. And that was not done by gas. It was done by arrogance. It was done by dogma. It was done by ignorance. When people believe that they have absolute knowledge, with no test in reality, this is how they behave”.

“Many theories of the ancient world seem terribly childish today, a hodge-podge of fables and false comparisons. But our theories will seem childish five-hundred years from now. Every theory is based on some analogy, and sooner or later the theory fails because the analogy turns out to be false. A theory in its day helps to solve the problems of the day.”

Now, look at the punctuation marks you have quotation marks open and close these are quotations taken from *The Ascent of Man*. So, you have a quotation mark, where you are quoting someone, so here the writer is quoting Bronowski. Then you have a comma by certain ragamuffin, barefoot irreverence, and then you have a semi colon. A use of comma here would have been inappropriate not really desirable, because here the writer is trying to separate two ideas therefore semi colon is more relevant rather than a comma. See when he says ragamuffin and barefoot irreverence they both mean almost the same things. And then of course, you have a full stop and there is a comma and a full stop and close quotation marks, quotation marks are closing.

Now again, next this is the concentration and there is a full stop. In fact, the entire paragraph is full of full stops; this is stylistic writing of a very high order. Advance learners people or is scholars or writers are entitled to write this way to begin a sentence

with and; and that was not done by gas full stop, all this simple shorts sentences, but how effective. This does not mean that the writer does not know how to write compound and complex sentences; he is using simple sentences. It was done by dogma. It was done by arrogance. It was done by ignorance. He is using so many full stops to emphasize a point; emphasize what? That how arrogance and ignorance go hand in hand together and Auschwitz that is the place where holocaust happen where millions were killed in **gas** **guest** chambers during the Nadzira in Germany, so that is the famous concentration camp.

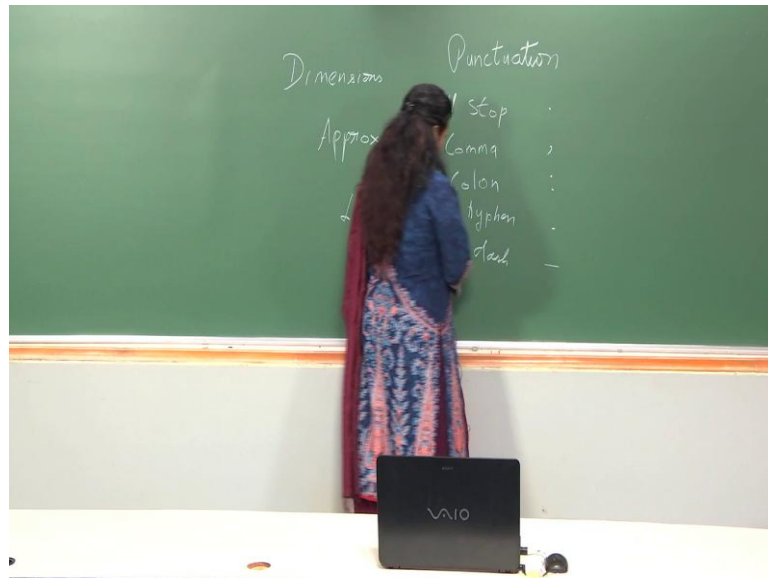
Now, let us look at the last one. There is a comma childish today, and then hodge-podge of fables and false comparisons full stop, and then you have again full stop and that is it. So, number of punctuation marks and also look at the hyphenated number five-hundred years, it is not five and hundred separate words joint by a hyphen. So, generally we use hyphen to denote numbers. So, as I was talking to about why do we use the full stop, the main use of the full stop is to end a statement.

Medicine has made great progress in the last fifty years. There are many factories in Chennai today. These are bare statements. This means a declarative statement or assertion that is not a question or an exclamation. An exclamation is expression of deep emotions, what have you done! It is not a question, I mean oh **!** my god, what have you done! This is an exclamation. In technical writing, **we** **you** do not need exclamation mark. It would be a rare kind of writing, where you would be needing that unless you are reading the passage by someone like Bronowski. You will hardly ever come across these passages these examples of exclamations.

So, again remember full stop suggest end of a sentence a declarative a statement. The generator broke down **twice** **to ice** this month **to ice**. In your particular cases, full stop is an extremely important punctuation mark. Sometimes there are a special users of full stop that is it is used in abbreviations mister - Mr., doctor - Dr., professor - Prof., p h d - PhD., and the full stop, so that is how it is used. Sometimes, it is also used in cases of indirect question, where there is no question mark, now this is again higher order speaking and writing. I was wondering, if then he would joined us today for dinner. I was wondering if I mean it has a sense of a question, but then it is also a statement. I want to

know if there is any truth about life on mars, I want to know if there is any truth about all these rumors, stated these are indirect questions, someone has to answer me, but **it is not** they do not end in a question mark, they end in a full stop.

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Going back to the comma; this is the point, and this is the colon - two dots, this is the hyphen, dash is a little longer bigger **.** So, the comma within sentences, the comma is easily the most important punctuation mark as you have already seen in that Bronowski passage. Its most typical use is to separate main clause linked by conjunctions such as, but, and, or, for, nor, so comma is used there; comma is used to separate a number of words. She is hard working comma clever comma persistent as well as and then you can have any other attribute. So, you need a comma, all suggesting qualities. If you want to say she is hardworking, yet cunning; so hardworking comma yet cunning.

Commas are also used to separate less essential materials from the rest of a sentence. This is the job of a dash also. You gave some additional extra information that is also one way of using comma. The comma is often used between clauses when the clauses are long contrasted and complete. Let us assume she is hardworking, yet very cunning to a human comma to forgive divines here you express contrasts. When we use commas between main clauses not linked by conjunctions like and, but, or, **nor**, it can lead to

comma splice or run on sentence. Now, let me give you a run on sentence, many students make these mistakes; my guide, my supervisor read my report he said it was no good. Now this is a run on sentence; it would look better more elegant more appropriate if there is a comma here. So, my supervisor, my guide read my report, he said it was no good.

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Let me give it you on the board. My supervisor read my report he said it was no good is a run on sentence. Clearly, look at it the layout itself shows there is something wrong with it. What would be the correct form, if you insert a comma, where do you insert the comma, my supervisor read my report, remove this he, and comma said it was no good and you are solving the problem of comma splice. Now, let me give you this text - a sample text and look at the kinds of punctuations that are used here particularly full stops and commas.

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## Sample text

- In the Roman period, it was commonly thought that disease was brought by the alignment of the stars. They believed that looking into astrology was the key thing to finding out why diseases occurred, for example, if a planet was lined up with another. Another belief for why diseases occurred was that there were evil creatures too tiny to be seen that were causing people's illnesses. This is very much true as nowadays we know about germs and how they can cause illness, showing that the Romans were on the right track for some part. Lastly, poisonous vapours in the air were also to blame for diseases. These theories were made by scientists in the Roman period, and lasted until the nineteenth century.

(<http://www.markedbyteachers.com/gcse/history/medicine-how-far-was-the-progress-made-by-the-romans-continued-in-the-middle-ages-explain-your-answer.html>)

Please look at the text and read with me. In the Roman period, it was commonly thought that disease was brought by the alignment of the stars. They believed that looking into astrology was the key thing to finding out why diseases occurred, **for example, let us say let us notice the way** for example, is separated by **pair appear** of commas this is the way it should be done, if a planet was lined up with another. Another belief for why diseases occurred was that there were evil creatures too tiny to be seen that were causing people's illnesses. This is very much true as nowadays we know about germs and how they can cause illness, showing that the Romans were on the right track for some part. Lastly, comma now again, firstly, lastly, secondly, eventually, they all need a comma after that; poisonous vapours in the air especially when we start a sentence with that these words. So, lastly, poisonous vapours in the air were also to blame for diseases. These theories were made by scientists in the Roman period, and lasted until the nineteenth century.

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## Exercise

- Progress made during the medical renaissance was due to several factors the printed book based on movable type adopted in Europe from the middle of the 15th century allowed for a wider distribution of medical ideas and anatomical diagrams better knowledge of the original writings of Galen in particular developed into the learned medicine tradition through the more open attitudes of renaissance humanism church control of the teachings of the medical profession and universities diminished and dissection was more often possible in addition the 17th century the microscope was an important technical advance helping to advance medicine.

Source: Boundless. "The Medical Renaissance." *Boundless World History I: Ancient-1600*. Boundless, 21 Jul. 2015. Retrieved 29 Dec. 2015 from <https://www.boundless.com/world-history/textbooks/boundless-world-history-i-ancient-1600-textbook/early-modern-europe-12/the-scientific-revolution-59/the-medical-renaissance-228-13262/>

Now, let us have an exercise here. Please look at this I have removed every punctuation mark from this passage, I would like you to solve it. I will read it for you. Progress made during the medical renaissance was due to several factors the printed book based on movable type adopted in Europe from the middle of the fifteenth century allowed for a wider distribution of medical ideas and anatomical diagrams better knowledge of the original writings of Galen in particular developed into the learned medicine tradition through the more open attitudes of renaissance humanism church control of the teachings of the medical profession and universities diminished and the section was more often possible in addition the seventh century the microscope was an important technical advance helping to advance medicine. See, without punctuations, how odd its sounds. So, please insert punctuation marks wherever necessary, wherever you think, it would look more appropriate.



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## Answer

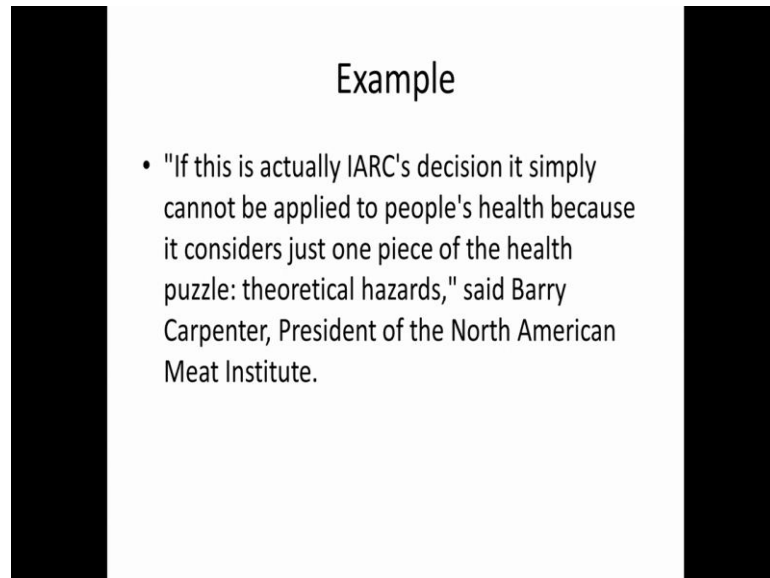
- Progress made during the Medical Renaissance was due to several factors. The printed book based on movable type, adopted in Europe from the middle of the 15th century, allowed for a wider distribution of medical ideas and anatomical diagrams. Better knowledge of the original writings of [Galen](#), in particular, developed into the learned medicine tradition through the more open attitudes of Renaissance humanism. Church control of the teachings of the medical profession and universities diminished, and dissection was more often possible. In addition, in the 17th century the microscope was an important technical advance helping to advance medicine.

Now, I am showing you the answer here. Look at the answer; please read on. Progress made during the Medical Renaissance and say this is we are talking about the age of Medical Renaissance, so therefore, M and R in capital was due to several factors, the full stop. The printed book based on movable type, comma, adopted in Europe from the middle of the fifteenth century, comma, allowed for a wider distribution of medical ideas and anatomical diagrams, full stop. Please read on and look at the slide. The better knowledge of the original writings of Galen, comma in particular, comma, again note that words such as in particular, lastly, when they occur in between for example, for instance, all they when they occur initially or in between a sentence, they generally take a comma, developed into the learned medicine tradition through the more open attitudes of Renaissance humanism - R capital. Church control of the teachings of the medical profession and universities diminished, comma, and dissection was more often possible. In addition, in the seventeenth century the microscope was an important technical advance helping to advance medicine.

Now, let us talk about another punctuation mark, the colon - two dots vertical. They are use to introduce material that explains adds, interprets, and also talk about what precedes it. We generally use this symbol to make list, and when we use the word following. I want from the market and then colon this, this, this, this, this. These boys are very

naughty in class: colon, this, this, this, this, this - the names or explain the following colon and then you have your passage, so that is some of the most common uses of the colon. It suggest parallels and contrast, man proposes; semicolon, god disposes, so that there you use a semi colon and not a colon.

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**Example**

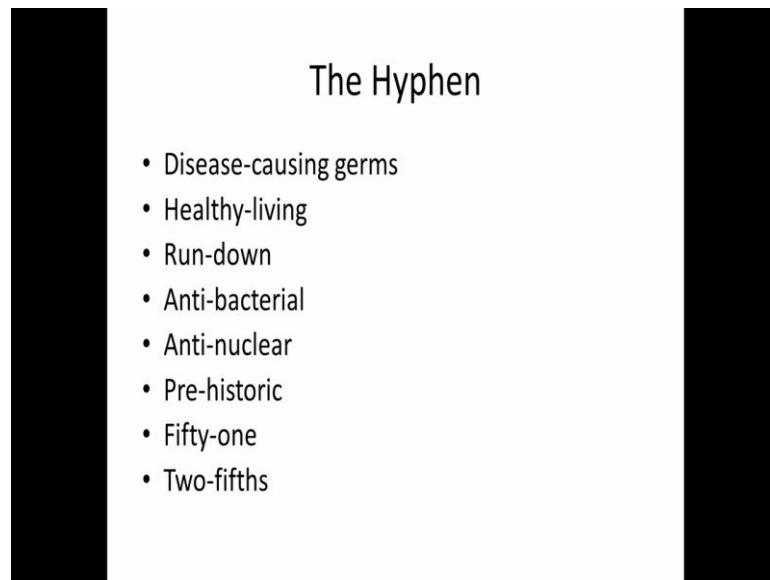
- "If this is actually IARC's decision it simply cannot be applied to people's health because it considers just one piece of the health puzzle: theoretical hazards," said Barry Carpenter, President of the North American Meat Institute.

I am giving you this example here; please look at it. Look at the slide. "If this is actually IARC's decision it simply cannot be applied to people's health because it considers just one piece of the health puzzle: theoretical hazards," said Barry Carpenter, President of the North American Meat Institute. So, just pay attention to the way, how the writer has used quotation marks, how the writer has used comma and then Barry Carpenter and then there is some additional information about him President of the North American Meat Institute. And then most importantly, you look at the way colon has been done, in order to explain or interpret something.

One piece of help puzzle, what is it theoretical hazards. Colon cannot be used loosely; it has to be just to show off. Sometimes writers try to show off and they use these punctuation mark extremely liberally one has to be careful especially in academic settings. And of course, then you also have one apostrophe people's and not peoples, where p e o p l e s; it is always people's with the apostrophe, this is the way apostrophe is

done.

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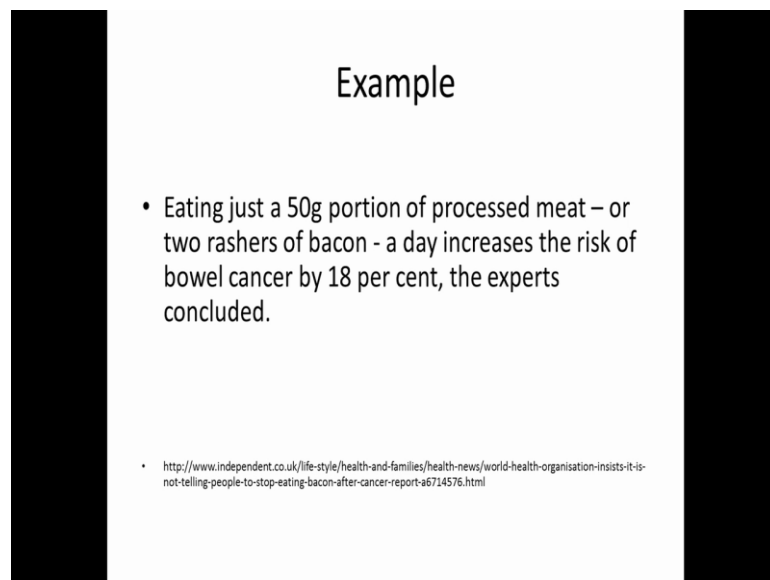


Next is the hyphen the use of hyphen varies between the British and American English; it also varies from author to author who wants to use a hyphen where. Here is a list of some common words, please look at the slide. The hyphen is used in these words: disease-causing germs. I am just giving you some examples healthy-living, run-down, anti-bacterial, anti-social, anti-nuclear, pre-historic, fifty-one or in suggesting numbers and then also fractions two-fifths, one-thirds, one-fourths. So, these are some of the examples.

The hyphen looks like a short dash as we have already done here, but hyphen and dash used very differently remember, they are not interchangeable hyphen brings together two different words; dash separates certain ideas. Hyphen is used before a suffix like middle-aged; it is used after a prefix at a let us look un-gentlemanly behavior. So, un is a prefix then a hyphen. In compound words, where both words are important and that can be joined or sometimes can also they know use to use hyphen here in compound words will be-gotten, side-case, text-pair. Many writers use a hyphen for in such cases many writers do not. It is desirable to use hyphen especially in your circumstances where you suggest fractions and numbers.

Coming to the dash; dash the main use of the dash is to surround just the way brackets, commas do. And we surround what, the material that is included in a sentence, which is **not** extremely important. So, we separate it either with comma or with a dash, sometimes also in parenthesis or brackets that will do in our next lecture. We use a dash to summarize, and elaborate, explain, interrupt, etcetera. So, in day today a practice we use a dash while making or taking down notes; you must have notice when you are taking down notes we keep bullet points or dash is just to separate. We are not writing running sentences, full complete sentences, we are separating certain key words through dashes not hyphens.

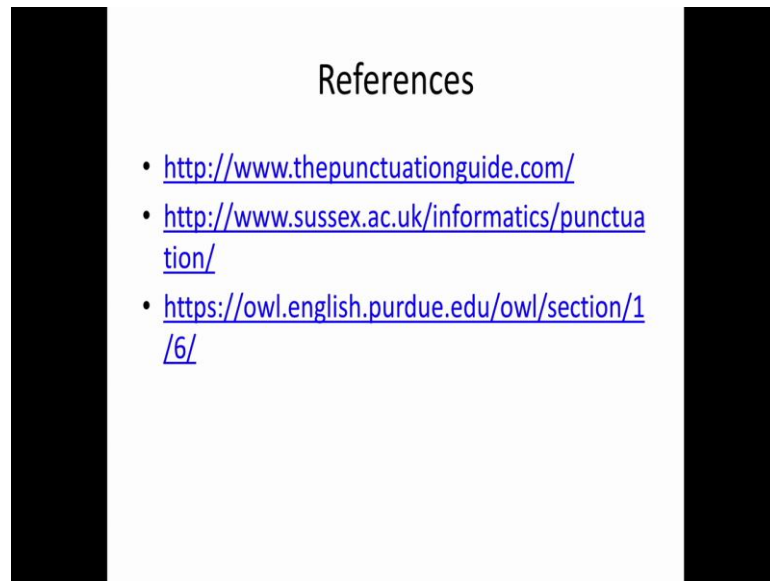
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The slide is titled "Example" and contains a bullet point. The bullet point text is: "Eating just a 50g portion of processed meat – or two rashers of bacon - a day increases the risk of bowel cancer by 18 per cent, the experts concluded." Below the bullet point is a URL: "http://www.independent.co.uk/life-style/health-and-families/health-news/world-health-organisation-insists-it-is-not-telling-people-to-stop-eating-bacon-after-cancer-report-a6714576.html".

Look at this sentence this example here. Look at the slide. Eating just a 50 gram portion of processed meat dash or two rashes of bacon dash a day increases the risk or **bowel of** bowel cancer by 18 percent, the experts concluded. Here, process meat is important and with dash **you** we have also included some supplementary kind of a material, which is not so important as the main clause or two rashes of bacon, but what is more important 50 gram portion of processed meat that increases risk of cancer.

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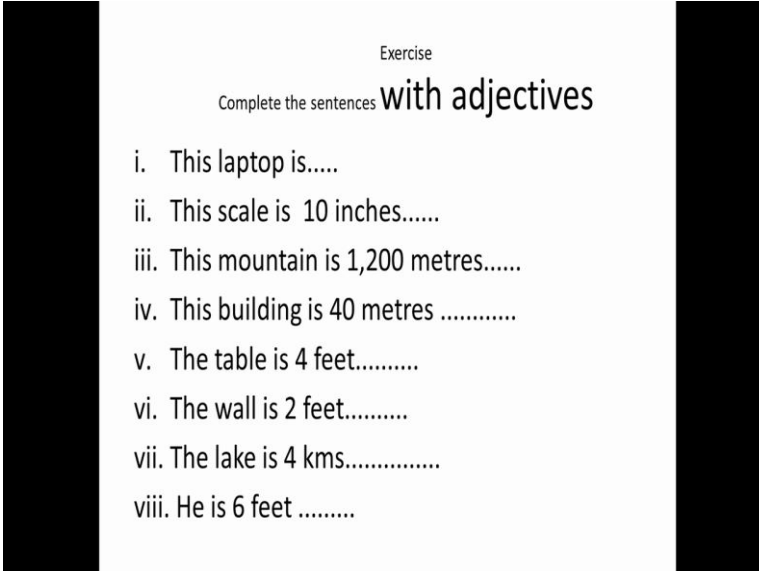


To understand more about punctuations, please look at this slide. And these are the references; here some extremely important and useful websites and they may be of use to you. Please take a good look, all right. Now from here, I move on to another topic that is measurement and the mention and properties. Now, the dimensions of an object are its length, width, height, volume, etcetera. As you know here is a point full stop is a point period, you know advance learners also call it a period or stop. It has no dimension; a line - a straight line like our hyphen is as a one dimension; a solid has three dimensions; a surface has two dimensions, and as you know a line has one dimension. We have several ways of describing dimensions and measurement such as you know we use words and terms such as a liter, centimeters, meters, inches, etcetera.

I would like to draw your attention to commonly confuse words; tall and high and a wide and broad. Sometimes students get confused here now wide and broad are ways of expressing the same thing and can be used interchangeably. It is a broad I am not trying to tell you the length. So, let us look it is a wide and we are we can also talk about the width and breadth of this particular structure surface. So, they can be used interchangeably. Tall and high are also mean the same thing; however, they cannot be used interchangeably. They suggest height but tall is use to express height especially of those physical objects, which are longer in height than in width. So, we say a tall man, a

tall building; high on the other hand is used for rectangular, circular, also **its a** square objects for example, a high dam, we do not say a tall dam, we do not say a tall mountain, we say a high mountain range. So, some words that describe property and dimensions are long; long is an adjective and the noun becomes length - l e n g t h, please remember the spellings. It is a very one of the very common errors where people makes mistakes here high and height, so h e i g h t. Thick, thickness, wide, width, deep, depth - d e p t h; remember the spellings please consult your dictionary. So, these are some of the words that suggest or describe properties and dimensions.

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Exercise

Complete the sentences **with adjectives**

- i. This laptop is.....
- ii. This scale is 10 inches.....
- iii. This mountain is 1,200 metres.....
- iv. This building is 40 metres .....
- v. The table is 4 feet.....
- vi. The wall is 2 feet.....
- vii. The lake is 4 kms.....
- viii. He is 6 feet .....

Now, here is an exercise for you; please look at this slide. Complete the sentences with adjectives. Use the word high, thick, tall, long, wide, etcetera. So, if you say this laptop is, what would you like to say a few centimeters thick, a few inches perhaps, a few feet long or high, you can talk about and describe it in these terms. The scale is 10 inches long. Mountain is this many meters high. Building is 40 meters tall. Table is 4 feet wide. The wall is 2 feet perhaps you can say thick, high also, but then it would not make much of sense having a 2 feet high wall, but thickness is a more appropriate may be. The lake is 4 kilometers wide. And he is 6 feet tall, not 6 feet high.

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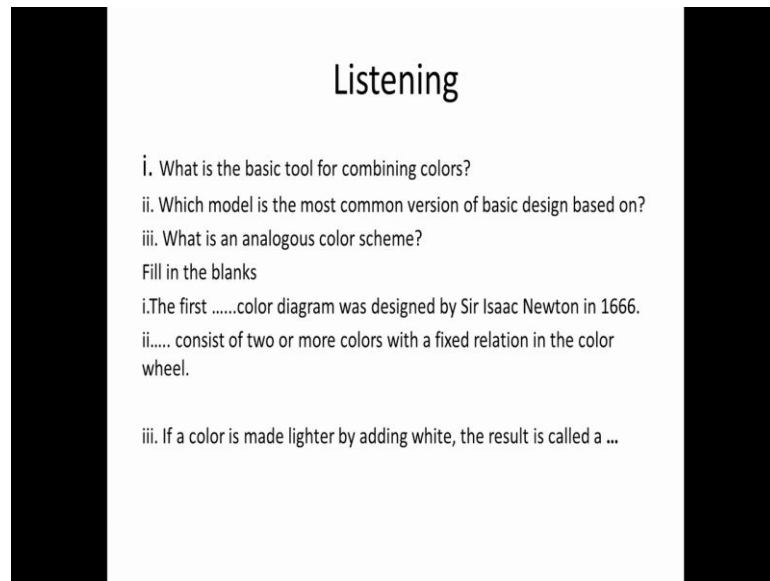
### Exercise

- i. The well has a .....of 30 metres.
- ii. Water has a .....point of 0 degrees.
- iii. This sphere has a .....of 20 cms.
- iv. Pure water has no..... .
- v. The ..... of sound is 333 m/sec.
- vi. The .....in the furnace is 1000 degree  
c.

Look at this slide, and another exercise for you instead of adjectives, I would like you use nouns here. The well has a depth of 30 meters, so its deep is 30 meters deep that becomes your adjective depth that becomes your noun. Water has a freezing point of 0 degrees. This sphere has a dimension of 20 centimeter. Pure water has no smell. The speed of sound is so much. And the dash in the furnace is 100 degree centigrade of the something the boiling point.

Let us move on to talk about approximation in your day today writing and reading you come across very frequently approximations. Approximations, what are they, if the quantities not exactly stated - explicitly stated that this is a 333 meter per second that is exact, sometimes we are not too sure. So, we have to infer that this is not stated exactly or extremely accurately, but almost there, almost accurately it is not erroneous, but not exactly specific. Some of the words that are used to express approximation are about is about 6 feet tall could be a little 1 inch here or there approximately. Approximately this temperature must be this room must be having a temperature of 24 degrees give or take a few. Over, under, slightly, just over, a little over, almost, nearly, more or less, these are the expressions we use to express approximation. So, these are things that when we will look into more in depth, because this is something that is extremely important to your writing and reading.

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**Listening**

- i. What is the basic tool for combining colors?
- ii. Which model is the most common version of basic design based on?
- iii. What is an analogous color scheme?

Fill in the blanks

- i. The first .....color diagram was designed by Sir Isaac Newton in 1666.
- ii..... consist of two or more colors with a fixed relation in the color wheel.
- iii. If a color is made lighter by adding white, the result is called a ...

Before we end the class, I would like to do a little listening activity with you; please look at the questions here. Before, I read the passage for you and you listen, you would not be shown the passage. Please look at the questions, and take them down. Questions, first question, you have to write or answer in very brief, what is the basic tool for combining colors? Which model is the most common version of basic design based on? What is an analogous color scheme? And these are the filling the blanks. Please look at the sentences carefully, look at the slide.

I am going to start reading the passage and you would not be shown the slides here. Listen to me and then solve the exercise. The color wheel or color circle is the basic tool for combining colors. The first circular color diagram was designed by Sir Isaac Newton in 1666. The color wheel is designed so that virtually any colors you pick from it will look good together. Over the years, many variations of the basic design have been made, but the most common version is a wheel of 12 color based on the RYB or artistic color model. Traditionally, there are a number of color combinations that are considered especially pleasing. These are called color harmonies or color codes, and they consist of two or more colors with a fixed relation in the color wheel. Color impact is designed to dynamically create a color wheel to match your base color.

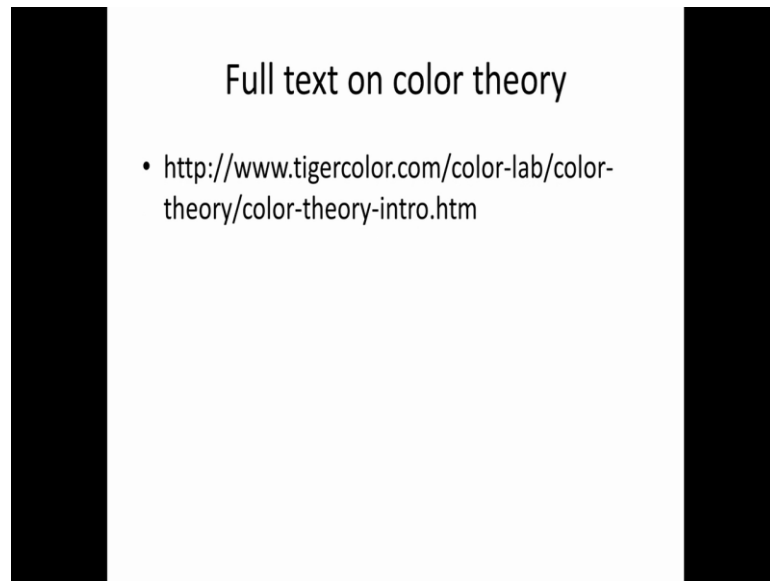


Talking about primary, secondary and tertiary colors in the RYB or subtractive color model, the primary colors are red, yellow and blue. The three secondary colors green, orange and purple are created by mixing two primary colors. Another six tertiary colors are created by mixing primary and secondary colors. Tints, shades and tones. Now, these are terms often used incorrectly, although they describe fairly, simple color concepts. If a color is made lighter by adding white the result is called a tint. If color is added, if black is added the darker version is called a shade, and if red green is added the result is a different tone.

What is complimentary color scheme? Colors that are opposite each other on the color wheel are considered to be complimentary colors, example, red and green. The high contrasts of complimentary colors create a vibrant look especially when used at full saturation. This color is scheme must be managed well, so it is not jarring. Complementary color scheme are tricky to use in large doses, but work well when you want something to stand out. Analogous color schemes use colors that are next to each other on the color wheel. We usually match well and create serene and comfortable designs. Analogous colors schemes are often found in nature and are harmonious and pleasing to the eye.

Now let us look at the answers. So, the answer to your first question is the color wheel or color circle. Answer to your second question is the RYB or artistic color model. And answer to your third question is analogous colors schemes are colors that are next to each other on the color wheel. For the filling the blanks, first is the answer is circular then you have color codes and the last answer is tint.

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Full text on color theory

- <http://www.tigercolor.com/color-lab/color-theory/color-theory-intro.htm>

Here is the link; here on this slide, please look at the slide, here you will find full text on color theory.

So, thank you very much and we will meet for the next class.

### ***unTags***

Reading English, English for Engineers, English words, English Exercise, Exercises in English, Grammar usage, English Grammar, vocabulary, words and phrases, spoken communication, written communication, English writing, English speaking, scientific English, report writing, CV, formal letter, Speech-Preposition, Noun Phrases, Countable and uncountable nouns, singular, plural, Modals and Voice, Tenses, Effective Speaking

Essay writing, word categories, word formation, formal tone, paragraph writing, tone in writing, speaking tone, signal words, Letter writing, understanding essays, Mechanics of Essays, publishable essays, nouns, pronouns, verbs, adverbs, adjectives, propositions, determiners, linking words, 'be' form, linking words, reading, listening, sentence, Subject, Verb, Object, Articles, comparatives, passive voice, Dictionary skills, Presentation, Punctuation

