



LESSON 15 - IN-CLASS PRACTICE

Exercise 1. [IELTS Reading: Sentence completion] Read the passage and answer the questions.

Calendars Through the Years

A How many days are there in a year? You might say 365, with an extra 'leap day' added to the end of February every four years. This averages out to a quarter of a day every year, so that every year is 365.25 days. This is because the actual length of a solar year - that is, the time it takes for the Earth to complete a full rotation of the Sun - is a little bit more than 365 days. Throughout history, most calendars have tried to match their year to the length of a solar year, with varying degrees of accuracy.

B The calendar used in much of the world today is based on the one used by the Romans. Because Romans thought that even numbers were unlucky, the earliest Roman calendar had months of 29 or 31 days, with 28 days in February. Since the year had 355 days, they would add a leap month of 27 days between February and March every 3 to 5 years, as determined by priests called *pontifices*. As a result, the average year was anywhere from 360 to 364 days, so it is no surprise that the calendar very quickly deviated from the solar year.

C Julius Caesar decided that the calendar should be based on the solar year, following a special year of 445 days in 46 BC that readjusted the months to their proper seasons. From 45 BC onwards, the months were given the current lengths of 30 or 31 days, retaining 28 for February but adding the 29th February every four years to account for the accumulated extra quarter days. The names of the months used by the Romans remain in English today, either with a slight adjustment to spelling (e.g., they called it *Aprilis*, we call it April) or in the exact same form (e.g., they also called September, October, November and December by those very names).

D The calendar used from 45 BC onwards - known as the Julian calendar, after the man who imposed it on the world - is far more accurate than any earlier calendar. Even so, the Julian calendar deviates from the solar year by 1 day every 128 years. This is because the exact length of the solar year is actually 365.2422 days, or about 11 minutes shorter than the 365.25 days calculated by the Romans.

E By the 16th century AD, the discrepancy between the solar year and the Julian calendar was notable enough that something had to be done. It took several decades of consultation among mathematicians and astronomers until it was finally decided to end the Julian calendar, and move to a new system of calculating leap years. Pope Gregory XIII decreed that the Julian calendar would end on Thursday 4th October 1582, and that the following day would be Friday 15th October. This would remove the 10 days that had been added in error by the Julian system for leap years, and readjust the calendar to the seasons in the solar year.





As we can see from this brief history of calendars, one of the key challenges in making any calendar is the decision about how to account for the variations between the calendar year and the solar year, since the latter includes a fraction of a day. The Gregorian calendar improved considerably on the Julian calendar, limiting the discrepancy to one day every 3,336 years. While it is commonly believed that every fourth year is a leap year, the actual rule imposed in 1582 is slightly more complicated: we add a day to February in years that are divisible by 4, but not in years divisible by 100, unless they can be divided by 400. Thus, 1700, 1800 and 1900 were not leap years, but 1600 and 2000 were. This adjustment means that the average calendar year is only 26 seconds longer than a solar year, so it won't be an issue again until the year 4918.

Vocabulary required:

- *leap day (n): the extra day added to the calendar in leap year (=one year in every four years when February has 29 days instead of 28).*
- *rotation (n): the action of an object moving in a circle around a central fixed point*
- *deviate from (v): to be different from something; to do something in a different way*
- *impose on (v): introduce a new rule, tax; to order that a rule, punishment, etc. be used*
- *discrepancy (n): a difference between two or more things that should be the same*

Complete the sentences below. Write NO MORE THAN THREE WORDS AND/OR A NUMBER for each answer.

1. A solar year is the time it takes for the Earth to make a _____ of the sun.
2. Without a _____, the year in the earliest Roman calendar was 355 days long.
3. From 45 BC, the calendar year was based on the solar year, thanks to the intervention of _____.
4. Unfortunately, the solar year is _____ than the year in Julian calendar.
5. When Pope Gregory XIII first instituted the new calendar, one change was to _____ that were mistakenly added by the Julian calendar.
6. Under current rules, years that are _____ are not leap year, unless they can also be divided evenly by 400.

Exercise 2. [IELTS Reading: Sentence completion] Read the passage and answer the questions.

How can we measure happiness?

Western leaders are looking beyond traditional indices of economic and social well-being and turning to ways of measuring national happiness.

What makes you happy? The smell of new-mown grass on a spring morning, perhaps; or the laughter of your children. For many of us, happiness is spiritual, individual, difficult to define



and ephemeral. A Buddhist monk with no possessions beyond his clothes and an alms bowl might consider himself happier than a City financier with homes on three continents.

Personal happiness is something we all aspire to; so what about national happiness? Can the well-being of a country be measured? Is it possible to aggregate all those individual experiences into a happiness index that can be published quarterly, along with crime statistics, inflation rates and unemployment figures? Some political leaders think it is. They subscribe to the idea that measuring a nation's well-being by this economic output is a policy dead-end. Is this wise?

The consideration of happiness and how to maximize it is hardly a new activity. It has exercised great minds from Socrates to Montaigne and on to Bentham, Mill and the authors of the American Declaration of Independence. But while philosophers tended to deal with how we should lead our lives as individuals, the idea of happiness both as a science and a specific aim of national policy has only taken off in the past decade or so.

It is hardly surprising that the idea appeals to many politicians, especially when most of the economic news is gloomy and government policy is couched in the downbeat language of austerity. In such circumstances, looking beyond the traditional measurement of national well-being is a great temptation, even if it risks being criticized as a gimmick that has no place in the serious business of politics.

Lord Layard, professor at the London School of Economics, believed that governments should embrace the principle that 'the best society is that where the people are happiest, and the best policy is the one that produces the greatest happiness'. They found this hard to do because so little was known about what made people happy. But as Lord Layard points out, 'The first thing we know is that in the past 50 years, average happiness has not increased at all in Britain or in the United States- despite massive increases in living standard.' In better-off countries, in other words, simply raising incomes does not make people any happier.

In truth, Prime Minister David Cameron has been thinking along these lines for a while. Shortly after he became Tony leader in 2005, he said: "Well-being can't be measured by money or traded in markets. It's about the beauty of our surroundings, the quality of our culture and, above all, the strength of our relationships. Improving our society's sense of well-being is, I believe, the central political challenge of our times".

In order to avoid a politically biased view of what constitutes national contentment, it would be essential to have an independent body deciding what questions to ask and when to do so. A survey conducted in the middle of a cold, wet January, for instance, might produce significantly gloomier results than one carried out in summer months.

If measuring happiness is a relatively new phenomenon in the West, it has underpinned the public policy of one country for almost 40 years. The Kingdom of Bhutan has pursued the goal of 'gross national happiness' since 1972. In addition to the promotion of equitable



socioeconomic development and the establishment of good governance, it also stresses the importance of the preservation and promotion of cultural values.

It probably helps, too, that there is little in the way of traffic, commuting into major cities does not involve an hour-long journey crushed together like sardines, television was banned until 1999 and the Himalayas provide a visual backdrop to a stunning sub-tropical landscape. No wonder they are happy.

Vocabulary required:

- *ephemeral (adj): lasting or used for only a short period of time*
- *aspire to (v): to have a strong desire to achieve something*
- *inflation rate (n): the percentage at which a currency is devalued during a period of time*
- *philosopher (n): a person who studies or writes about philosophy (triết học)*
- *couch in (v): to say or write words in a particular style or manner*
- *austerity (n): a situation when people do not have much money to spend because there are bad economic condition*
- *contentment (n): a feeling of happiness or satisfaction*

Read the text and complete the sentences. Use NO MORE THAN THREE WORDS for each answer.

1. Some politicians feel that it is not wise to focus on a country's _____.
2. Governments have only really taken the importance of promoting national happiness seriously in _____.
3. While the idea of measuring happiness appeals to some politicians, others believe it could be _____ for lacking in seriousness.
4. Although there have been _____ in personal wealth, people in rich West are not happier.
5. For David Cameron's government, the attempt to increase the _____ of the people is a key priority.
6. Surveys may have different results depending on the weather, with _____ results being possible for those carried out in winter.
7. As part of its policy of promoting happiness, the government of Bhutan thinks it is important to ensure the country remains true to its _____.
8. According to the writer, Bhutan has the advantage of having almost no _____, which is a source of stress in Western countries.