1. **Complete the text with the suitable form of the words given in capital letters.**

Common throughout the highlands, islands and lowlands of Scotland,

the ____ purple thistle has been Scotland's national emblem for centuries. **PRICK**

This proud and regal plant, which grows to a height of five feet, has no

natural enemies because of the _____ spines that cover and protect it **VICE**



like a porcupine.

There are several different legends that tell how the thistle became Scotland's

symbol, but most date from the reign of Alexander III and in _____ the **PARTICLE**

events surrounding the Battle of Largs in 1263.

It is often _____ , that for hundreds of years much of Scotland was part of **FORGET**

the Kingdom of Norway. By 1263 however, Norway seems to have had little

interest in their ____ territory. However, that was until King Alexander III **FORM**

proposed to buy back the Western Isles and Kintyre from the Norse King

Haakon IV. The thought of _____ King Alexander of some of his riches **RELIEVE**

and territories appears to have re-kindled Norse interest in Scotland.

Late in the summer of 1263 King Haakon of Norway, now intent on_____ **CONQUER**

the Scots, set off with a _____ fleet of longships for the Scottish coast. **SIZE**

Gales and fierce storms forced some of the ships onto the beach at Largs

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in Ayrshire, and a Norwegian force was landed.

Legend has it that at some point during the_____ the Norsemen tried **INVADE**
to surprise the sleeping Scottish Clansmen. In order to move more ____ **STEALTH**
under the cover of _____ the Norsemen removed their footwear. But as they **DARK**
crept barefoot they came across an area of ground covered in thistles and one
of Haakon's men _____ stood on one and shrieked out in pain, thus **FORTUNE**
alerting the Clansmen to the advancing Norsemen.
His shout warned the Scots who rose up and ____ the enemy, thus saving **ENGAGE**
Scotland from invasion. The important role that the thistle had played in
the Battle of Largs was recognised and so was _____ as Scotland's **CHOOSE**
national emblem.

In 1965, 17-year-old high school student, Randy Gardner stayed awake for 264 hours. That's 11 days to see how he'd cope _____ sleep. On the second day, his eyes stopped focusing. Next, he lost the ability to identify objects ___ touch. By day three, Gardner was moody and uncoordinated. At the end of the experiment, he was struggling ___ concentrate, had trouble with short-term memory, became paranoid, and started hallucinating. Although Gardner recovered without long-term psychological or physical damage, for others, losing shuteye can result ___ hormonal imbalance, illness, and, in extreme cases, death.

We're only beginning to understand why we sleep to begin____ , but we do know it's essential. Adults need seven to eight hours of sleep a night, and adolescents need about ten. We grow sleepy due __ signals from our body telling our brain we are tired, and signals from the environment telling us it's dark outside. The rise in sleep-inducing chemicals, like adenosine and

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melatonin, send us _____ a light doze that grows deeper, making our breathing and heart rate slow down and our muscles relax. This non-REM sleep is when DNA is repaired and our bodies replenish themselves ___ the day ahead.

In the United States, it's estimated that 30% of adults and 66% of adolescents are regularly sleep-deprived. This isn't just a minor inconvenience. Staying awake can cause serious bodily harm.

When we lose sleep, learning, memory, mood, and reaction time are affected. Sleeplessness may also cause inflammation, halluciations, high blood pressure, and it's even been linked ___ diabetes and obesity.



In 2014, a devoted soccer fan died after staying awake ___ 48 hours to watch the World Cup. While his untimely death was due to a stroke, studies show that chronically sleeping fewer than six hours a night increases stroke risk by four and half times compared ___ those getting a consistent seven to eight hours of shuteye. For a handful of people on the planet who carry a rare inherited genetic mutation, sleeplessness is a daily reality. This condition, known as Fatal Familial Insomnia, places the body ___ a nightmarish state of wakefulness, forbidding it ____ entering the sanctuary of sleep. Within months or years, this progressively worsening condition leads to dementia and death.

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How can sleep deprivation cause such immense suffering? Scientists think the answer lies ___ the accumulation of waste products in the brain.

During our waking hours, our cells are busy using ___ our day's energy sources, which get broken down into various byproducts, including adenosine. As adenosine builds ___ , it increases the urge to sleep, also known as sleep pressure. In fact, caffeine works by blocking adenosine's receptor pathways. Other waste products also build up in the brain, and if they're not cleared ___ , they collectively overload the brain and are thought to lead to the many negative symptoms of sleep deprivation.

So, what's happening in our brain when we sleep to prevent this? Scientists found something called the glymphatic system, a clean-up mechanism that removes this buildup and is much more active when we're asleep. It works by using cerebrospinal fluid to flush ___ toxic byproducts that accumulate between cells. Lymphatic vessels, which serve as pathways for immune cells, have recently been discovered in the brain, and they may also play a role __ clearing out the brain's daily waste products.

While scientists continue exploring the restorative mechanisms behind sleep, we can be sure that slipping ___ slumber is a necessity if we want to maintain our health and our sanity.

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