A GOLDEN BALL OF FIRE

The sun is a huge ball of fire — so large that a million earths would fit inside it. The temperature on its surface is about 5,500 deg. C., and huge prominences as high as 15 million degrees! The sun is about 150 million km (93 million miles) away from us. Although this seems a long way, if the sun were much nearer, the earth would be scorched, and if it were farther away the earth would freeze. Many people believe that this all happened by accident, but we believe that God designed it like this, so that our special planet would be a suitable home for us.

The sun is so bright that looking at it directly could cause blindness. Astronomers have been able to study the sun during a solar eclipse, when the moon blocks the sun’s light (see page two). The Bible tells us that there is also spiritual light and life, and this comes from God, too. We have all sinned against God in many ways, and this means we are in spiritual darkness, separated from God. God, who sent light into the world in the beginning, has sent Jesus, His Son, to give us spiritual light and life. He died on the cross, and rose again to overcome sin’s darkness. Jesus said, “I am the light of the world. The person who follows me will never live in darkness. He will have the light that gives life.” (John 8: 12). Believing in Jesus is like stepping from darkness into light. A light that will last for ever, and continue in heaven when this life is over — a place where “they will not need the light of a lamp or the light of the sun. The Lord God will give them light.” (Revelation 22: 5).

**Puzzle Answers**

**Number Plane**

1. Jupiter
2. Neptune
3. Mars
4. Uranus
5. Mercury
6. Venus

**Word Square**

Sunburn. 6. Glucose.
Ozone. 4. Energy. 5. Oxygen. 2. Eclipse. 3. Eclipse.

**Nature Notes: Bird formations**

Capturing the sun’s energy

If humans designed a machine that could turn sunlight, water and a poisonous gas into fuel and oxygen, they would be very clever. Yet all over the world the leaves on millions of trees and plants are doing just that. We breath in oxygen and breath out carbon dioxide. Plants turn this back into oxygen; we call this photosynthesis. If there were no plants on earth the atmosphere would become poisonous and everything would die. Each leaf is like a tiny factory turning the sun’s energy into glucose — a form of sugar. The sun is a huge power plant, producing more power every hour than the whole world uses in a year! That’s why more and more people are trying to capture that energy, which is clean and free, and will never be used up.

The sun is a huge ball of fire — so large that a million earths would fit inside it. The temperature on its surface is about 5,500 deg. C., and huge prominences rise like flames from its surface (right). But the temperature at the centre could be as high as 15 million degrees! The sun is about 150 million km (93 million miles) away from us. Although this seems a long way, it is the right distance for life on earth to exist. If it were much nearer, the earth would be scorched, and if it were farther away the earth would freeze. Many people believe that this all happened by accident, but we believe that God designed it like this, so that our special planet would be a suitable home for us. The sun is so bright that looking at it directly could cause blindness. Astronomers have been able to study the sun during a solar eclipse, when the moon blocks the sun’s light (see page two).
Planet earth is not a chunk off the sun! The Bible tells us that God created the earth before the sun, to show us that He, not the sun, is the source of all life. God warned His people, the Israelites, “When you look up at the sky, you see the sun moon and stars... But don’t bow down and worship them. The Lord your God has made these things for all people everywhere.” (Deuteronomy 4: 19) In spite of this, for thousands of years people in many parts of the world have made the sun into a god and worshipped it. The ancient Egyptians worshipped the sun-god Ra (left). They believed he travelled across the sky each day in a boat, and that a large serpent called Apep tried to destroy Ra every night by eating the sun-boat. Some people even believed that Ra was killed, and reborn every morning.

In ancient China, when an eclipse happened, people thought a huge dragon was trying to eat the sun, so they made a lot of noise to frighten it away. When the eclipse ended, they believed they had succeeded, so did the same whenever eclipses happened! Worshipping the sun is foolish, and forbidden by God. He created the sun, He is the One we should worship!

The perfect fit of the moon over the sun helps us understand how the sun works

The Bible tells us that God created two special lights — the sun and the moon. Although the sun is 400 times larger than the moon, it appears to be the same size in the sky. This is because the sun is 400 times farther away! Sometimes the moon passes in front of the sun, and fits over it perfectly, blocking out its light (right). We call this a total eclipse,

Most other planets in our solar system have moons, but the size of these moons means that total eclipses never happen. Is it just by accident that the sun and moon appear the same size in our sky? Many scientists don’t think so, but believe it is part of God’s special design which helps us understand our world, and the special star that gives us light and life.

Although we couldn’t live without the sun, it does produce harmful ultra-violet radiation. God has provided protection from the worst of this through the ozone layer. Other planets don’t have this protection — they don’t need it because they have no life. In spite of this shield, strong sunlight can still harm us by causing sunburn and skin cancer, so it is always wise to protect ourselves (left) when the sun is strong.

Have you ever seen flocks of birds such as geese flying in the shape of a “V”? (left) They often do this when migrating during autumn and spring. People who study flight have discovered that by flying in the “V” formation the birds use less energy, because of the way the air flows from one bird to another, giving “lift” to the following birds. They have to flap their wings less, and can fly much further than they could if they were flying alone. The bird at the front of the “V” works hardest, but when it gets tired it drops back and another bird takes the lead. Any birds which drop out of the formation are quickly pushed back into line. Flying like this is really useful for birds that often travel hundreds or thousands of miles. It also helps the birds to keep contact with each other.

Some birds even manage to save fuel by copying the way flocks of birds fly. They have found that by flying planes in formation (above right) those following the leader get extra “lift” just like the birds. They suggest that if large planes going to the same place could fly in formation they would save as much as one tenth of their fuel. Once again, the birds — or rather God — did it first!

God made the earth before the sun!

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Some of the sun’s rays (called ultra-violet) are harmful and could destroy all life on earth, but our atmosphere contains a layer of an invisible gas called ozone, which acts as a protective shield.

Unjumble the names of the planets below:

1. Trusan
2. Rams.
3. Trujpie.
5. Tunneep.