by Sally O'Hare, Aike Kennett-Brown and Jane Butler



Bible story

Lord, our Lord, how majestic is your name in all the earth!

You have set your glory in the heavens.

Through the praise of children and infants you have established a stronghold against your enemies.

to silence the foe and the avenger.
When I consider your heavens,
the work of your fingers,
the moon and the stars,
which you have set in place,
what is mankind that you are mindful of them,
human beings that you care for them?

You have made them a little lower than the angels and crowned them with glory and honour.
You made them rulers over the works of your hands; you put everything under their feet: all flocks and herds, and the animals of the wild, the birds in the sky, and the fish in the sea, all that swim the paths of the seas.
Psalm 8 (NIV)

How does this session help people grow in Christ?

As the evenings are getting darker and Halloween approaches, this session offers Messy Church teams an alternative way into exploring Jesus as the light of the world. It looks at how we are all encouraged to reflect Jesus' light in our world, through an exploration of the night sky in Psalm 8, thinking about our role as humans to look after this world.

Add value

Take home idea

Send home some round biscuits, so you can practise 'phases of the moon' later.

Question to start and end the session

So... do you prefer to be out in the day? Or do you like to be out in the dark?

Social action

Try out 'earth hour' – switch off all electricity in your house for one hour and spend time as a household playing games, reading or sitting by a lighted candle.

Gathering prayer

Use the following actions for the repsonses:

- In faith touch your forehead and bring the side of your hand down on to your other hand in a chopping action.
- And hope cross your fingers on both hands.
- And love cross your hands over your heart.

Leader: We've come together on this patch of earth

All: In faith and hope and love.

Leader: We've come together under this sky

All: In faith and hope and love.

Leader: We've come together with the creatures

we can see and those we can't

All: In faith and hope and love.

Leader: We've come together with the people we

can see and those we can't

All: In faith and hope and love.

Leader: Creator God, Jesus Christ, Holy Spirit,

we've come together in your name

All: In faith and hope and love. Amen



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Messy reflection

We're going to read Psalm 8 – as you listen, take a look around, maybe look up into the night sky – see if there's a word or phrase that really stands out to you. *Read Psalm 8*.

What word or phrase stood out to you? What part of the psalm do you like best? What does it tell us about God? *Encourage* people to chat to their neighbour. Share your favourite phrase and take two or three responses from participants.

It's now nighttime and the sun has set. The sun that gives us energy, warmth and light, that helps us see and makes plants grow for our food. We now have night. The night is usually a time for resting and recharging, but the night is also a place for other creatures to wake up (bats and moths), and teenagers!

I wonder... what does light and dark mean for you? Are you a night owl or a morning lark? A night adventurer or a bit scared of the dark? How does night affect us?

Again, invite people to chat to those around them for a couple of minutes and then invite all the night owls to give a hoot, and then all the morning larks to crow like a cockerel.

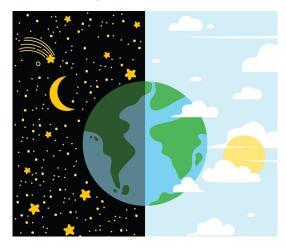
I wonder... (choose one of the following questions)

- How does the sky change throughout the day and through the seasons? What do you notice? Summer changes to autumn, winter changes to spring – this has an impact on our environment and our mood. What does this look like?
- Christians believe that God created this universe how does it feel to know that the God who made everything, also made and loves you?

The following three activities can be done together or as separate, smaller groups, depending on numbers.

Activities

1. Day and night



Adapted from Messy Church Does Science (p. 48)

You will need: balls of various sizes (inflatable globes/beach balls, footballs etc.); light sources (torches, camping lamps etc.)

Before you begin, ask the group:

- How long is a day? (It takes the earth 24 hours to make one rotation.)
- How many days in a year? (It takes 365.25 days for the earth to orbit the sun. We can't have 0.25 of a day, so we have leap years every four years.)

Explain how other planets have longer days and years than we do. For example, the planet Mars' days are about the same as the earths, but it takes two earth years to go around the sun. The one-yearly orbit and 24-hour rotation of earth impacts life and how we measure time. You might want to find a short YouTube video on day and night, or rotation and orbit, to help you get started.

Experimental method

Explain that the large ball represents the earth. Explain that the earth rotates every 24 hours around an axis joining the north and south poles. We are going to demonstrate this. Invite some helpers to come forward to hold the lamp and the inflatable glove.

Shine a strong light on to the globe, e.g. lamp, projector or powerful torch (do not look into the light!), centred on the equator, so that the whole of one side is illuminated evenly.

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- Which countries are in light at this moment?
- Which countries are in the dark?
- What does this represent? (Day and night for those in shade.)
- Rotate the ball counterclockwise and see what happens. Can you see the light moving across the earth? Does everywhere go into the shade at the same time?

Explain that the earth's rotation axis is not straight up but tilts a little. Tilt the north pole of the ball towards the light a little, so that the area near the north pole is always in the light when you rotate the ball around its axis. This is what happens in summer in the Northern Hemisphere – it points towards the sun as the earth moves around its orbit and the days are longer. What is it like at the south pole? It should be always in the shade. This is what happens in winter in the Southern Hemisphere – it is pointing away from the sun.

Big thinking

The world experiences both light and darkness through each day, and different amounts of each as we go through the year, along with seasonal changes in temperature. Many plants and animals have adapted to this pattern. Some flowers open in sunlight, and then close again at night (get people to shout out some names, examples include daisies). Some trees grow leaves in the spring and summer and shed them in the dark days of the winter.

Is darkness always bad?

Animals too are affected by different light levels and the seasons. Some hibernate in the dark, cold days of winter when there is not much food – ask people if they can think of any (squirrels, bears, tortoises). You could have pictures of plants/animals and explain how light and dark affect them. Plants and animals are affected when the amount of light changes – even humans. Because of the short days in winter, some people feel sad. When the clocks are changed in the spring and autumn, people's sleep patterns can be disrupted too for a week or so.

Big questions

Light and darkness are common themes in the Bible. The first phrase God says in the Bible is, 'Let there be light', (Genesis 1:3) and it is described as good. Darkness, on the other hand, often represents evil.

Christ claims to be the light of the world (John 8:12); Jesus said, 'I am the light of the world. Whoever follows me will not walk in darkness, but will have the light of life.'

Christians are encouraged to be lights in this world (turn on your torches/phone torch): Matthew 5:14 and 16 – 'You are the light of the world... let your light shine before others, that they may see your good deeds and glorify your Father in heaven.' Invite everyone with a phone to turn on the torch function, and to 'shine like stars' for a moment.

Light is coupled with truth and salvation (Psalm 27:1, Psalm 43:3) and revelation (Luke 2:32). In the book of Revelation, natural light seems not to feature in the new earth, as God is its light. Day and night are linked with laws of motion, rotation of the earth on its axis and elliptical orbits. God is described not only as creator but sustainer of the physical universe (Colossians 1:17).

- What do you praise God for about light?
- What do you praise him for about darkness?

There is light and dark inside all of us. What can you ask God for today that will enable your light to shine more strongly?

2. The lesser light



Adapted from Messy Church Does Science (p. 58).

You will need: Jaffa Cakes (or similar); balls from activity 1; light sources (torches, camping lamps etc.)

Before you begin

We will be exploring the phases of the moon and the difference between reflections, shadows and direct sources of light.

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It's worth making a chart depicting the phases of the moon (you can find plenty of these online or make your own by doing a nightly observation of the moon over a month).

Give everyone a Jaffa Cake (other round biscuits work just as well!) and ask people to show the phases of the moon by nibbling away at their cake/biscuit: a full moon; a gibbous moon; a half moon; a crescent moon; a new moon (or total eclipse!)

Have a go at creating these phases of the moon with your light source and balls to represent the earth and the moon.

Experimental method

The moon reflects twelve percent of the light from the sun that hits its surface. It seems brighter at times according to its orbit around the earth. Shine a light on to a range of surfaces e.g. grass, trees, skin (not faces!), clothing, etc. You could use a collection of different rocks and grade their brightness.

Remember to keep the conditions the same, e.g. level of darkness, intensity of light and size of surface.

What was the shiniest surface that you found? What reflected the light best? What surface reflected the light least? What was the dullest surface?

Big thinking Moon fun facts:

- The moon is the earth's only natural satellite. It is thought to have formed when a small planet collided with the earth and material thrown off collected together.
- There are different types of landscape on the moon.
 The dark 'seas' were once thought to be oceans, but now we know they are barren volcanic plains. In between, the landscape is covered with craters.
- We only see one side of the moon, as the length of its day is the same as the time it takes to orbit the earth, so the same face always points at the earth. We had never seen the far side of the moon until space probes were sent. It is different from the side we see, being very heavily cratered without any volcanic plains.
- During nine Apollo missions, 24 astronauts (all Americans) went to the Moon, and twelve of them walked on it. Did you know that Buzz Aldrin celebrated Communion as he stepped on the moon in 1969?
 Back at Aldrin's home church, they celebrate Lunar Communion Sunday every July and recite Psalm 8 which he had quoted on his return to earth.

- As our natural satellite, the moon is easily observed and admired. It is the only other body in the solar system that humans have visited.
- We benefit from its effects in a number of ways. The moon's gravitational pull governs the oceans' tides, impacting the natural world.
- Less well known, but still important, it helps to stabilise the rotation of the earth on its axis. Without the moon, the axis of the earth would wobble around, making the seasons more extreme!

Big questions

Genesis calls the moon the 'lesser light'. It is referred to elsewhere in the Bible to mark when festivals start (Nehemiah 10:33 – New Moon feasts); Passover is the full month in the month of Aries the ram (the Egyptians worshipped the ram as a God) as a reminder of God's splendour (Job 31:26); and as a sign of end times (Acts 2:20) 'the sun shall be turned to darkness and the moon to blood, before the day of the Lord comes, the great and magnificent day.'

The moon cannot shine by itself; it reflects the light of other objects (such as the sun). Christians need to be exposed to the light of Christ to reflect it into dark places. How can we best do this? How do you connect with God best? Talk about how God provides protection through light. If separated, draw the groups back together for this final activity.

3. Moon and stargazing



Taken from *Messy Adventures* (p. 138 in the book or p. 25 from the **online PDF 'Wild weather!'**)

There are online star maps available on lots of different sites that will tell you what stars you can see from your location at each time of the year. For example, **skyandtelescope.org/interactive-sky-chart** or the BBC sky at night website (**bbc.co.uk/programmes/b006mk7h**).

What to do

Using the star map for your location and time of year, try and identify some of the constellations in the night sky. Are all the stars the same colour? Can you try and count the stars?

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Divide up the night sky between you by taking different directions and count how many stars you can see. If you can connect with a Messy Church in another place, perhaps one where it is darker, compare your counting! If the moon is up, what phase is it – a thin crescent, half-moon or full moon? If you have a telescope or binoculars, then use it to look at the moon. What can you see? Craters? Mountains? Dark plains – called seas (even if they are dry and have no water).

Can you see any planets – use the star chart to tell you want might be visible. Venus, Mars, Jupiter and Saturn should be visible with the naked eye. Do they look different to the stars? What are their colours? Through a small telescope you should be able to see the disks of these planets and also the four largest moons of Jupiter and the rings of Saturn.

Big thinking

The stars are like the sun, but much further away. It takes eight minutes for light to reach the earth from the sun. The next nearest star, Alpha Centauri (only visible from the southern hemisphere) is just over four light years away – that means it takes light over four years to travel from there to the earth.

Stars come in different colours depending upon their temperatures. Red ones are cooler, while white ones are hotter. The planets do not make light on their own but reflect light from the sun. Their colour depends upon the surface. Mars has a very red surface, so it looks red. Venus is covered in thick white clouds, so it looks bright white. Jupiter and Saturn have a yellow tinge. They are called gas giants and are balls of gas without any solid surface.

The earth's moon looks very different to the earth. It has no atmosphere or water, so craters caused by rocks hitting the moon long, long ago, don't erode like on the earth. Before we had telescopes, people thought the dark areas might be covered in water, but we now know they are vast plains of volcanic rock covered in dust.

Big question

God challenged Abraham, 'Look up at the sky and count the stars – if indeed you can count them' (Genesis 15:5). Yet, the Bible also says, 'He determines the number of the stars and calls them each by name' (Psalm 147:4). In the earth's galaxy alone, the sun is one of up to 400 billion stars! Do we feel small when we look at the stars? Do you ever feel small compared to everyone around you? But like the stars, you are not small to God – he knows your name.

Celebration

You might want to read Psalm 8 again, or part of it (vv. 5–8). Look up again at the sky. Chat about what part of the Psalm they like best. What does it tell them about God?

Tonight we considered the vast expanse of sky above us and the vast array of planets and stars in the sky. How does it feel to know you are part of a bigger picture? We are all interconnected, we all relate to one another – everything we do has a knock-on effect on the environment around us.

What might it mean to us, to be 'rulers' or to have the works of God's hands 'under' our feet? On a scale of 1–10 (10 is an amazing job and 1 is a rubbish job), how are we doing at this job of looking after our world? Do they think God is pleased with his creation? It is magnificent. And so are we!

Prayer

As we have thought about the sky and its vastness, can you think of a 'thank you' prayer? Cup your hands over your eyes so your view is narrowed and focus on the smaller piece of sky that you can see now. As you do this, what sorry or please prayers can you say to God? Focus on one or two things. Pray these out loud, in small groups or silently in your heart.

Wherever you go, walk lightly. (point the way in front of you)
Whever you go, shine brightly. (raise your arms above your head like a star)

Wherever you go, hold tightly, (if you're happy to, hold hands with the person next to you. Alternative option here is to hold a leaf or something – hold tightly to nature as well as people)

To everything true and pure and good, both day and night. (shake hands on each beat)

In the name of Jesus Christ (let go of hands and touch each palm of your own hands)

Amen. (punch the air)

Meal suggestion

If you can, gather around a firepit and check out the **Messy Adventures take-out menu** for some warming snacks to enjoy together.

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