# SCIENCE

Lesson 2

## Year 1

**Topic: Observing skies**

## Exploring the night sky

### Lesson concepts

- Observable changes occur in the sky and landscape
- Science involves asking questions and describing changes
- People use science in their daily lives
- Questions can be responded to and predictions can be made
- Investigations can explore and answer questions
- Observations can be collected and recorded
- Information can be sorted
- Observations can be compared with predictions
- Observations can be compared with others
- Observations and ideas can be represented and communicated

Today students will:

- identify and describe features of the night sky
- compare features of the day and night sky.

### Resources

**Digital**

Slideshow — Observing night

**Sheets**

Sheet 1 — Word cards (from Lesson 1)

Sheet 2 — Day and night observations (saved copy from Lesson 1)

### Key terms

moon, planet, star

For definitions and explanations of terms, please see the Glossary.

## Lesson

### Share prior knowledge about features of the night sky

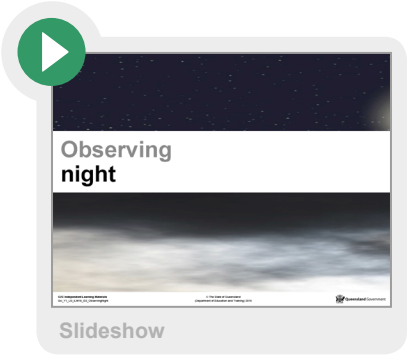
1. Discuss the night sky. Refer to words from **Sheet 1 — Word cards** cut out in Lesson 1.

#### Focus question

Q. *What do you know about the night sky?*

A. For example: At night it is dark, the sky is dark, sometimes you can see the moon and the stars, sometimes the moon shines very brightly and looks very big and round, sometimes the moon looks thin and not so bright. You might sometimes see a shooting star.

2. a. View the **Slideshow — Observing night**.




b. Discuss the slideshow images by asking students to identify the things they can observe in each image. Similar focus questions can be asked for each photograph, and answers will vary with each image.

#### Focus questions

Q. *What is this a photograph of?*

A. For example: Fireworks at night

Q. *How do you know that it is night-time in this photograph?*

A. For example: Because the sky is dark and I can see the fireworks.

Q. *What else do you see in the photograph?*

A. For example: buildings, smoke, a river

3. Discuss why people observe the night sky.

#### Focus question

Q. *Why do people make observations of the night sky?*

A. For example: To find out what the weather is like; to see how the moon looks when it is changing shape, to see how the planets move.



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## Say to students

Scientists make observations of the night sky to learn about it and about how the things in it change. They observe as the **moon** seems to change shape and they observe the way the **planets** move and the way the **stars** appear in different night skies. By making these observations, scientists can learn more about the moon, stars and planets. Scientists also make observations of the weather at night to learn more. We can also make observations of the night sky to learn more about it in our everyday lives.

## Focus questions

Q. *What do you think you might see if you looked at the sky tonight?*

A. For example: The moon will be big and bright.

Q. *Why do you think this?*

A. For example: Because it was big and bright last night. There is no rain or clouds so I think I will be able to see the moon very well.

### Compare features of the day sky and the night sky

4. a. Look at the images of a city in the daytime and at night.

i.

ii.

b. Ask students to list the features they observe in the day sky and the night sky in their Science journals under the headings ‘day sky’ and ‘night sky’. For example:

| Day sky | Night sky |
|---|---|
| sun | moon |
| plane | clouds |
| bird | lights |
| clouds | |
| balloon | |

i. Image created using: https://pixabay.com/en/river-high-rise-building-brisbane-627249/ ; https://pixabay.com/en/hot-air-balloon-balloon-colorful-4761/ ; https://pixabay.com/en/plane-sky-fly-blue-travel-pilot-843434/

ii. https://pixabay.com/en/laser-show-laser-brisbane-city-221150/

### Focus questions

Q. *What was the same about these two photos?*

A. For example: There are buildings and clouds in both photos.

Q. *What was different about these two photos?*

A. For example: In the day, there is the sun and blue sky; at night the moon is in the sky and it is dark.

## Establish ongoing record of night sky observations

### Say to students

‘This week you are going to participate in a ‘night watch’ to investigate the night sky. This will be like the day watch you have just done but instead you will make your observations at night.’

5. Discuss with students what they predict they will see.

### Focus questions

Q. *What do you predict you will see tonight?*

A. The moon, stars, clouds

Q. *If you looked at the night sky next week, do you think it would look the same?*

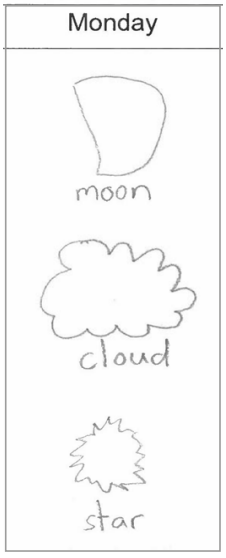
A. For example: No, I think the moon will be a different shape next week.

Q. *Do you think the night sky changes over months and years?*

A. For example: Yes, the moon is always there but its shape is different, the stars look different, sometimes there are clouds and sometimes there aren’t.

6. Discuss how students will record their observations on **Sheet 2 — Day and night observations**, for example: they could draw the shape of the moon each night and use symbols or drawings for clouds, stars and planets.

**Night observations**



**Note**

Arrange for students to observe the sky for five to ten minutes each night for five nights under the supervision of a responsible adult. Encourage them to make scientific observations of everything they see and record these observations.

Students may be confused by the difference between stars and planets. Stars have a fixed position that appears to change as Earth moves and planets move as they orbit the sun. Students do not need to understand these concepts at this age but if it is possible to identify Venus or Mars in the night sky, explain to students that these are planets. Other objects they see shining in the sky may be stars, satellites or even the lights of planes. Clarify any features they observe with the students.

7. Conduct night sky observations for the week and have students record their observations on **Sheet 2**.