

Clouds

FOCUS QUESTIONS

1. Briefly explain how clouds form.
2. Why are clouds an important part of the earth's atmosphere?
3. What does a meteorologist study?
4. What is a Cloud Atlas?
5. When was it first published?
6. What does a cumulus cloud look like?
7. What is the name of the cloud that brings rain and lightning?
8. The Cloud Atlas has special clouds that are defined by the unusual ways they form. Give an example of one.
9. Describe the cloud that Gary helped get into the Cloud Atlas.
10. What do you understand more clearly since watching the BTN story?

ACTIVITY

Class Discussion

Watch the BTN *Cloud Atlas* story and discuss the information raised as a class. What questions do students have (what are the gaps in their knowledge)? The following questions may help guide the discussion:

- What are clouds? Come up with a definition.
- What have you noticed about clouds?
- How do clouds form?
- What are the main types of clouds?
- What is the Cloud Atlas?

The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

<i>What do I know?</i>	<i>What do I want to know?</i>	<i>What have I learnt?</i>	<i>How will I find out?</i>

KEY LEARNING

Students will develop an understanding of how clouds form and the different types of clouds.

AUSTRALIAN CURRICULUM

Science – Year 4

Represent and communicate observations, ideas and findings using formal and informal representations ([ACSI071](#))

Science – Year 5

Solids, liquids and gases have different observable properties and behave in different ways ([ACSSU077](#))

Science – Year 7

Some of Earth's resources are renewable, including water that cycles through the environment, but others are non-renewable ([ACSSU116](#))

ACTIVITY

How do Clouds form?

Ask students to watch the [Science of Clouds video](#) which explains the water cycle. Ask students to explain each component of the water cycle:

Evaporation
Condensation
Precipitation



Create a diagram that shows the water cycle.

ACTIVITY

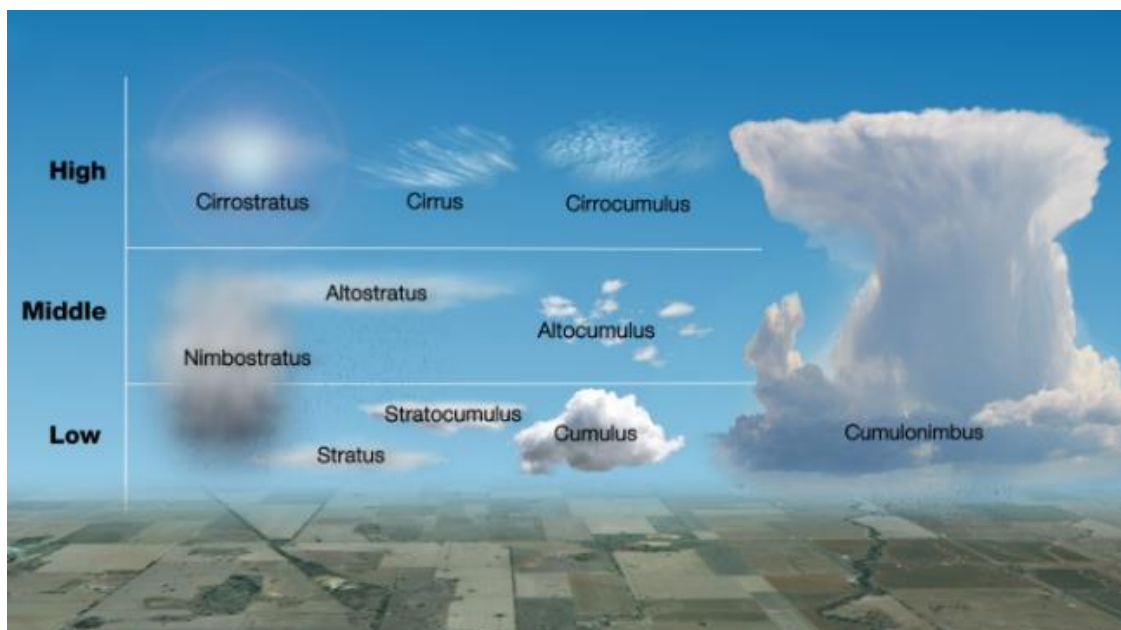
Types of Clouds

Students will explore in more detail the main types of clouds. Explain to students that clouds are categorised by where they sit in the atmosphere – low (earth's surface to 2.5km), middle (2.5-6km) or high (above 6km).

Many words in science come from Latin. Clouds are given Latin names which describe their characteristics. For example, stratus which means *flattened* or *layer*, cirrus which means *curl of hair*, and cumulus which means *heap* or *pile*.

Show students the [image below](#) and choose a cloud type from each layer (high, middle and low) to find out more about. Ask students to:

- Name of cloud
- Describe the appearance of the cloud
- Meaning in Latin
- Interesting fact



Source: [Bureau of Meteorology](#)

ACTIVITY

Identify the Cloud

Students will learn to identify different types of clouds. Ask them to look at the photographs of the different types of clouds and name each cloud.

Cumulonimbus Cumulus Cirrus Stratus



Type of cloud:



Type of cloud:



Type of cloud:



Type of cloud:

ACTIVITY

Keep a Cloud Journal

Students will keep a cloud journal for a week. Observe and record the following each day:

Observe: What type of clouds are in the sky?

Record: Take a photograph of the clouds.

Predict: Make some predictions about the weather. Is it likely to rain? Were their predictions correct?

ACTIVITY

Cloud in a Jar Experiment

Students will gain a better understanding of how clouds are made by conducting the *Cloud in a Jar* experiment. The following [video](#) has the list of materials and instructions for the experiment. Ask students to summarise the experiment and explain what happened to make the cloud.



ACTIVITY

Create a Quiz

Use [Kahoot!](#) to test students' knowledge about clouds. Quizzes can be created to recap learning or test personal knowledge. There is also the option to connect with classrooms around the world and play kahoot in real time.



USEFUL WEBSITES

NASA – What are Clouds?

<https://www.nasa.gov/audience/forstudents/5-8/features/nasa-knows/what-are-clouds-58.html>

PBS Learning - Cloud Types Interactive

https://www.pbslearningmedia.org/asset/ess05_int_cloudtype/

BOM – Clouds

<http://www.bom.gov.au/info/clouds/>

BOM – What's that Cloud?

<http://media.bom.gov.au/social/blog/895/whats-that-cloud/>

NASA – Cloud Identification Chart

https://scool.larc.nasa.gov/pdf/1-PageCloudChart/Cloud_ID.pdf

Youtube – Why do clouds stay up?

<https://www.youtube.com/watch?v=DjByja9ejTQ>

CBBC Newsround – New Type of Cloud in the Sky

<http://www.bbc.co.uk/newsround/39398682>

ABC News – Asperitas: How a Tasmanian geologist helped classify a new type of cloud

<http://www.abc.net.au/news/2017-03-23/asperitas-burnie-mans-cloud-dreams-come-true/8379362>

ABC Science – Cloud Quiz

<http://www.abc.net.au/news/interactives/quiz/?quiz=1475815830.9375&v=4.2.0>