

Depressions and anticyclones

Learning objective:

To explain what depressions and anticyclones are and to describe the associated weather conditions.



Air pressure

Air pressure is how hard the air is pressing onto the Earth's surface.

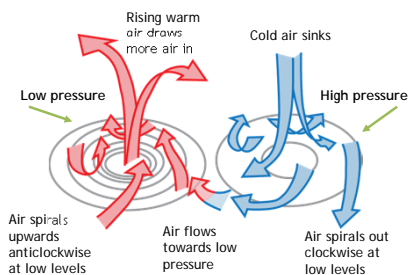
- High pressure systems = **anticyclones**
- Low pressure systems = **depressions**

www.youtube.com/watch?v=aiYyCurh_SU

- An anticyclone is...
- A depression is...

What causes high and low pressure?

Areas of high and low pressure are caused by rising and sinking air. As air warms, it rises leading to low pressure at the surface. As air cools, it sinks leading to high pressure at the surface.



High pressure = generally settled weather
Low pressure = unsettled weather

Simple learning objective:

Describe the differences between high and low pressure systems.

Draw a diagram to go with your description.

Basic learning objective:

Explain the differences between high and low pressure systems.

Draw a diagram to go with your explanation.

Detailed learning objective:

Explain how an anticyclone and depression are formed.

Explain the differences between the two pressure systems.

youtube.com/watch?v=IITCF3UPVu4&feature=youtu.be

What does an anticyclone look like?

Summer weather conditions

- Fine calm days
- Long periods of sunshine
- Haze
- Cloudless skies
- Heat waves
- Colder nights due to no cloud cover
- Morning mist / dew
- Thunderstorms after a few days

Winter weather conditions

- Dew and morning mists
- Extensive fogs
- Frost
- Sometimes there is smog
- Very cold nights due to no cloud
- Cloudless skies



Satellite image of high pressure area



Synoptic chart of high pressure area

Questions

Q: Why are the isobars usually spaced further apart in high pressure areas?

A: The isobars are usually spaced further apart in high pressure areas because

Q: Why are there clear skies in a high pressure weather system?

A: There are usually clear skies in a high pressure weather system because

Q: What is another name for a high pressure weather system?

A: Another name for a high pressure weather system is

What does an depression look like?

Summer weather conditions	Winter weather conditions
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- Prolonged rainfall
- Cloudy skies
- Windy conditions
- Storms

- Storms
- Snowfall
- Sleet
- Hail
- Heavy rainfall
- Windy conditions



Satellite image of low pressure area



Synoptic chart of low pressure area

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Questions

Q: Why are the isobars usually spaced close together in low pressure areas?

A: The isobars are usually spaced close together in low pressure areas because

Q: Why are there cloudy skies in a low pressure weather system?

A: There are usually cloudy skies in a low pressure weather system because

Q: What is another name for a low pressure weather system?

A: Another name for a low pressure weather system is

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Competition time

Close your books. How many points can you and your partner score in 2 minutes. The pair with the highest number of points will win a prize! Total marks available 26.

What do isobars measure?	Which weather system is caused by sinking air?	What does this symbol mean?
Give three high pressure summer conditions.	What is indicated if isobars are close together?	Strong winds are found in which weather condition?
Which weather system is caused by rising air?	What does this symbol mean? 	What is an area of low pressure called?
What is an area of high pressure called?	What does this symbol mean? 	Give three low pressure winter conditions.

1 Point

2 points

3 points

4 points

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Plenary

Three pieces of information a weather chart can tell us:

- 1.
- 2.
- 3.

Three weather conditions we can expect in summer in an anticyclone:

- 1.
- 2.
- 3.

Three weather conditions we can expect in the winter in a depression:

- 1.
- 2.
- 3.

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