CLASSROOM 42

WEATHER HAZARDS

AQA GCSE GEOGRAPHY

TEACHER ANSWER BOOKLET

YOUR LEARNING JOURNEY

What do you already know?

1	2	3	4	5
○	○	○	○	○
NOT YET CONFIDENT	SLIGHTLY CONFIDENT	SOMEWHAT CONFIDENT	CONFIDENT	VERY CONFIDENT

1 BASELINE RETRIEVAL

1. What happens to warm air? Warm air rises.

2. Which pressure is linked to rising air? Low pressure is linked to rising air.

3. What causes the Coriolis effect? The Coriolis effect is the apparent deflection of moving air caused by Earth's rotation.

4. State one condition needed for a tropical storm. Tropical storms need warm ocean water.

5. What is a storm surge? A storm surge is an abnormal rise in sea level driven by strong winds and low pressure.

BY THE END, YOU WILL BE ABLE TO:

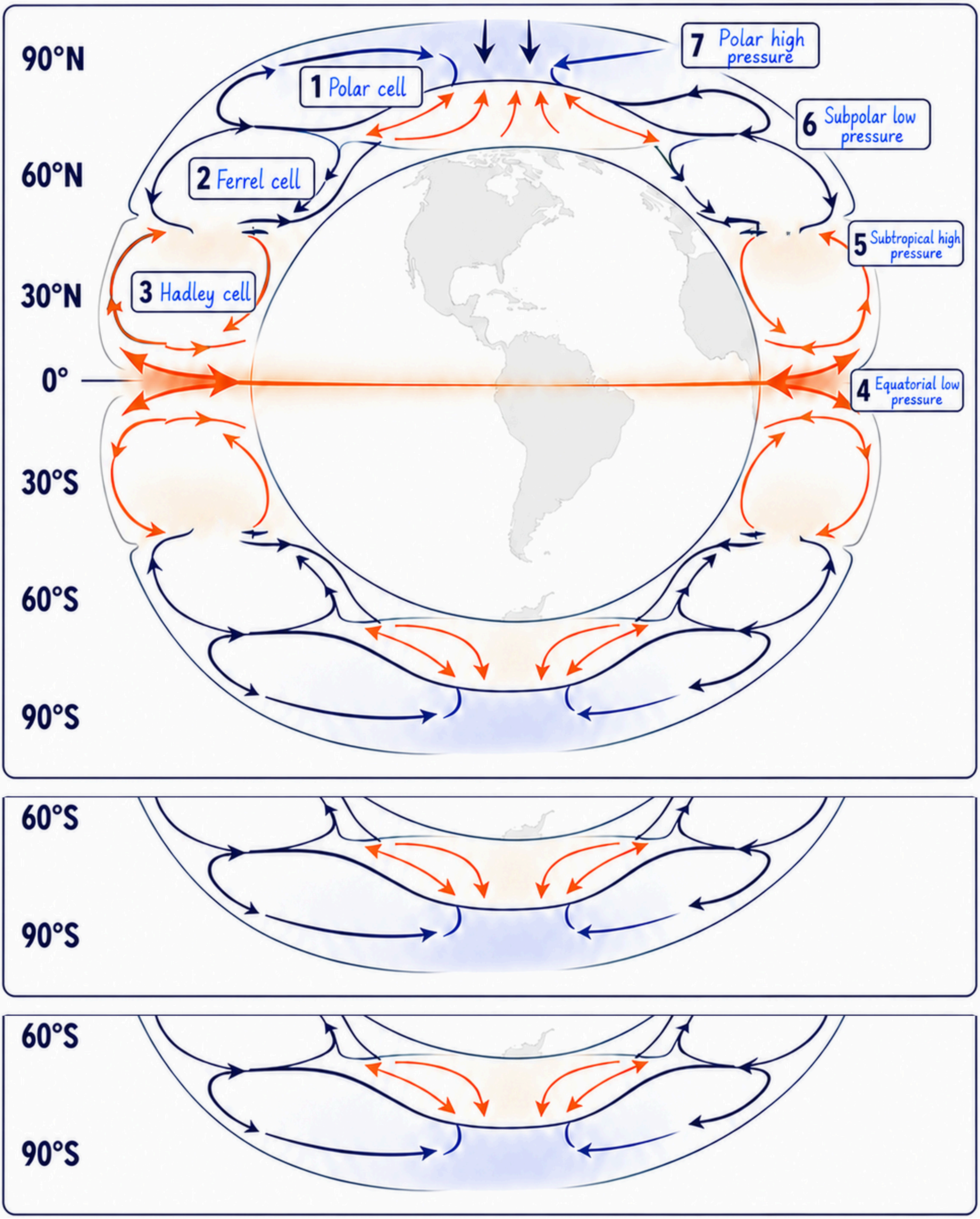
- ☐ Explain global atmospheric circulation.
- ☐ Describe tropical-storm formation and structure.
- ☐ Assess effects, responses and risk reduction.
- ☐ Explain UK weather hazards and extreme-weather evidence.

WEATHER HAZARDS

GLOBAL ATMOSPHERIC CIRCULATION

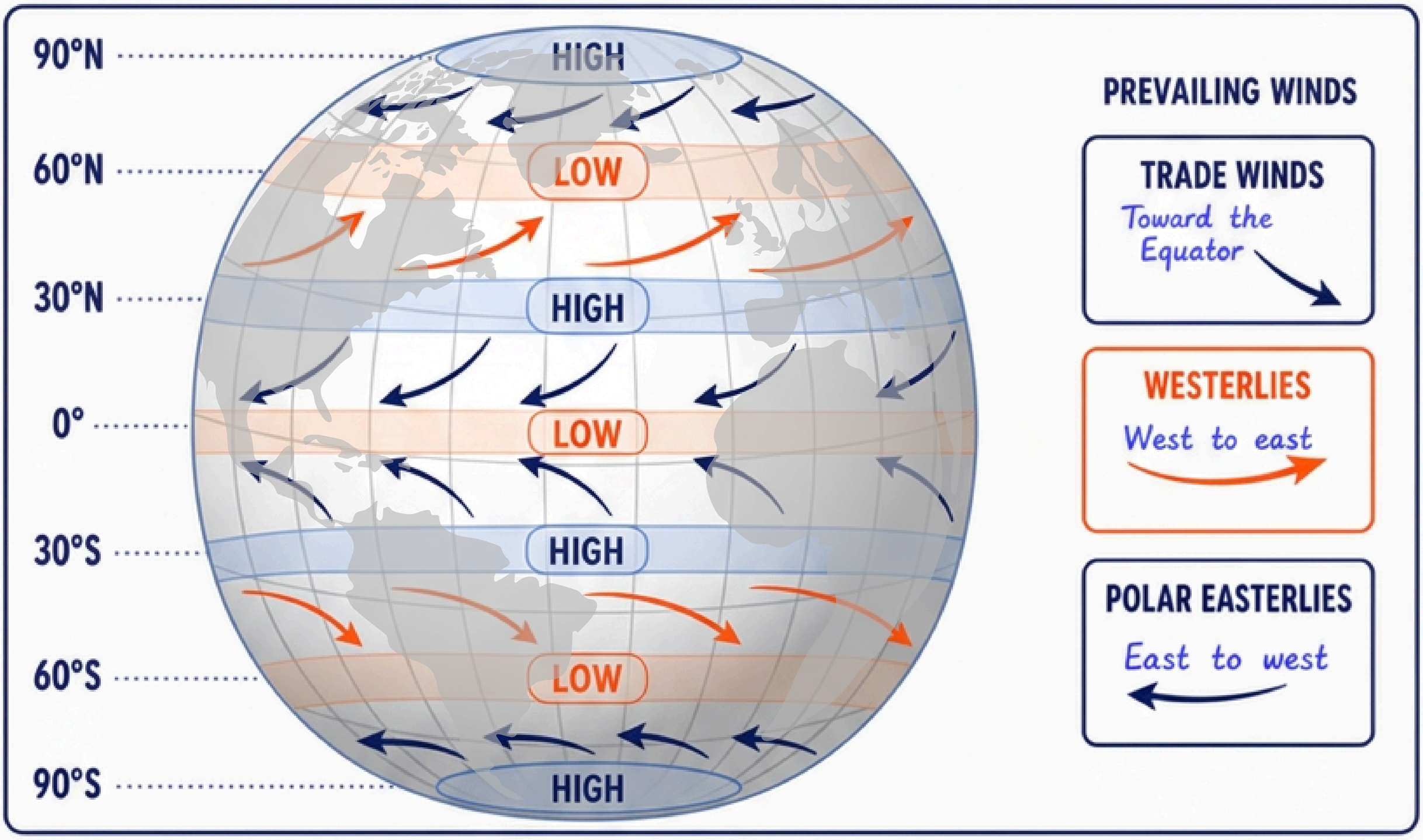
LABEL IT

Write each shuffled term in its exact target box, then answer the question.



PRESSURE BELTS & SURFACE WINDS

Complete the table, then apply the model to the UK.



LATITUDE	PRESSURE	AIR MOVEMENT	TYPICAL WEATHER
0°	low pressure	rising air	cloudy/wet
30°	high pressure	sinking air	dry/settled
60°	low pressure	rising air	unsettled/wet
90°	high pressure	sinking air	cold/dry

CORIOLIS EFFECT: the apparent deflection of moving air caused by Earth's rotation.

Deflects moving air to the right in the Northern Hemisphere and to the left in the Southern Hemisphere.

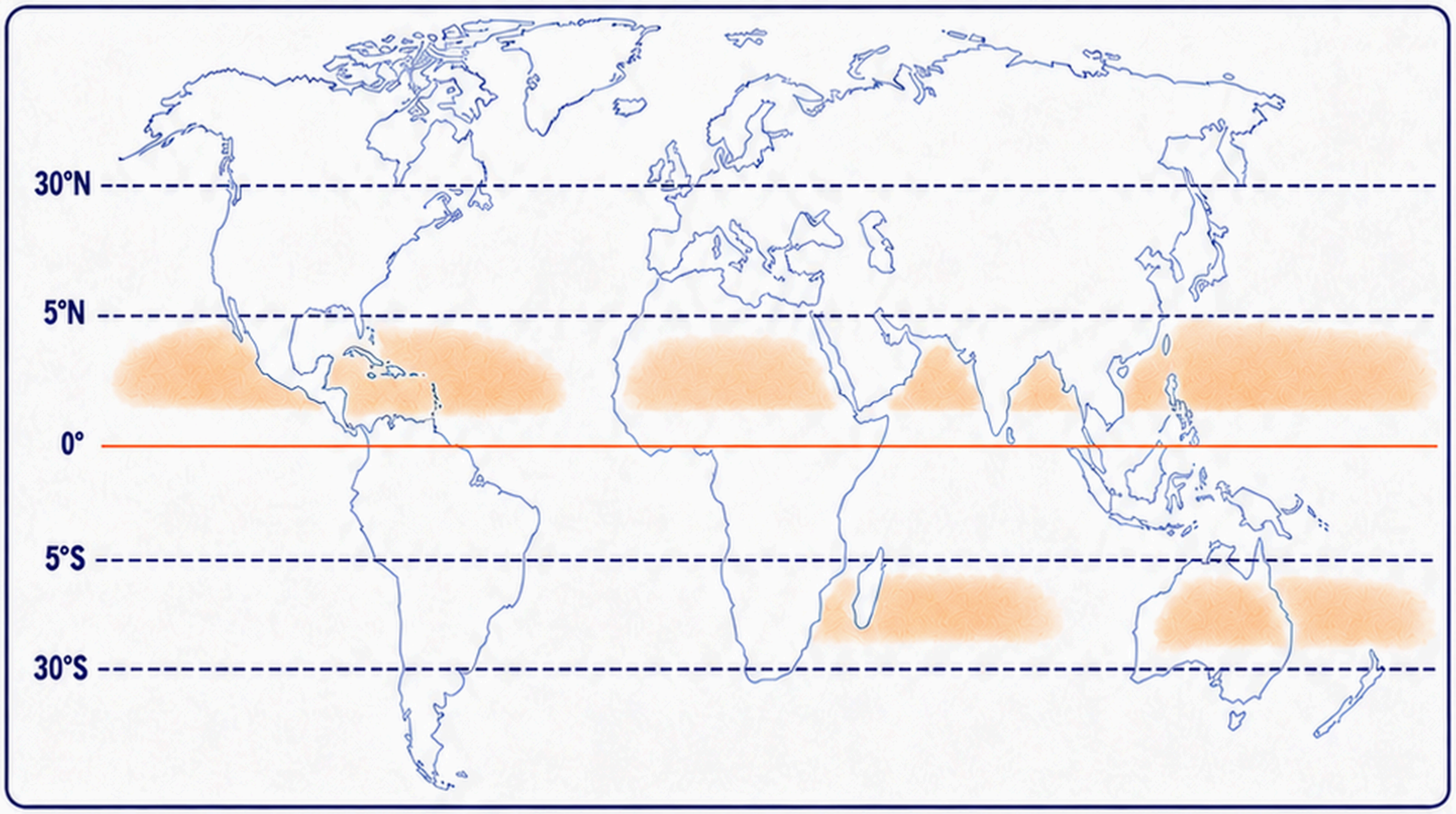
CHALLENGE

Why does the UK often receive unsettled weather from the Atlantic?

The UK lies in the mid-latitude westerlies near the polar-front/subpolar-low zone, so Atlantic depressions and fronts are often steered west to east, bringing unsettled weather.

WHERE TROPICAL STORMS FORM

Use the map and keyword bank to complete the tasks.



HURRICANE – Atlantic and eastern Pacific

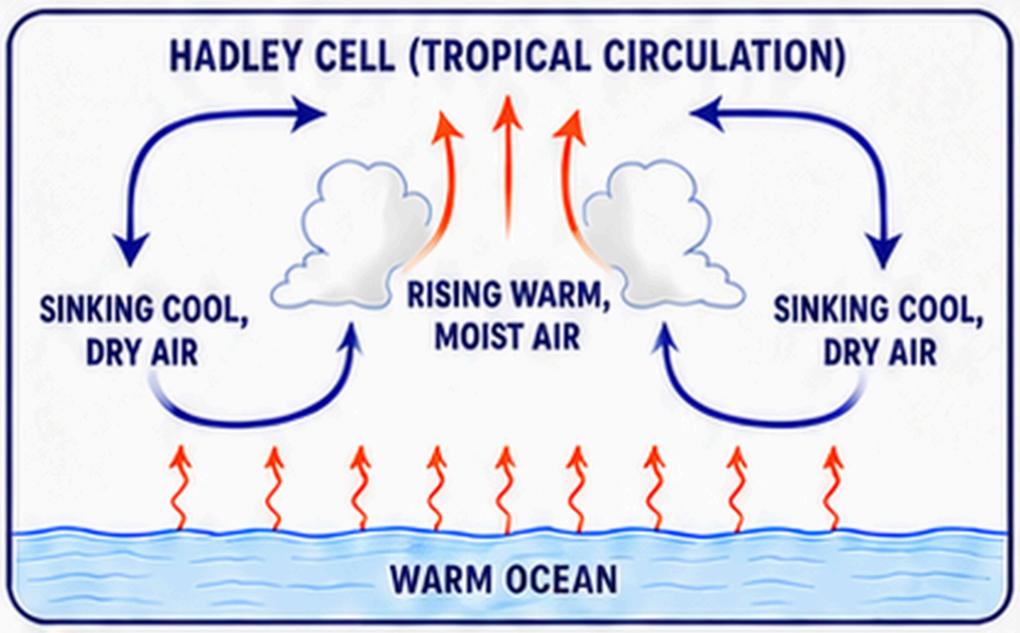
TYPHOON – western Pacific

CYCLONE – Indian Ocean and South Pacific

1 Shade the main tropical-storm formation zones.

2 Why do storms not form directly on the Equator?

There is insufficient Coriolis force at the Equator to produce rotation.

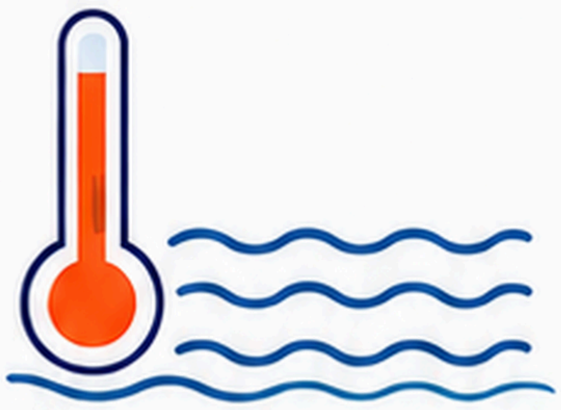


3 Explain how warm oceans, rising air and global circulation help to create the pattern shown.

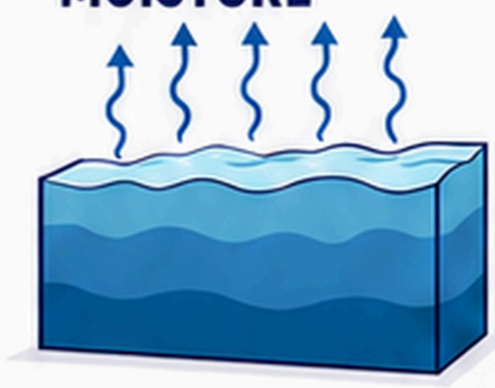
Warm oceans above about 27°C supply heat and moisture. Warm, moist air rises, creating low pressure; condensation releases latent heat and strengthens uplift. Converging winds draw in more air, while the Coriolis effect away from the Equator produces rotation. This links storms to warm tropical oceans and rising air in the Hadley-cell zone.

CONDITIONS FOR FORMATION

1. SEA TEMPERATURE OF AT LEAST 27°C



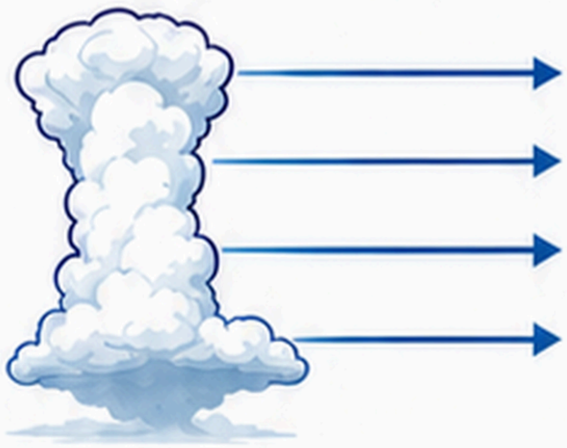
2. DEEP WARM WATER AND PLENTY OF MOISTURE



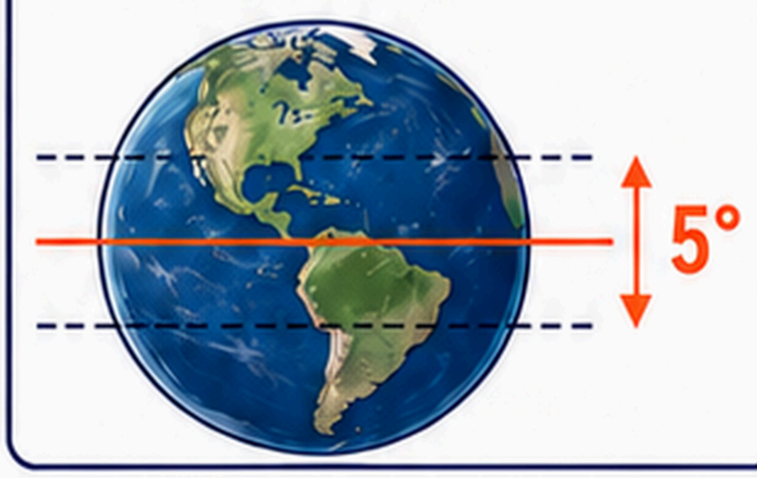
3. CONVERGING SURFACE WINDS

4. RISING AIR AND LOW PRESSURE

5. LOW VERTICAL WIND SHEAR



6. AT LEAST ABOUT 5° FROM THE EQUATOR



RANK & JUSTIFY

Rank the three most essential conditions. Justify your first choice using a because–therefore chain.

RANK	CONDITION	WHY IT MATTERS
1	Sea ≥27°C	Supplies heat and moisture to power uplift.
2	Deep warm water	Maintains the energy supply as water mixes.
3	Low wind shear	Keeps the rotating storm vertically aligned.

Accept any three with a justified order.

CHALLENGE

Why is warm water necessary but not sufficient on its own?

Warm water supplies heat and moisture, but a storm also needs converging and rising air, low pressure, little vertical wind shear and enough Coriolis force away from the Equator to organise rotation.

Examples shown: Southern Hemisphere torpical cyclone

HOW A TROPICAL STORM DEVELOPS

LABEL IT

Number the stages 1–6, then complete the cause–effect chains.

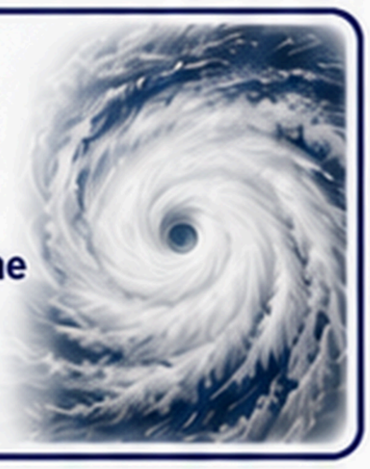
1 Warm, moist air rises from the ocean surface.

2 Condensation releases latent heat, adding energy.

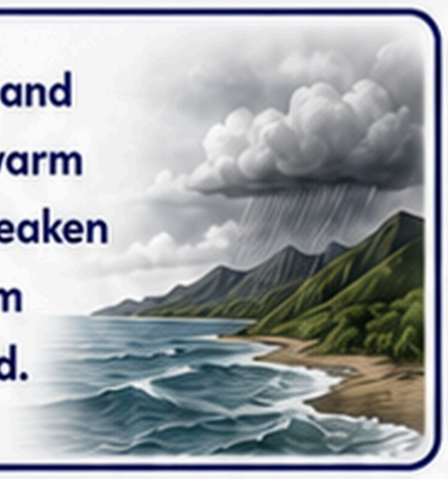
3 Falling pressure draws more air towards the centre.

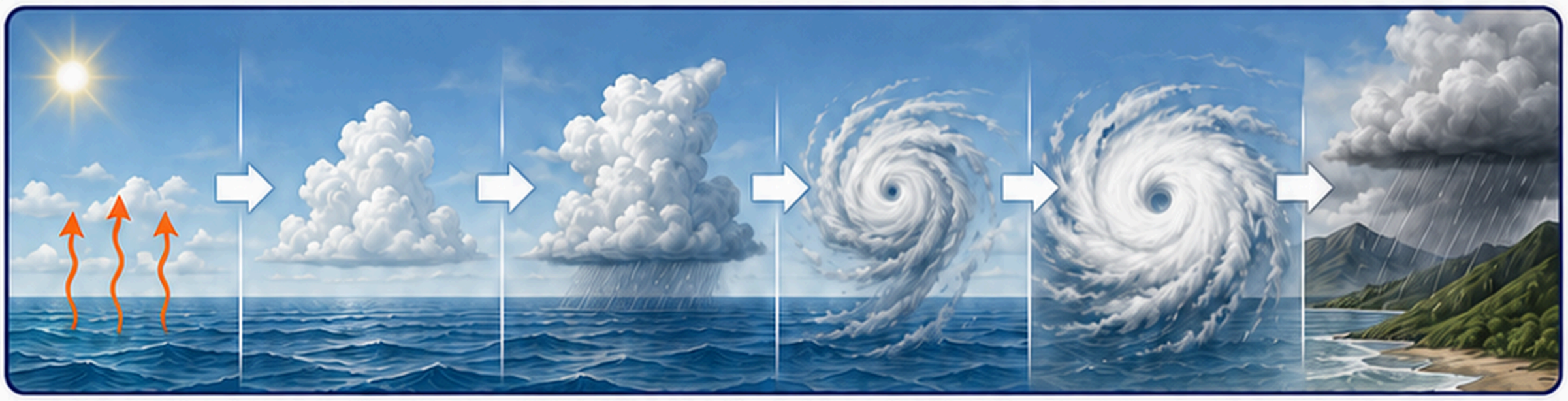
4 Coriolis deflects the moving air and rotation develops.

5 Spiral rain bands and an eyewall become organised.



6 Friction and loss of warm water weaken the storm over land.





CAUSE → EFFECT

Warm air rises because...

the warm ocean heats moist air, making it less dense.

Condensation strengthens the system because...

latent heat is released, adding energy and driving more uplift.

The storm weakens over land because...

friction increases and the supply of warm, moist ocean air is cut off.

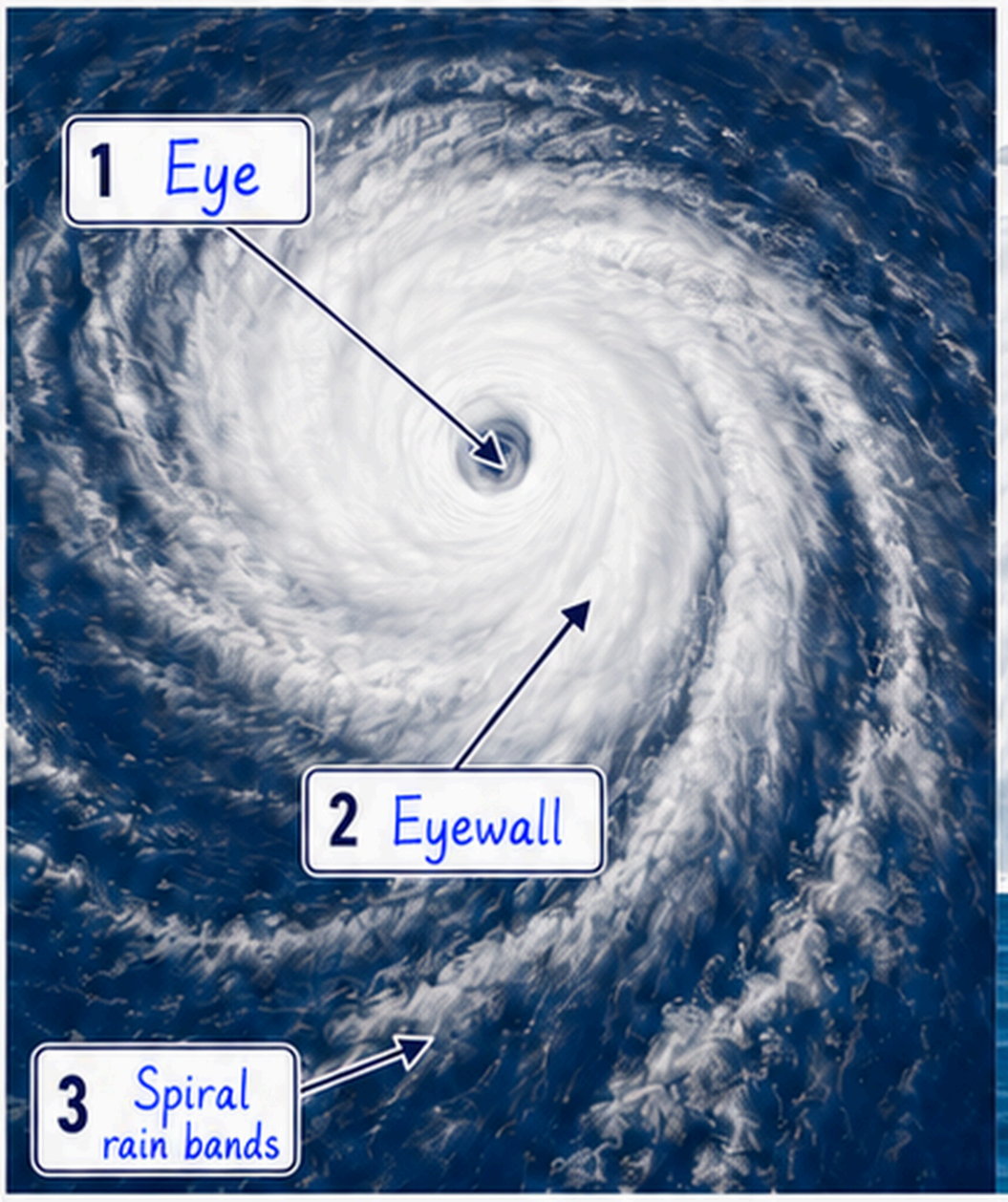
⚠ Coriolis helps organise rotation; it does not create the initial uplift.

Examples shown: Southern Hemisphere torpical cyclone

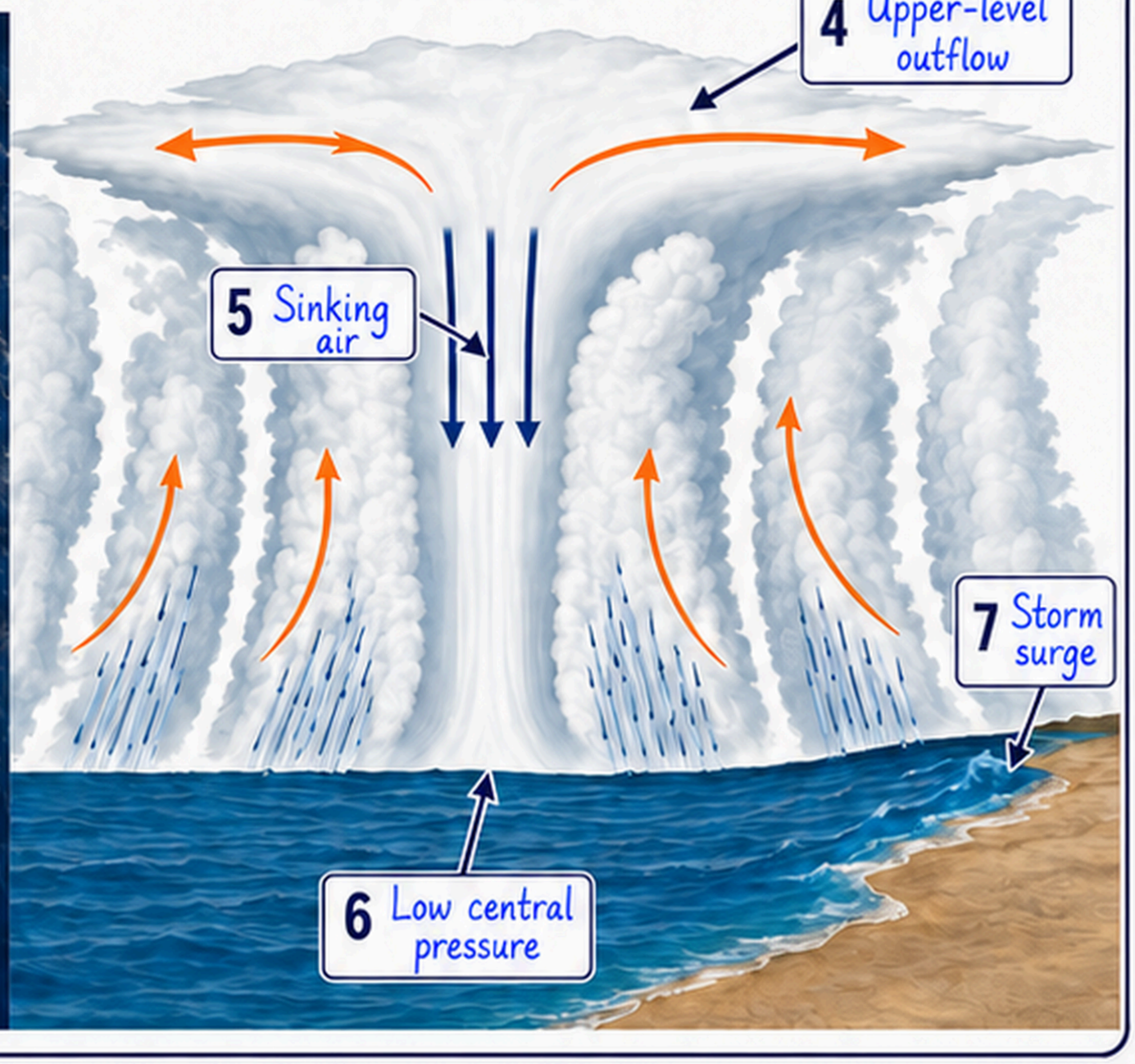
STRUCTURE OF A TROPICAL STORM

LABEL IT — Use the shuffled keyword bank to label the plan view and cross-section.

PLAN VIEW (SATELLITE)



CROSS-SECTION



EYE • EYEWALL • SPIRAL RAIN BANDS • UPPER-LEVEL OUTFLOW
LOW CENTRAL PRESSURE • SINKING AIR • STORM SURGE

CHECK YOUR UNDERSTANDING

1. How is the eye different from the eyewall?

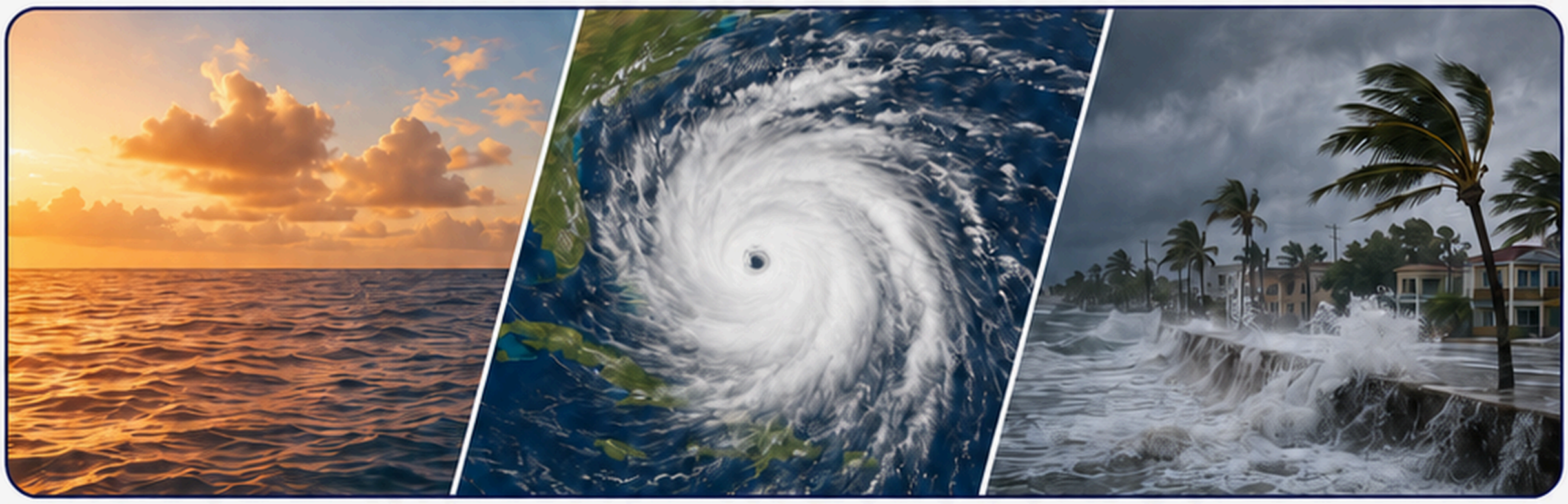
The eye is relatively calm, with sinking air and little cloud. The eyewall surrounds it and has the strongest winds, fastest uplift and heaviest rain.

2. Why is the storm surge dangerous at the coast?

Strong winds and low pressure raise sea level and drive water onshore, causing rapid coastal flooding, powerful waves and damage.

Examples shown: Southern Hemisphere torpical cyclone

CLIMATE CHANGE & TROPICAL STORMS



WARMER SEAS

may support a higher potential storm intensity

WARMER AIR

can hold more moisture, increasing rainfall rates

SEA-LEVEL RISE

can worsen storm-surge flooding

CHANGING CONDITIONS

may shift where storms can form or travel

CERTAIN, LIKELY OR UNCERTAIN?

Classify each statement, then rewrite the overconfident claims using *may*, *likely* or *uncertain*.

STATEMENT	CERTAIN / LIKELY / UNCERTAIN	IMPROVED WORDING
A. Every ocean will experience more tropical storms.	Uncertain	Suitable storm-forming areas may shift, but not every ocean will have more storms.
B. A greater proportion of storms may become very intense.	Likely	A greater proportion of storms is likely to become very intense.
C. Rainfall from the strongest storms is *likely* to increase.	Likely	Rainfall from the strongest storms is likely to increase.
D. Total global storm frequency *will definitely rise*.	Uncertain	Total global storm frequency is uncertain and may not increase.

KEY MESSAGE: Frequency is *uncertain*: climate change does not simply mean more storms everywhere.

Explain one way climate change might affect tropical storms.

Warmer air can hold more moisture, so tropical storms may produce heavier rainfall and increase flood risk.

WEATHER HAZARDS

EFFECTS & RESPONSES

PRIMARY EFFECT

happens directly because of the storm

SECONDARY EFFECT

happens as a later consequence

IMMEDIATE RESPONSE

action during or just after the event

LONG-TERM RESPONSE

action over months or years

CLASSIFY IT

Write P, S, I or L beside each mixed example.

1. Homes destroyed by strong winds — P
2. Emergency search and rescue — I
3. Water supplies contaminated after flooding — S
4. Rebuilding homes to a stronger standard — L
5. Storm surge floods coastal settlements — P
6. Restoring farming and fishing livelihoods — L
7. Emergency food, water and shelter — I
8. Disease risk rises because clean water is scarce — S

DEVELOP A CHAIN

Choose one effect and explain how it could lead to a secondary effect.

A storm surge can flood homes and water-treatment systems (primary effect). This may contaminate drinking water, so clean water becomes scarce and the risk of water-borne disease rises (secondary effect).

NAMED EXAMPLE: TYPHOON HAIYAN

PHILIPPINES, 2013

Landfall: 8 November 2013 • Central Philippines • Very intense tropical cyclone

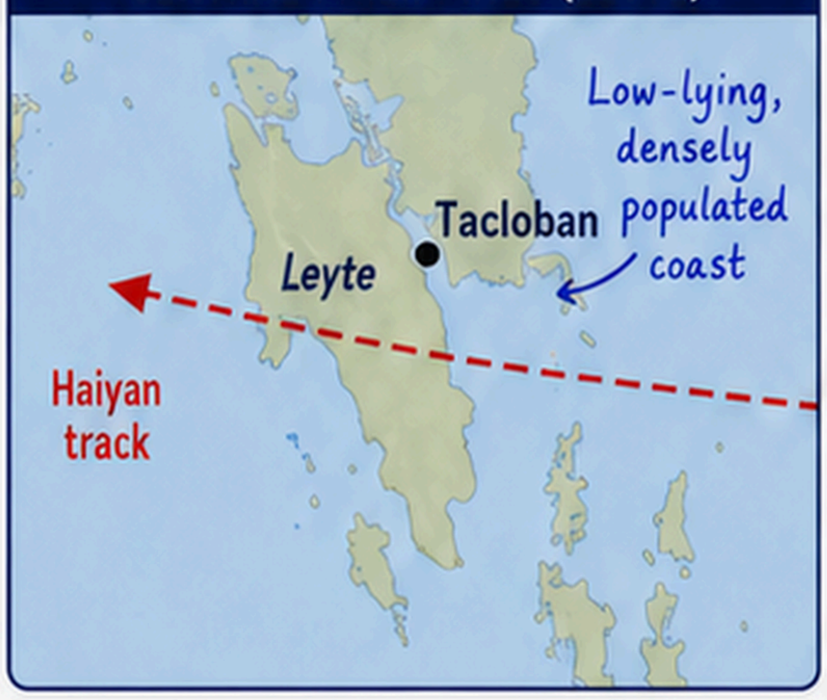
EXTREME WINDS

HEAVY RAIN

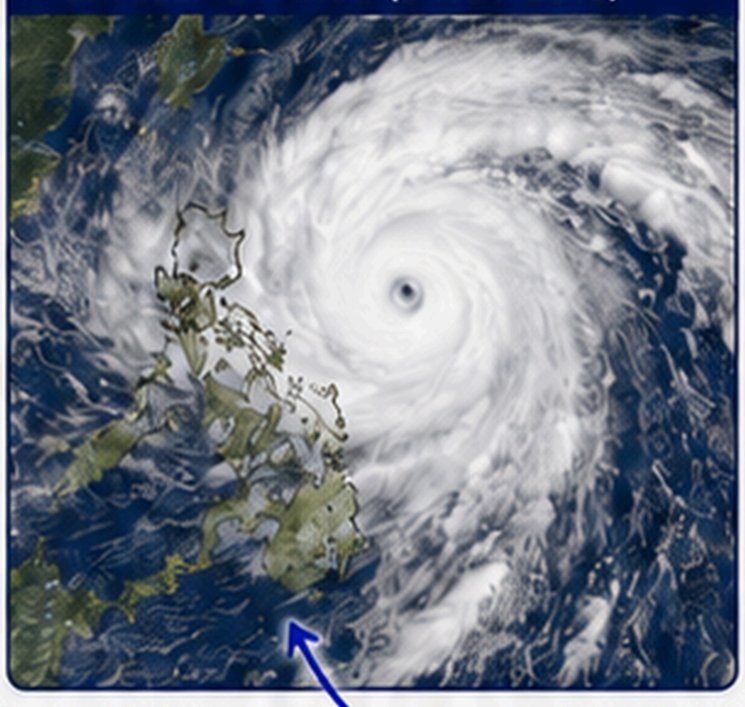
DESTRUCTIVE STORM SURGE

LOCATION: SOUTHEAST ASIA

CENTRAL PHILIPPINES (LEYTE)



SATELLITE IMAGE (8 NOV 2013)



HAZARD OR VULNERABILITY?

Annotate the map and classify each factor.

1	Low-lying coastal settlements	V	4	Powerful winds and storm surge	H
2	Warm western-Pacific ocean	H	5	Homes of varied construction quality	V
3	Dense population around Tacloban	V	6	Many livelihoods depended on farming and fishing	V

Explain how one physical hazard and one vulnerability factor combined to increase risk.

Haiyan's powerful winds and storm surge were physical hazards. Tacloban's low-lying, densely populated coast increased exposure, while weaker homes were easily damaged; therefore more people were flooded, displaced and at risk.

TYPHOON HAIYAN: EFFECTS

OVER 6,000 DEATHS

OVER 16 MILLION PEOPLE AFFECTED

ABOUT 4 MILLION DISPLACED

HOMES AND INFRASTRUCTURE DESTROYED

CROPS AND FISHING LIVELIHOODS DAMAGED

COASTAL FLOODING, DEBRIS AND WATER CONTAMINATION

CLASSIFY THE EVIDENCE

Choose four evidence cards and complete the table.

EFFECT	SOCIAL / ECONOMIC / ENVIRONMENTAL	PRIMARY / SECONDARY	WHY?
Over 6,000 deaths	Social	Primary	Direct result of winds, debris and storm surge.
About 4m displaced	Social	Secondary	Destroyed homes forced people to leave.
Homes/infrastructure destroyed	Economic	Primary	Winds and surge directly damaged buildings and roads.
Crops/fishing livelihoods damaged	Economic	Primary	Wind, waves and salt water damaged productive assets.

BUILD TWO CHAINS

Strong winds caused... because... therefore...

Strong winds tore roofs from homes because pressure forces were extreme; therefore families lost shelter and many people were displaced.

Storm-surge flooding caused... because... therefore...

Storm-surge flooding occurred because winds and low pressure pushed seawater ashore; therefore homes flooded, water was contaminated and disease risk increased.

TYPHOON HAIYAN: RESPONSES

Place each response on the timeline and label it immediate or long term.

BEFORE / DURING	FIRST DAYS	WEEKS & MONTHS	LONGER TERM
Warnings and evacuations — IMMEDIATE	• Search and rescue — IMMEDIATE • Emergency food, clean water, shelter and medical aid — IMMEDIATE • International assistance — IMMEDIATE	• Rebuilding homes and infrastructure — LONG TERM • Restoring farming and fishing livelihoods — LONG TERM	• Improved shelters, warnings and evacuation planning — LONG TERM • Build back better approaches — LONG TERM

Warnings and evacuations

Search and rescue

Emergency food, clean water, shelter and medical aid

International assistance

Rebuilding homes and infrastructure

Restoring farming and fishing livelihoods

Improved shelters, warnings and evacuation planning

Build back better approaches

EVALUATE

Which response most reduced long-term vulnerability? Use evidence and explain a limitation.

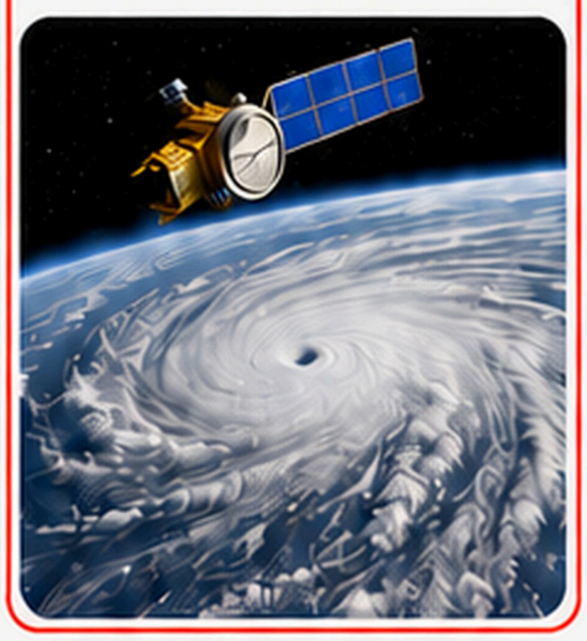
CHOICE	EVIDENCE	WHY EFFECTIVE	LIMITATION
Improved shelters, warnings and evacuation planning	New cyclone shelters; improved warnings and evacuation plans	Reduces exposure and saves lives in future typhoons	Needs funding, maintenance and people to act on warnings

Improved shelters, warnings and evacuation planning most reduced long-term vulnerability. Stronger cyclone shelters give people safer places to go, while earlier warnings and organised evacuation reduce exposure before another typhoon. However, the approach only works if systems are maintained, warnings reach people and they act in time.

REDUCING TROPICAL-STORM EFFECTS

MONITORING

satellites, radar, aircraft and ocean buoys collect data



PREDICTION

forecasts estimate track and intensity so warnings can be issued

PROTECTION

shelters, sea defences and wind-resistant buildings reduce damage

PLANNING

evacuation routes, drills, emergency supplies and zoning reduce exposure

£10 MILLION COASTAL-CITY CHALLENGE

HYPOTHETICAL BUDGET EXERCISE — NOT REAL-WORLD COST DATA

Allocate the budget across the four methods. Total must equal £10 million.

METHOD	£ MILLION	HOW IT REDUCES RISK	LIMITATION
1 MONITORING	£1.5m	Improves real-time storm data	Does not itself stop damage
2 PREDICTION	£1.5m	Gives earlier track/intensity warnings	Forecasts retain uncertainty
3 PROTECTION	£4m	Shelters and defences reduce physical damage	Expensive; protects limited areas
4 PLANNING	£3m	Evacuation, drills and zoning reduce exposure	Needs participation and enforcement

TOTAL = £10m £10m

Justify your package. Which method offers the greatest benefit, and why?

Protection receives the most because shelters and defences can directly reduce deaths and damage. Planning is also strongly funded so people can evacuate and avoid exposed land. Monitoring and prediction make warnings possible, but no method removes all risk and forecasts can change.

KEY REMINDER: No single strategy removes all risk.

UK WEATHER HAZARDS

Match each hazard to a likely impact, then add one UK example or season.

Transport disruption

Water shortages and crop stress

Power cuts and building damage

Flash flooding and lightning risk

Homes, roads and farmland inundated

HAZARD	LIKELY SEASON / CONDITIONS	SOCIAL, ECONOMIC OR ENVIRONMENTAL IMPACT
1 Heavy rain & flooding	Autumn/winter; prolonged rain and saturated ground	Homes, roads and farmland inundated — social/economic/environmental
2 Strong winds & storms	Autumn/winter Atlantic depressions	Power cuts and building damage — social/economic
3 Snow & ice	Winter; cold air and sub-zero surfaces	Transport disruption — social/economic
4 Heatwaves & drought	Summer; persistent high pressure	Water shortages and crop stress — economic/environmental
5 Thunderstorms & hail	Warm, humid air, often summer	Flash flooding and lightning risk — social/economic

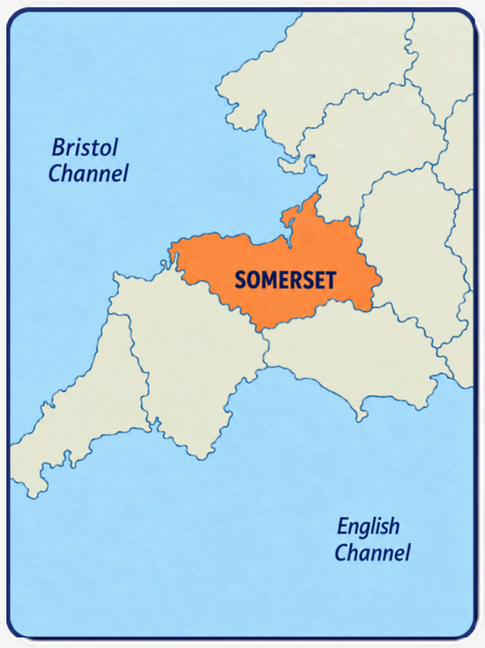
Why is it inaccurate to describe flooding as the UK's only major weather hazard?

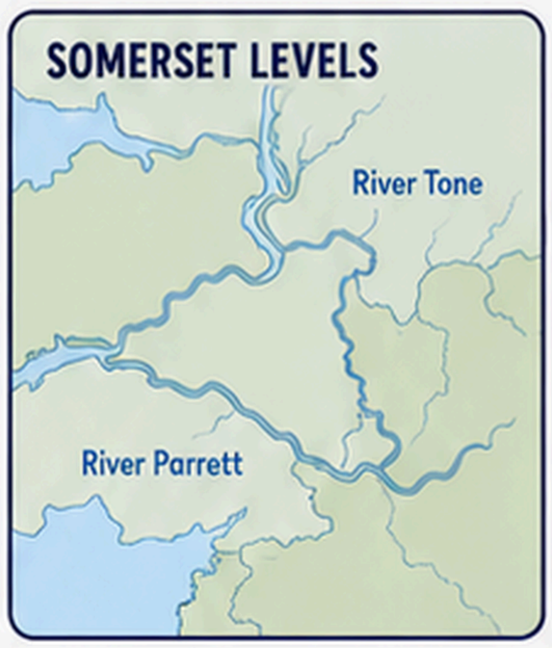
The UK also experiences damaging winds, snow and ice, heatwaves, drought, thunderstorms and hail. These can disrupt transport and power, damage buildings and crops, threaten health and cause water shortages, so flooding is only one part of the hazard picture.

SOMERSET LEVELS FLOODS: CAUSES

WINTER 2013–14

A prolonged period of exceptional rainfall affected a low-lying, flat landscape drained by the Rivers Parrett and Tone.





PROLONGED WINTER RAINFALL — P / H: P

SATURATED SOILS — P / H: P

HIGH RIVER LEVELS — P / H: P

LOW-LYING FLAT LAND — P / H: P

LIMITED DRAINAGE AND PUMPING CAPACITY — P / H: H

HIGH TIDES SLOWED RIVER DISCHARGE — P / H: P

PHYSICAL OR HUMAN / MANAGEMENT?

Classify the causes, then connect them into one causal chain.

TRIGGER	→	CONDITION	→	PROCESS	→	FLOODING
Prolonged exceptional rainfall		Saturated soils and low, flat land		More runoff; Parrett and Tone rose; tides slowed discharge		Water overtopped channels and spread across the Levels

Do not claim that a lack of dredging alone caused the floods.

Explain why floodwater remained on the Somerset Levels for a long time.

Floodwater remained because the land is very low and flat, soils were saturated and river levels stayed high. High tides slowed discharge to the sea, while limited drainage and pumping capacity meant water could not be removed quickly.

SOMERSET LEVELS FLOODS: IMPACTS

SOCIAL — homes and communities flooded; residents disrupted or temporarily isolated

ECONOMIC — roads and rail disrupted; farms and businesses affected; livestock moved; crops and stored feed damaged

ENVIRONMENTAL — large areas of land and wildlife sites inundated; floodwater carried debris and pollutants

RANK THE IMPACTS

Choose a criterion: severity, duration, number affected or cost. Rank the six evidence cards and justify the top two.

Flooded homes

Villages and journeys disrupted

Farmland under water

Livestock moved and feed lost

Transport links closed or damaged

Habitats and water quality affected

Model criterion; severity and duration; other justified rankings accepted.

RANK	IMPACT	EVIDENCE	WHY THIS RANK?
1	Flooded homes	Homes and communities inundated	Severe personal loss; long recovery
2	Transport links closed/damaged	Road and rail disruption	Isolated villages; affected many services
3	Farmland under water	Large areas inundated	Long-lasting farm losses
4	Livestock moved/feed lost	Animals relocated; stored feed damaged	High costs and welfare risks
5	Habitats/water quality affected	Debris and pollutants in floodwater	Environmental damage, partly recoverable
6	Villages/journeys disrupted	Residents isolated; travel delayed	Serious but mostly shorter term

Which category of impact was most significant overall?

Economic impacts were most significant overall because transport; farms and businesses were disrupted and recovery costs continued after water levels fell. A social-impact judgement is also valid if supported by flooded homes and isolation.

SOMERSET LEVELS: MANAGEMENT

IMMEDIATE RESPONSES

PUMPING AND TEMPORARY FLOOD DEFENCES

EMERGENCY SUPPORT, EVACUATION AND ROAD RESPONSE

IMMEDIATE → LONGER-TERM

LONGER-TERM STRATEGIES

SOMERSET LEVELS AND MOORS FLOOD ACTION PLAN

DREDGING SECTIONS OF THE PARRETT AND TONE

IMPROVED PUMPING AND RIVER MAINTENANCE

RAISED OR STRENGTHENED TRANSPORT LINKS

COORDINATED CATCHMENT MANAGEMENT

EVALUATE TWO STRATEGIES

Evaluate one engineering strategy and one planning or catchment strategy.

STRATEGY	HOW IT REDUCES RISK	BENEFIT	LIMITATION
Dredging Parrett and Tone	Removes sediment, increasing channel capacity	Can move more water downstream	Silt returns; ecological impacts; not enough alone
Coordinated catchment management	Slows and stores runoff across the catchment	Reduces peak flow and works with natural processes	Needs landowner cooperation and time

Why is a combined approach more effective than relying on one strategy?

A combined approach tackles different parts of the risk. Dredging, pumping and stronger transport links improve channel flow and resilience, while catchment planning slows runoff and emergency plans protect people. If one measure is exceeded or fails, others still reduce impacts; however, no combination removes all flood risk.

KEY MESSAGE: Management reduces risk; it cannot guarantee that flooding will never occur.

WEATHER HAZARDS

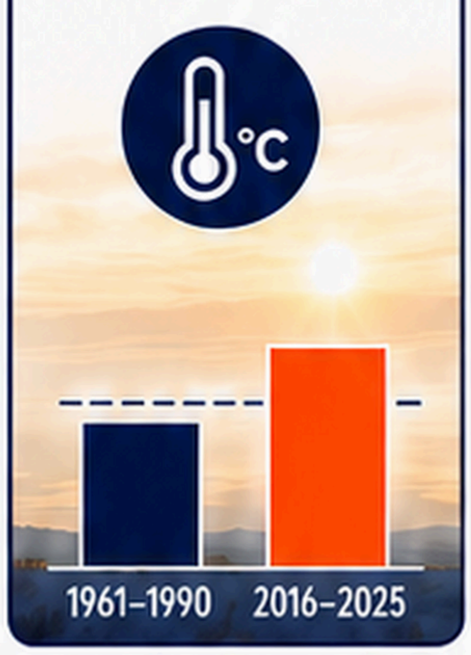
IS UK WEATHER BECOMING MORE EXTREME?

UK WARMING

2025 was the warmest year in the UK series from 1884

RECENT DECADE

2016–2025 was 1.33°C warmer than 1961–1990

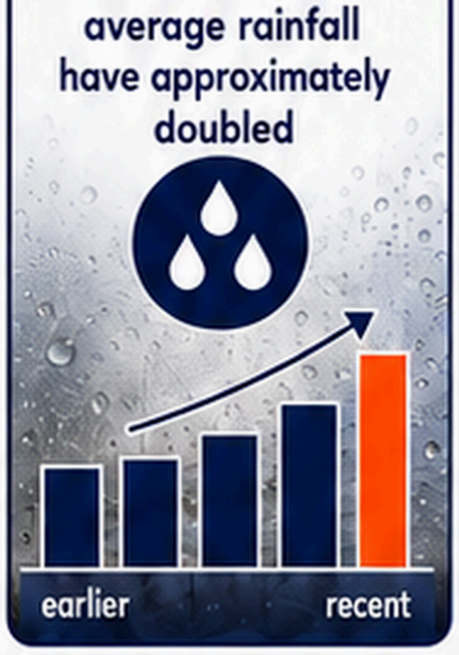


WETTER WINTER HALF-YEAR

2016–2025 was 13% wetter than 1961–1990

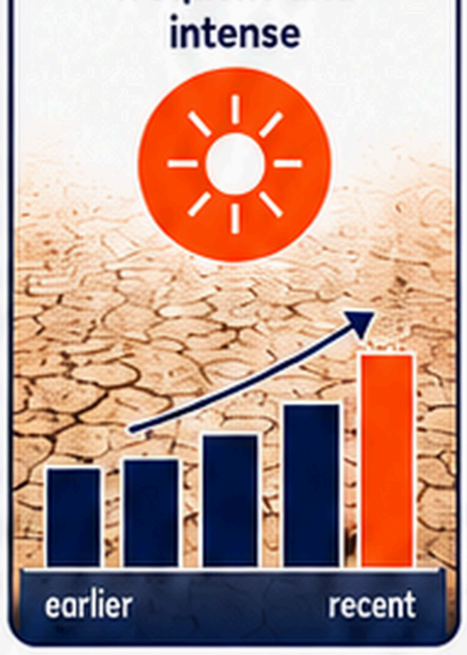
VERY WET MONTHS

October–March months with twice the 1961–1990 average rainfall have approximately doubled



HOT EXTREMES

temperature extremes are becoming more frequent and intense



A single event does not prove a long-term trend. Change varies by hazard, season and location.

WEIGH THE EVIDENCE

Use two pieces of trend evidence and one limitation.

	EVIDENCE	WHAT IT SUGGESTS	STRENGTH / LIMITATION
1	2016–2025 was 1.33°C warmer than 1961–1990	A clear long-term warming signal	Ten-year mean compared with a baseline: strong trend evidence
2	Recent winter half-years 13% wetter; very wet months about doubled	Heavier and very wet periods are becoming more common	Multi-year observations, but change varies by season and place
3	One recent storm or flood	Shows an extreme event occurred	A single event cannot prove a long-term trend

To what extent is UK weather becoming more extreme? Write a supported conclusion.

Overall, the evidence suggests... However... Therefore...

Overall, UK weather is becoming more extreme to a considerable extent: recent decades are warmer, hot extremes are more frequent and recent winter half-years are wetter, with very wet months more common. However, trends differ by hazard, season and location, and one event alone proves nothing. Therefore the conclusion is strong for heat and heavy rainfall, but should not be generalised equally to every hazard.

Source: Met Office, *State of the UK Climate*, published July 2026.

SYNOPTIC APPLICATION

A. CARIBBEAN ISLAND

Sea temperature is 29°C. A deep low-pressure system is strengthening 600 km east of a densely populated, low-lying island. Forecast wind shear is low.

1 Identify two formation conditions.

Sea temperature 29°C; low forecast wind shear.

2 Predict one primary and one secondary effect.

Primary: homes damaged by wind/storm surge.
Secondary: displacement or disease risk.

3 Choose one short-term and one long-term risk-reduction action.

Short term: issue warnings and evacuate.
Long term: storm shelters and wind-resistant rebuilding.

B. UK CATCHMENT

Three weeks of above-average rainfall have saturated the ground. More prolonged rain is forecast. Rivers drain slowly through a low-lying catchment containing farms, villages and a main road.

1 Explain why flood risk is high.

Soils are saturated, more rain is forecast and the low-lying catchment drains slowly, so runoff and river levels will rise.

2 Predict one social and one economic impact.

Social: homes/road flooded and villages isolated.
Economic: farm, transport and business losses.

3 Choose one immediate and one long-term management action.

Immediate: pumps, barriers and evacuation.
Long term: improve drainage/river maintenance and catchment storage.

COMPARE VULNERABILITY

Which community is more vulnerable? Use exposure, capacity to cope and likely impacts in your judgement.

PROCESS	IMPACT	MANAGEMENT	VULNERABILITY
A: strengthening tropical cyclone; B: prolonged rainfall and river flooding	A: rapid wind/surge damage; B: widespread prolonged inundation	A: warning/evacuation/ shelters; B: pumping, maintenance and catchment action	A has denser low-lying coastal exposure; B has farms, villages and a key road exposed

Community A is likely to be more vulnerable because a powerful storm can produce sudden wind and surge impacts across a densely populated, low-lying island, leaving little response time. Community B faces serious and prolonged flooding, but forecasting, road management, pumping and catchment measures may provide greater capacity to cope.

EXAM PRACTIICE

1 Explain how global atmospheric circulation influences the distribution of tropical storms. [4 marks]

Global circulation creates rising, low-pressure air and warm ocean conditions in the tropics. Tropical storms mainly form over seas around 5°–30° north and south, where Coriolis can organise rotation; directly at the Equator Coriolis is too weak. Descending dry air around 30° and cooler water poleward limit formation.

2 NAMED EXAMPLE ASSESSMENT

Using a named example, assess the effectiveness of responses to a tropical storm. [9 marks + 3 SPaG]

	POINT	CASE-STUDY EVIDENCE	EXPLAIN	JUDGEMENT
1	Immediate responses saved lives and met needs.	Haiyan warnings/evacuation, search and rescue, food, water, shelter, medical care and international aid after 8 Nov 2013.	Vital for displaced communities to survive in the first days/weeks.	Effective but damaged transport/communications and storm scale caused delay and uneven access.
2	Long-term responses reduced vulnerability.	Rebuilding homes and infrastructure; restoring fishing/farming livelihoods; improved shelters, warnings and evacuation; build back better.	Supports recovery and improves resilience to future typhoons.	Longer-lasting impact but slow, costly and uneven between communities.
3	Overall judgement.	Combined package of immediate relief and long-term development.	Addresses both survival needs and future risk.	Most effective approach but no response removes all vulnerability.

Typhoon Haiyan (Yolanda) struck the Philippines on 8 November 2013 with winds over 300 km/h. Warnings and evacuations moved some people away from exposed coasts. Search and rescue and international aid delivered food, clean water, shelter and medical care. However, damaged roads and communications delayed distribution, while over 6,000 deaths and about 4 million displaced show that immediate responses could not protect everyone.

Long-term responses rebuilt homes and infrastructure, restored fishing and farming livelihoods, and improved shelters, warnings and evacuation planning. Build-back-better approaches aimed to make communities more resilient, although recovery was slow, costly and uneven.

Overall, a combined package of immediate relief and long-term development was most effective. Immediate action was essential for survival, while long-term measures offered greater, sustained risk reduction. Yet recovery is slow, costly and uneven, and poverty and exposure mean no response can remove all vulnerability.

CHECK YOUR PLAN:

- ✓ Named the tropical storm
- ✓ Used specific evidence
- ✓ Assessed immediate and long-term responses
- ✓ Reached a supported judgement

WEATHER HAZARDS

REVIEW & EXIT TICKET

CLASSROOM 42

1 RETRIEVAL SIX

1 Name the three circulation cells.

Hadley, Ferrel and Polar cells. ✓

2 Why do tropical storms form away from the Equator?

Coriolis is too weak at 0°; beyond about 5° it can organise rotation. ✓

3 State two formation conditions.

- Sea surface at least 27°C/deep warm water.
- Low vertical wind shear. ✓

4 Distinguish a primary from a secondary effect.

Primary effect happens directly because of the hazard; secondary effect develops later from a primary effect. ✓

5 Name two UK weather hazards.

- Heavy rain/flooding.
- Heatwaves/drought. ✓

6 Give one piece of evidence that UK weather is becoming more extreme.

2016–2025 was 1.33°C warmer than 1961–1990. ✓

2 KEY TERMS

PRESSURE BELT
Broad zone of persistent high or low pressure. ✓

CORIOLIS EFFECT
Apparent deflection of moving air caused by Earth's rotation. ✓

STORM SURGE
Abnormal sea-level rise driven by storm winds/low pressure. ✓

MONITORING
Collecting hazard data using satellites/radar/buoys etc. ✓

PREDICTION
Forecasting likely track, timing or intensity. ✓

VULNERABILITY
How susceptible people or places are to harm, including their capacity to prepare, cope and recover. ✓

3 CONFIDENCE CHECK

GLOBAL CIRCULATION	TROPICAL STORMS	TYPHOON HAIYAN	UK WEATHER HAZARDS	SOMERSET LEVELS
1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 = Not confident ····→ 5 = Very confident

4 EXIT TICKET

Which strategy most effectively reduces weather-hazard risk, and why?

A combined package is most effective: monitoring and prediction provide warning, planning enables evacuation, and targeted protection reduces damage. Planning often gives the broadest benefit, but no single strategy removes all risk. ✓

Tick the topics you feel confident answering questions on.

- ☐ Pressure belts & winds
- ☐ Risk reduction
- ☐ Formation & structure
- ☐ UK hazards
- ☐ Effects & responses
- ☐ Extreme-weather evidence