Air can push

Look and predict

Name _____ Date _____

Air can push. Air pressure is the push of air on an area. Where could it push? Show your idea.



Draw the pushes you predict.

Add arrows to show where you think air pushes

W1 Where does air push? Add arrows.

My idea:

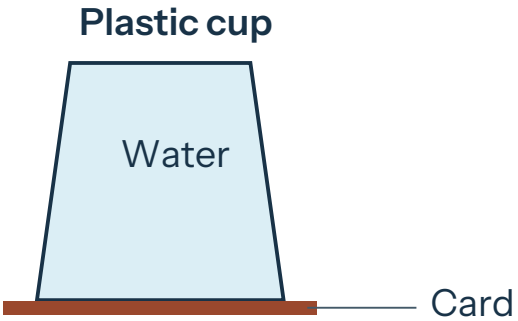
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Cup and card

Teacher only

Name _____ Date _____

Watch the teacher's plastic cup, water and card over a tray. Do not copy it.



What will happen?



Teacher-only plastic cup and card over a tray. Predict before any explanation.

O1 What do you predict?

Prediction:

I observed:

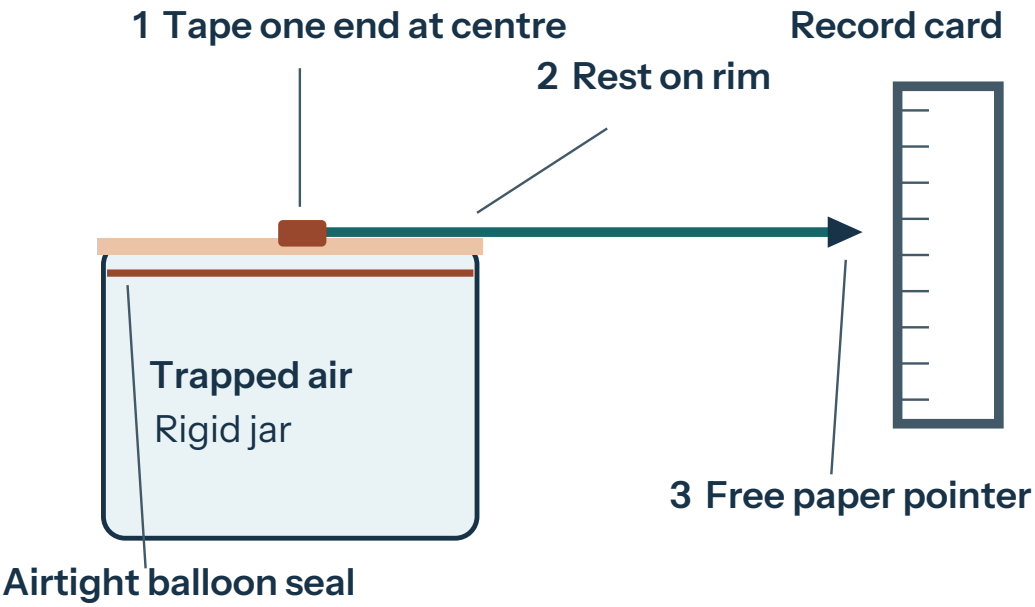
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Jar parts

Point and name

Name _____ Date _____

A barometer tracks air pressure. A membrane is a thin cover that can stretch. The rim is the jar's top edge.



Taut membrane, rubber band, straw taped at centre, straw resting on rim, free paper pointer and paper scale.

- Balloon membrane
- Rubber band
- Straw at centre
- Straw on rim
- Paper pointer free over edge
- Paper scale

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Build Day 1

Teacher helps

Name _____ Date _____

- Stretch balloon tight. Add rubber band.
- Tape straw at centre. Rest it on rim.
- Add paper pointer and scale.
- Keep jar shaded and still. Mark Day 1.
- No sharp tools or hot water.

My Day 1 mark:

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Words and guided checks

Use the model

Name _____ Date _____

Keep the jar sealed. Keep it at the same temperature.

- air pressure: air push
- membrane: a thin cover that can stretch
- baseline: first mark
- climate normal: an average over many years
- forecast: a claim about weather to come

Q1 **Where does air push on the thin cover? Draw arrows to show your idea.**

Q2 **Air outside now pushes more. How might the cover and pointer move? Why?**

Q3 **Air outside now pushes less. How might the cover and pointer move? Why?**

Starter: Air pushes ___. I think the pointer ___.

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Winnipeg data

Read the table

Name _____ Date _____

Winnipeg, 1991–2020 averages	Pressure (kPa)
Station annual	98.6
Sea-level annual	101.6
January sea-level	102.0
July sea-level	101.2

NOAA standard at sea level: 101.325 kPa. A reference, not a Winnipeg average.

Winnipeg is 238.7 m above sea level. The station value is read there. Sea-level values are changed to compare places. These are long-term averages, not today's weather. They cannot predict tomorrow's weather.

Q4 **Look at January and July. Which has more pressure? How much more? Show your math.**

Q5 **Compare the station value with the NOAA value. Why may they differ? Use the height of the land to help.**

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Five days

Look; do not touch

Name _____ Date _____

Day	Time	Compared with prior reading	Weather / room
1	___	Baseline line ___	___
2	___	Up / down / same	___
3	___	Up / down / same	___
4	___	Up / down / same	___
5	___	Up / down / same	___

2 minutes each day. A leak, moved straw, or warmer room can change the pointer. One change is evidence to investigate, not a weather forecast; write the conditions beside it.

No jar? Use this made-up practice record. Day 1: at the first mark. Day 2: below that mark. The room is warmer. It is not a real class record. It does not tell us the next day's weather.

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Make a careful claim

Use evidence carefully

Name _____ Date _____

Use one reading from your model or one number from the Winnipeg table. Do not predict tomorrow's weather.

I observed:

This could suggest: _____ because:

Another possible cause is:

To check, I would:

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Evidence and exit

Claim and limit

Name _____ Date _____

Q6 The pointer moved down once. What could that mean? Why is that not enough to tell the next day's weather?

E1 Which fits? (a) Air pushes down only. (b) Air pushes in all directions. (c) Gravity stops. Choose one. Give a detail from the model.

E2 What can this tool help you know? What can it not tell you on its own? Give one claim for each.

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