

You cannot see wind. But you know it's there. You can feel it pressing against your body. You see tree branches bend when it blows. A gentle wind makes you feel fresh. A strong wind can blow you down.

What is this invisible force we call wind?

A *wind* is air that is moving parallel to the ground. (Air that moves up or down is *not* called wind.)

There are two main groups of winds. They are planetary winds and local winds.

PLANETARY WINDS move across our entire planet. They cover very large areas.

Most of the time a planetary wind blows at the same speed and in the same direction. Some planetary winds blow high in the atmosphere. You cannot feel them on the ground.

LOCAL WINDS move across small areas. They change direction and speed very often. Local winds blow low in the atmosphere. You can always feel them on the ground.

Every wind has speed and direction.

- An *anemometer* [an uh MOM uh tur] measures how fast a wind blows.

- A *wind vane* tells us from which direction a wind blows.

Do you want to know what causes winds? You will find out in the next Aim.

ABOUT WIND

Look at Figure A. The arrows show the directions of the main planetary winds.

1. Do they all blow in the same direction? _____

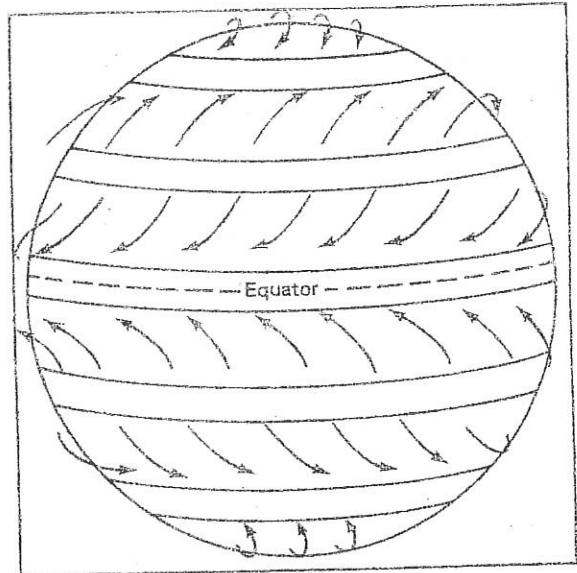


Figure A

The trade winds carried Columbus and his ships across the Atlantic ocean. The trade winds are planetary winds.

2. Why were these more helpful than local winds? _____

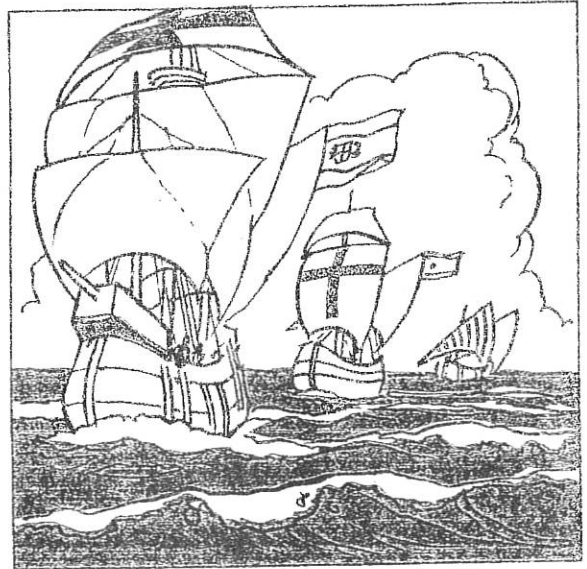


Figure B

Figure C shows an anemometer.

3. What does an anemometer measure? _____

A wind makes the anemometer's cups turn.

4. The stronger the wind, the _____ the cups turn.
slower, faster

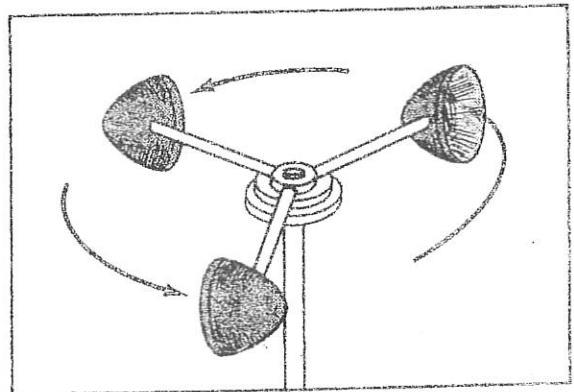


Figure C

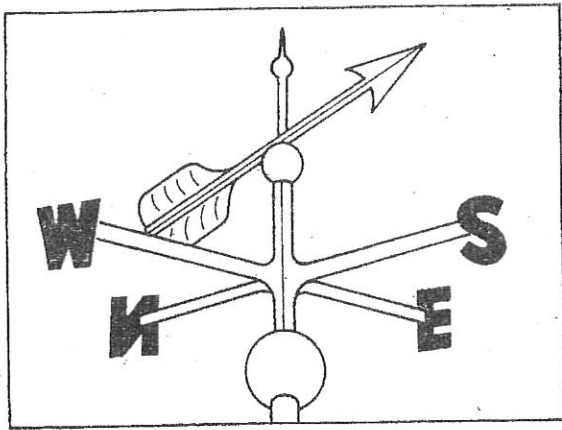


Figure D

Figure D shows a wind vane.

5. Where is the wind coming from?

COMPLETING SENTENCES

Complete the sentences with the choices below. Four of these may be used twice.

anemometer
planetary
speed
parallel to the ground

air
high
wind vane
ground

direction
always
local

1. A wind is _____ that is moving _____.
2. The two main groups of winds are _____ winds and _____ winds.
3. Winds that move across the entire planet are called _____ winds.
4. Some planetary winds blow _____ in the atmosphere.
5. You cannot feel some planetary winds on the _____.
6. A planetary wind usually blows at the same _____ and _____.
7. Winds that move across small parts of the earth are called _____ winds.
8. Local winds can _____ be felt on the ground.
9. Local winds often change _____ and _____.
10. An _____ measures wind speed; a _____ shows wind direction.

PLANETARY WIND OR LOCAL WIND?

Put a check (✓) in the proper box.

		Planetary Wind	Local Wind
1.	Covers small area		
2.	Often changes speed and direction		
3.	Covers large area		
4.	Always felt on the ground		
5.	Can be high above the ground		
6.	Speed and direction stays the same		

WHICH ARE WINDS?

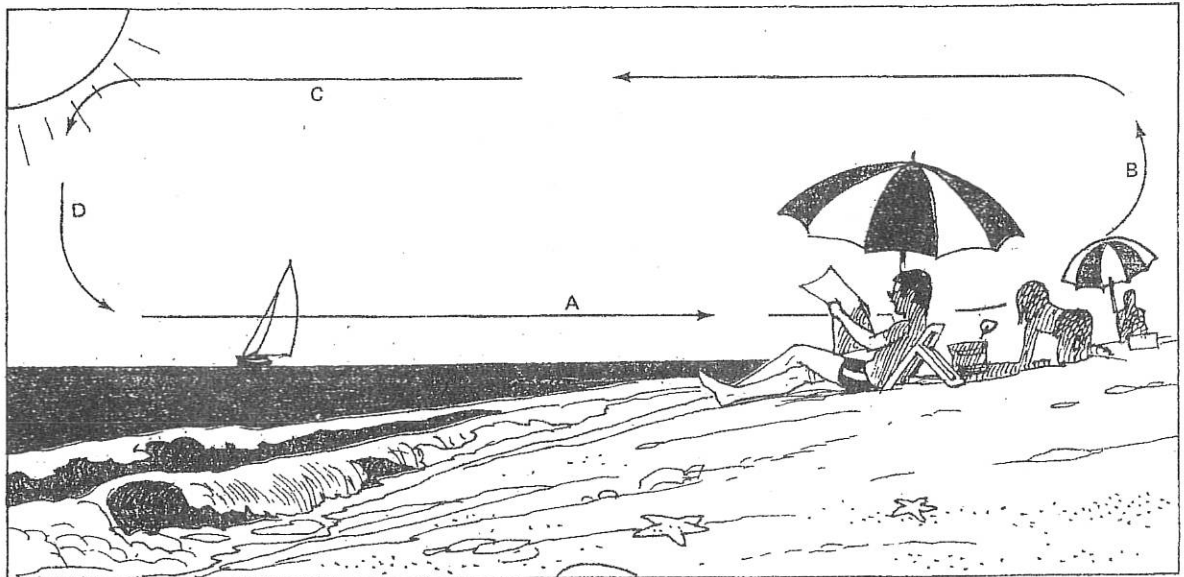


Figure E

A, B, C, and D stand for moving air.

- Which ones move parallel to the ground? _____
- Which ones do not move parallel to the ground? _____
- Which ones are winds? _____
- Which ones are not winds? _____

MATCHING Match the two lists. Write the correct letter on the line next to each number.

- | | | |
|----------|-----------------|--------------------------------------|
| 1. _____ | wind | a) cover large areas |
| 2. _____ | planetary winds | b) tells wind direction |
| 3. _____ | local winds | c) cover small areas |
| 4. _____ | wind vane | d) measures wind speed |
| 5. _____ | anemometer | e) air moving parallel to the ground |

TRUE OR FALSE Write T on the line next to the number if the sentence is true.
Write F if the sentence is false.

1. _____ You need air to have a wind.
2. _____ The moon has winds.
3. _____ Air that moves up or down is a wind.
4. _____ There is only one kind of wind.
5. _____ Planetary winds cover large areas.
6. _____ All planetary winds blow high in the atmosphere.
7. _____ Planetary winds often change speed and direction.
8. _____ Local winds cover small areas.
9. _____ You can always feel a local wind.
10. _____ Local winds often change speed and direction.

