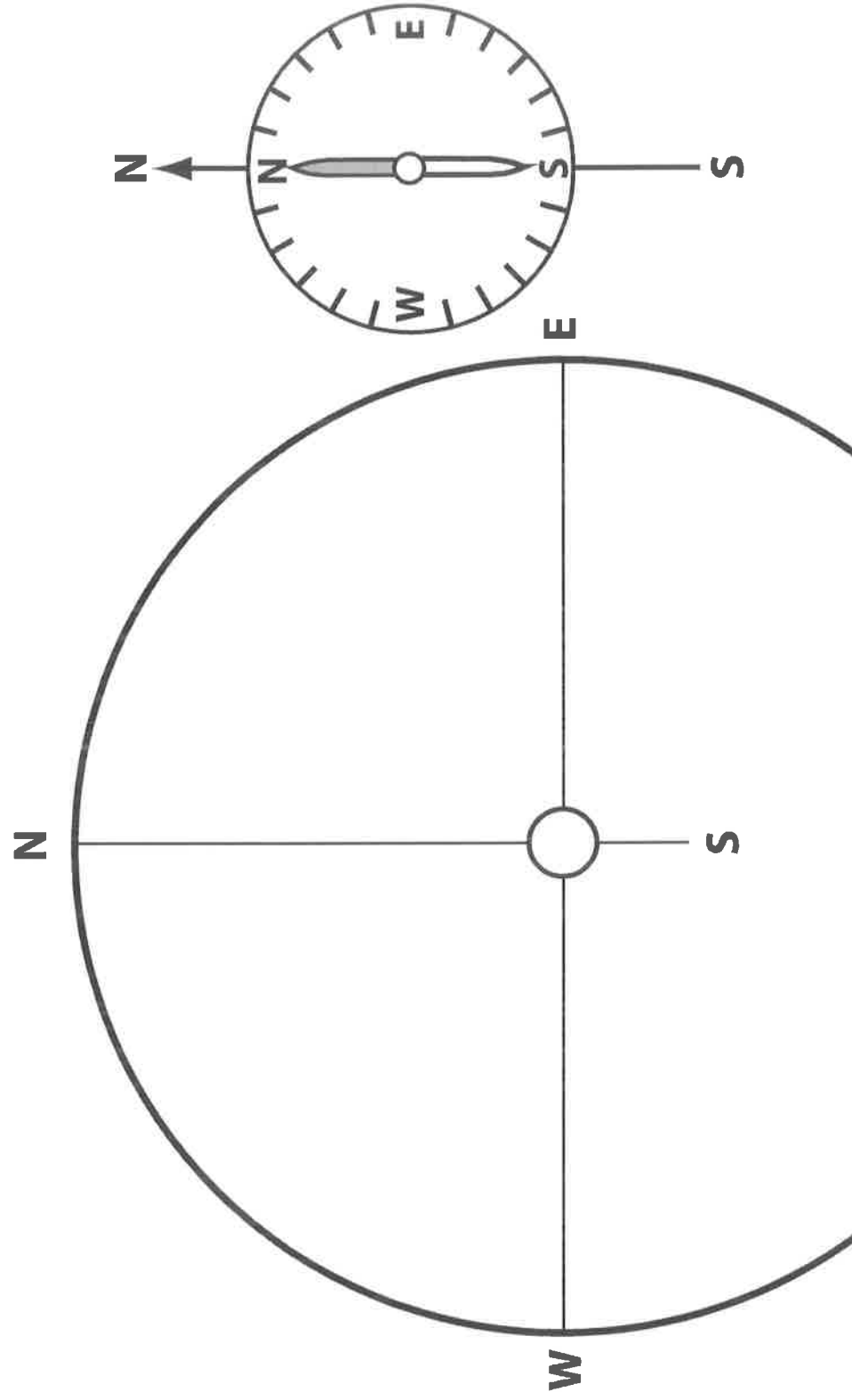
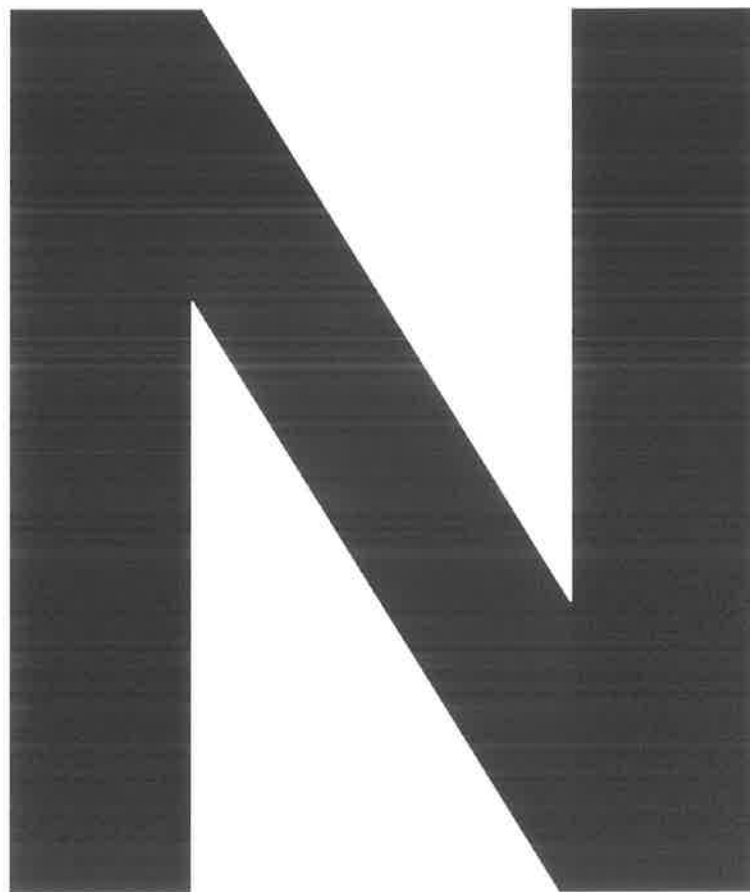


SUN TRACKER.....



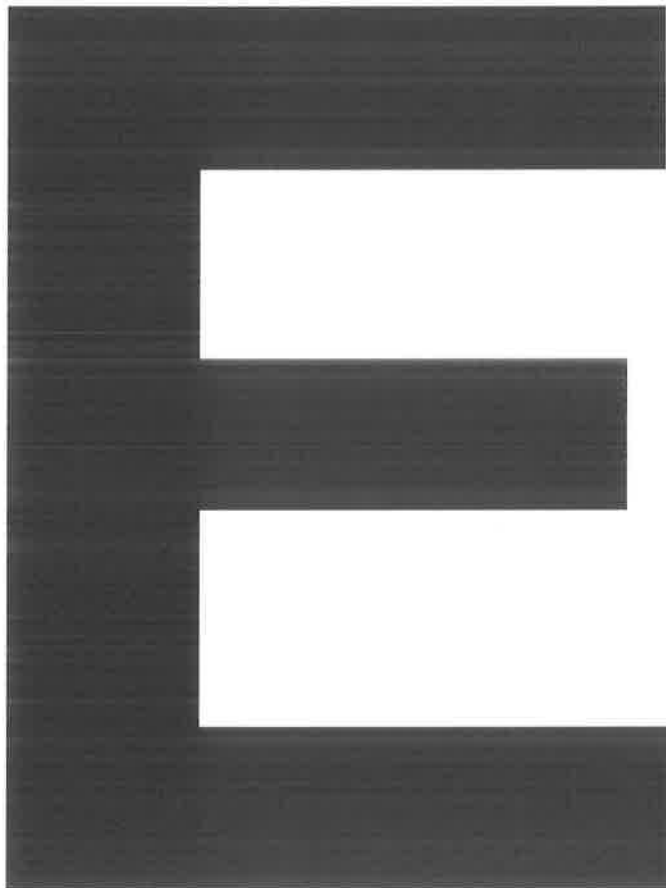
CARDINAL DIRECTION A



CARDINAL DIRECTION B



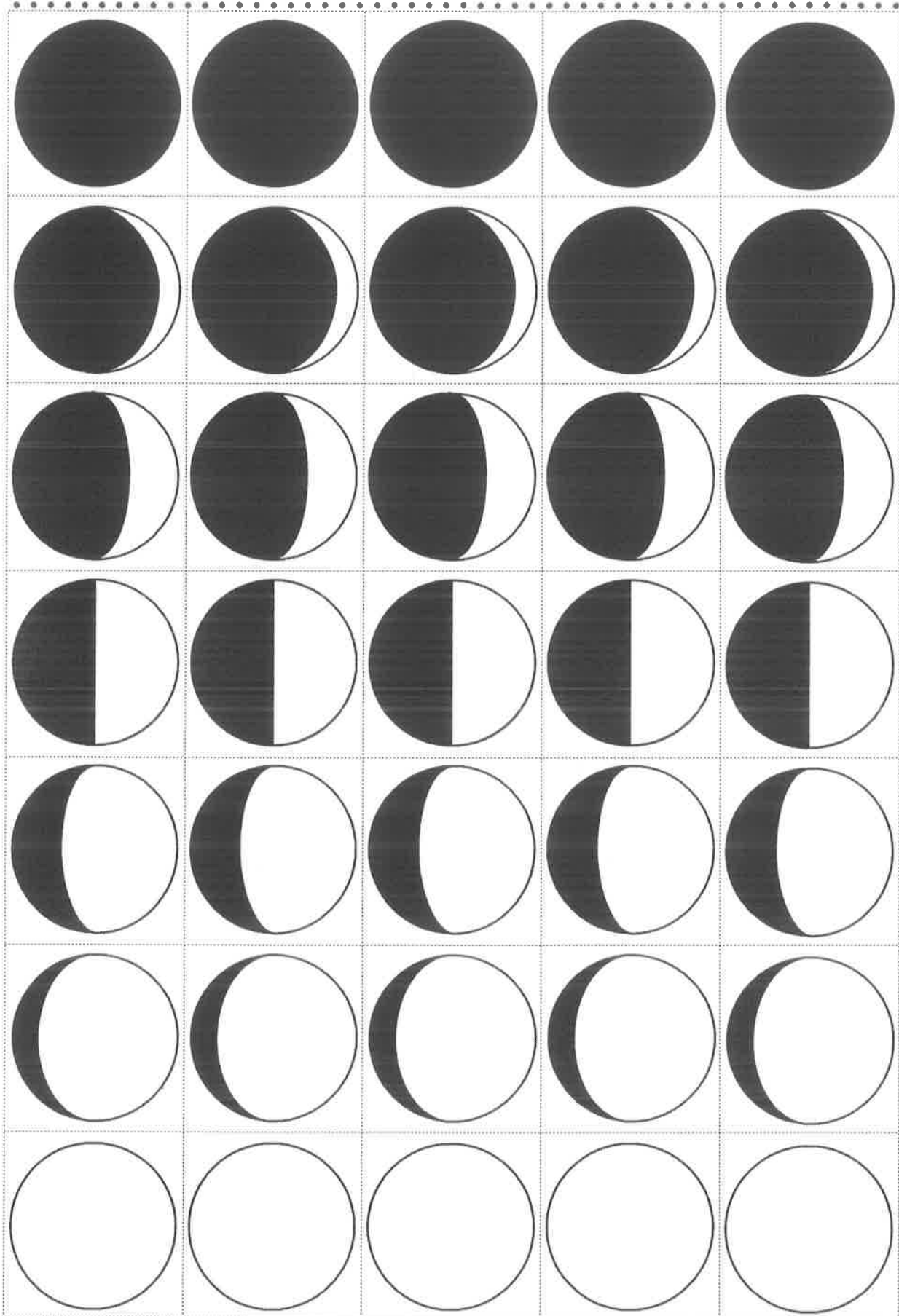
CARDINAL DIRECTION C



CARDINAL DIRECTION D



CUT-AND-STICK MOONS



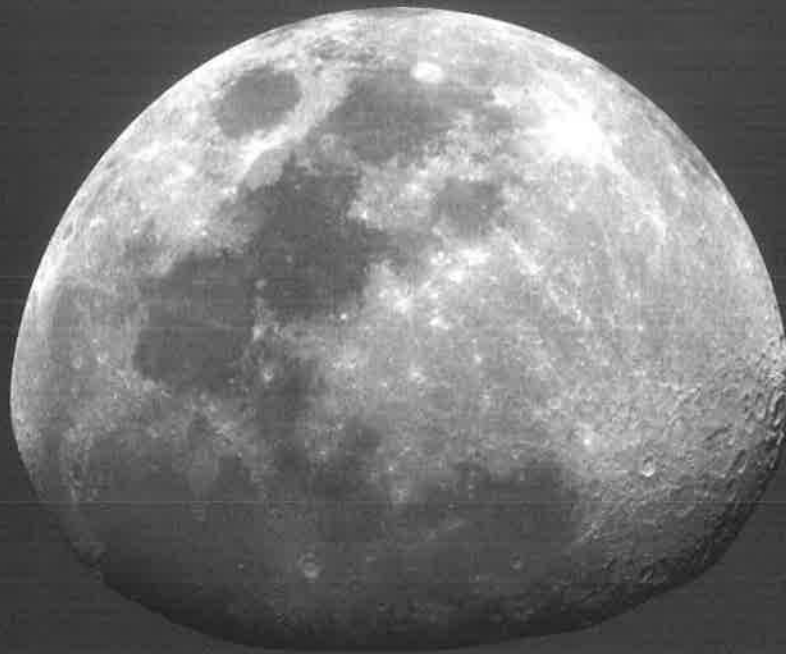
NIGHT-SKY QUESTIONS

1. What natural objects did you observe in the night sky?
2. How are they like objects you might see in the day sky?
3. How are they different?
4. Do objects in the sky, such as the Sun, Moon, and stars, always stay in one place?
5. When can you see the Sun? The Moon? The stars?
6. What observations did you make about stars?



**Waxing Crescent
Moon**

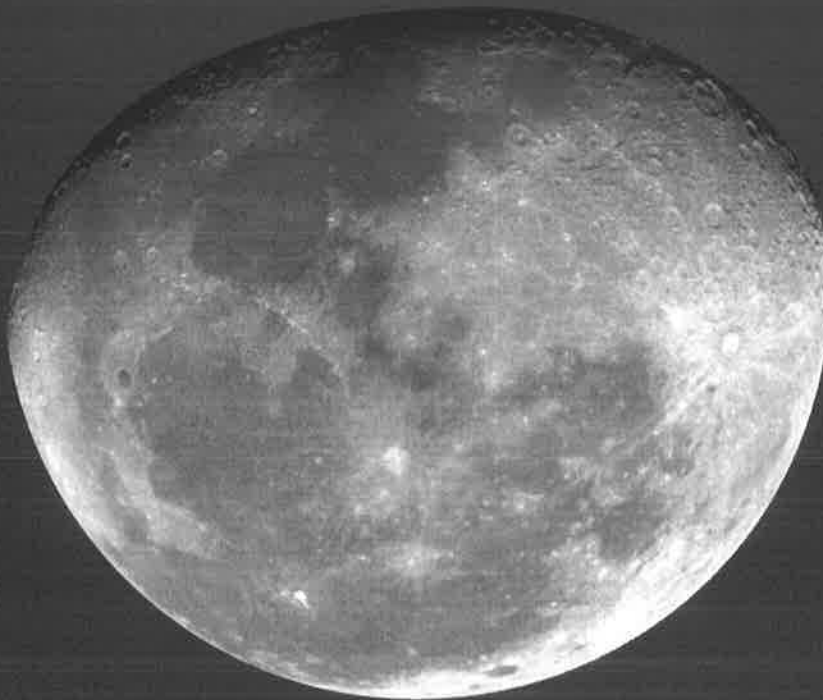
**New
Moon**



**Waxing Gibbous
Moon**



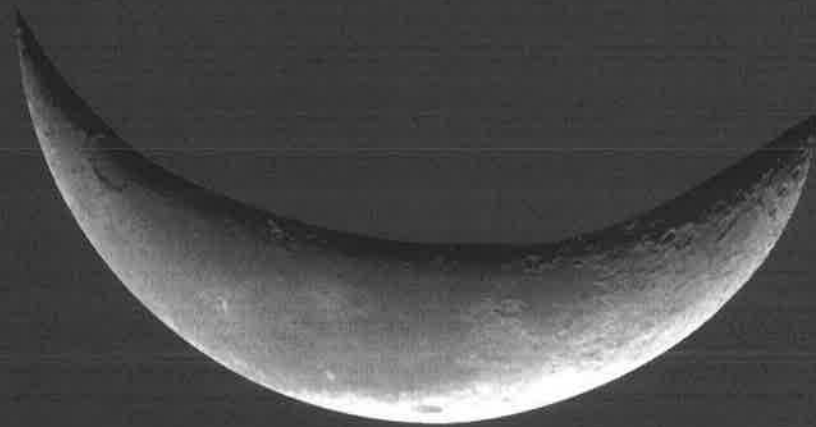
**First-Quarter
Moon**



**Waning Gibbous
Moon**



**Full
Moon**

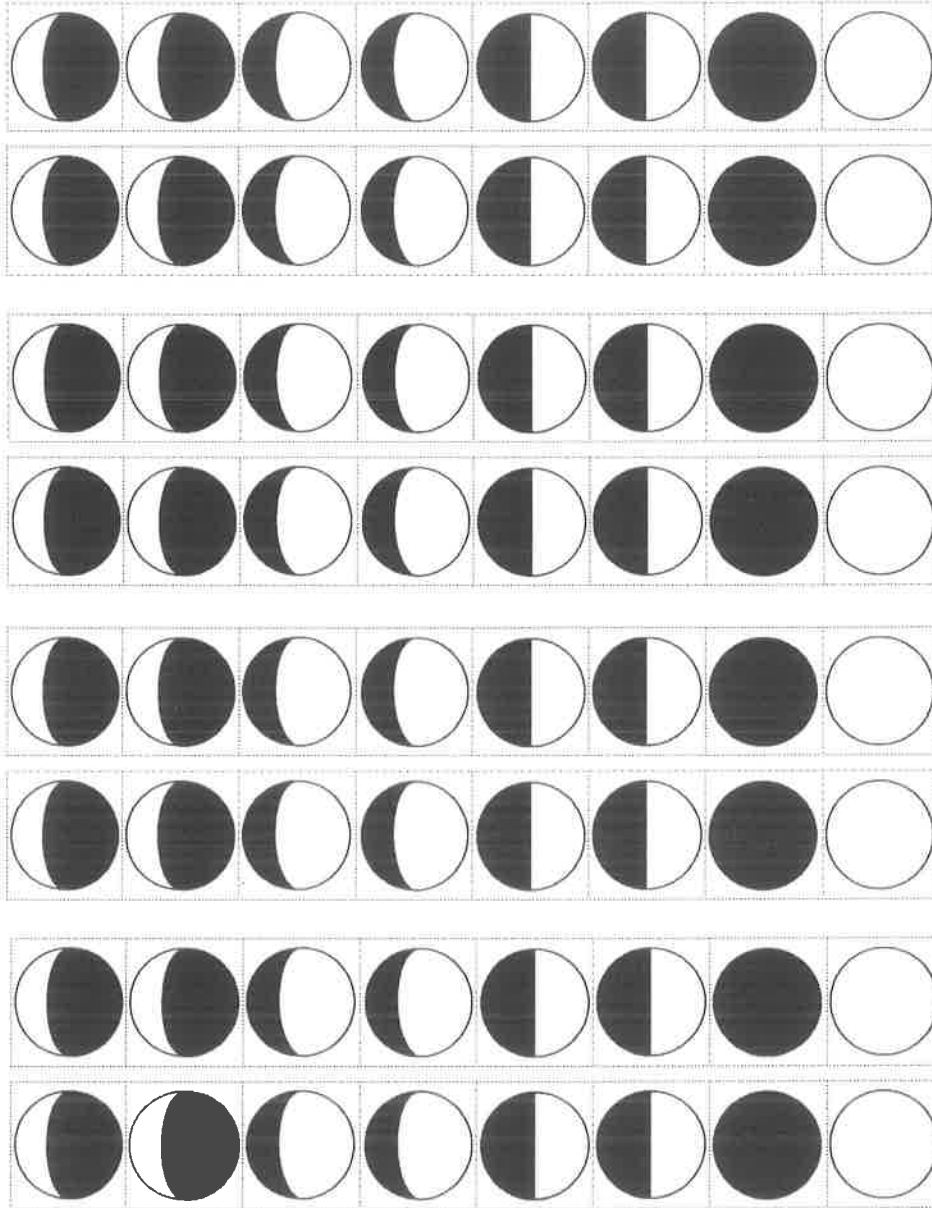


**Waning Crescent
Moon**

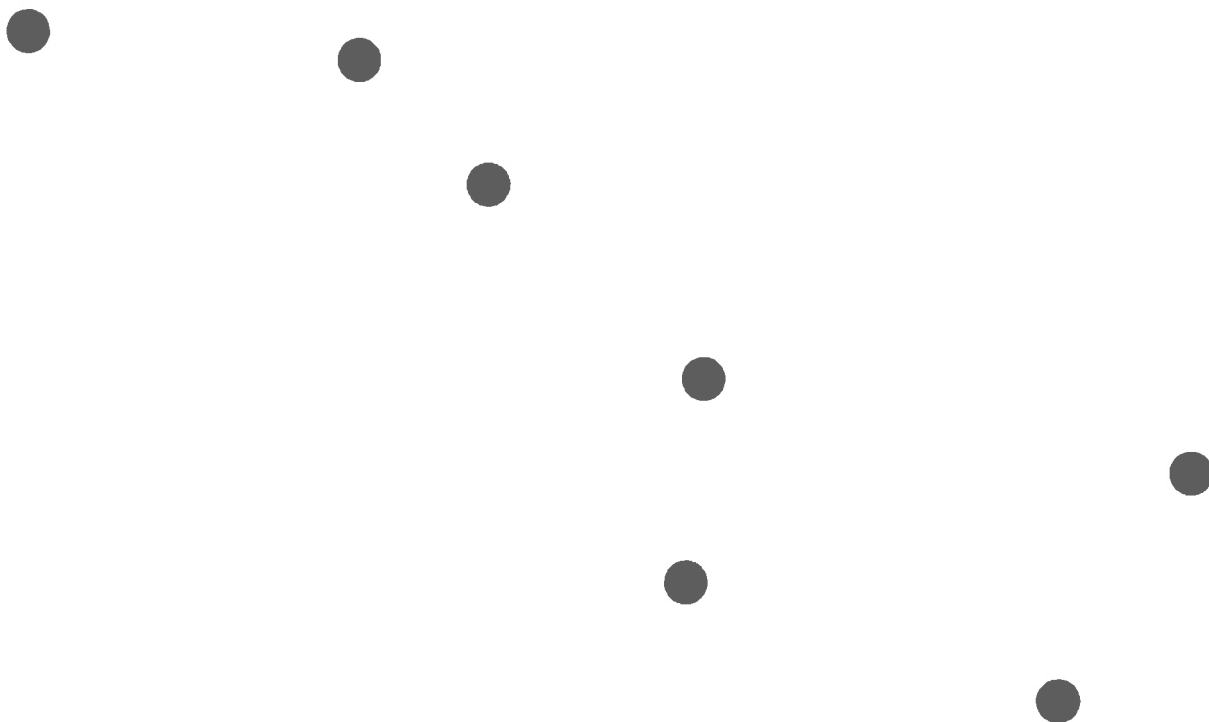


**Third-Quarter
Moon**

MOON-PHASE REPRESENTATIONS



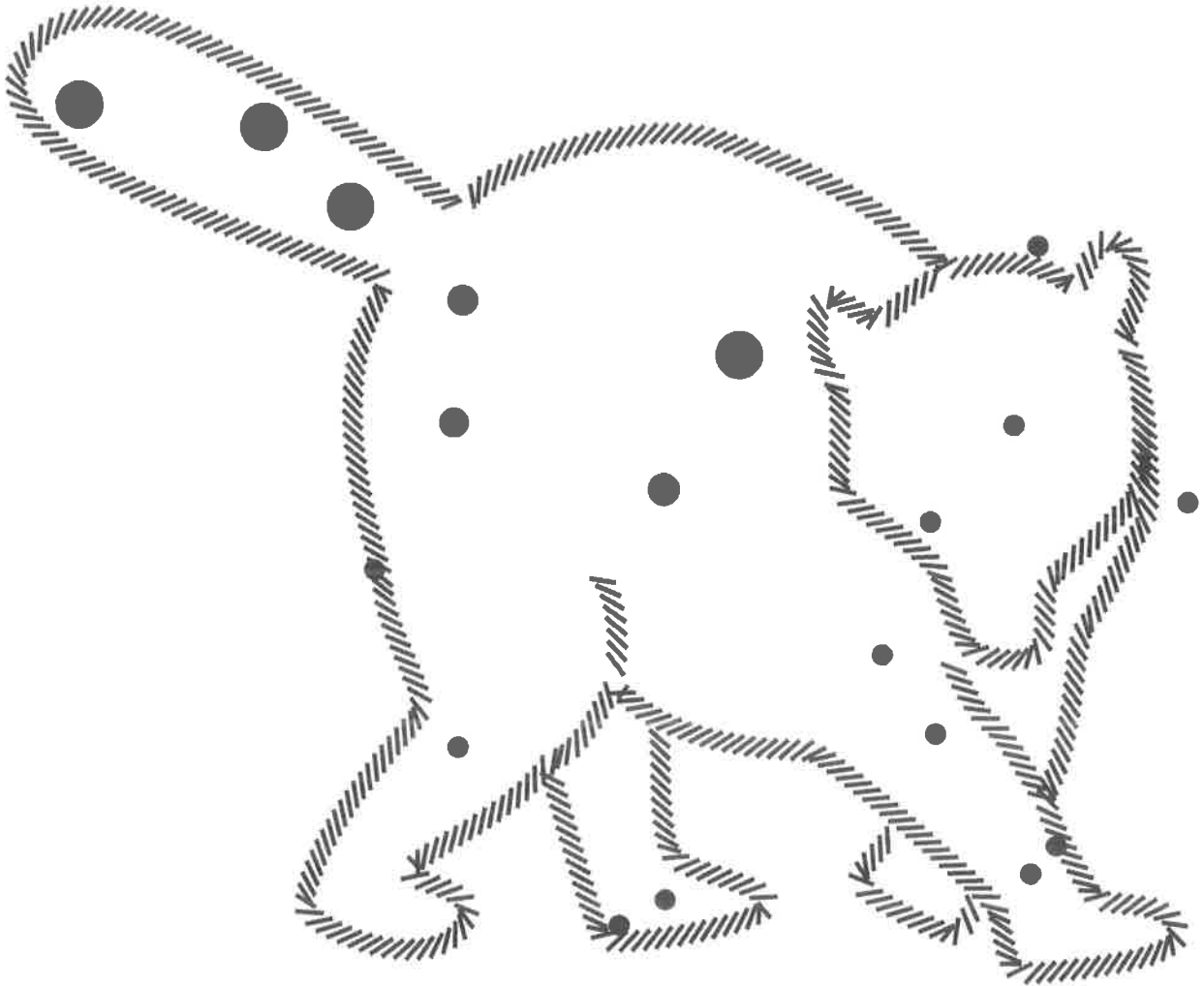
BIG DIPPER



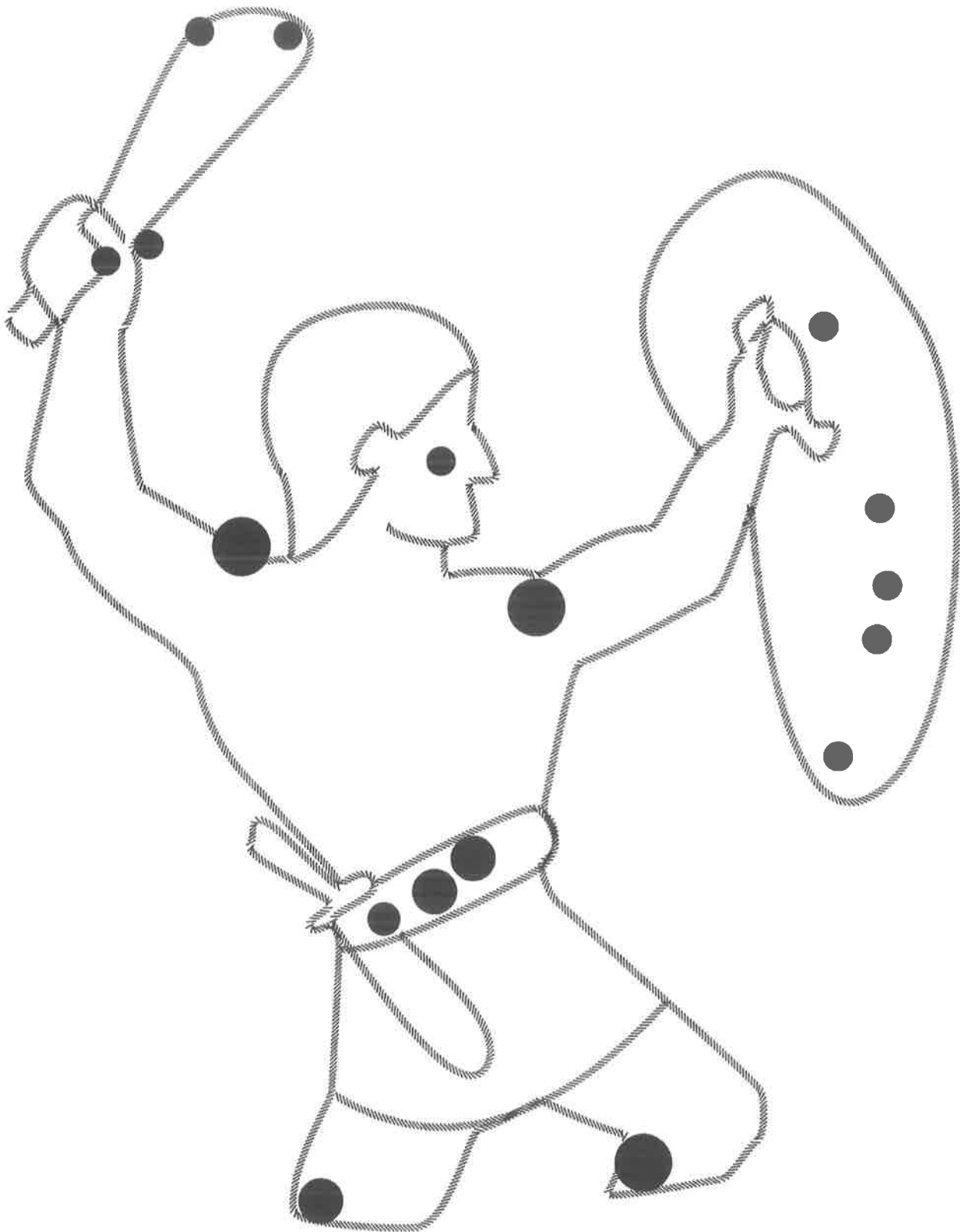
URSA MAJOR—THE STARS



URSA MAJOR—THE GREAT BEAR

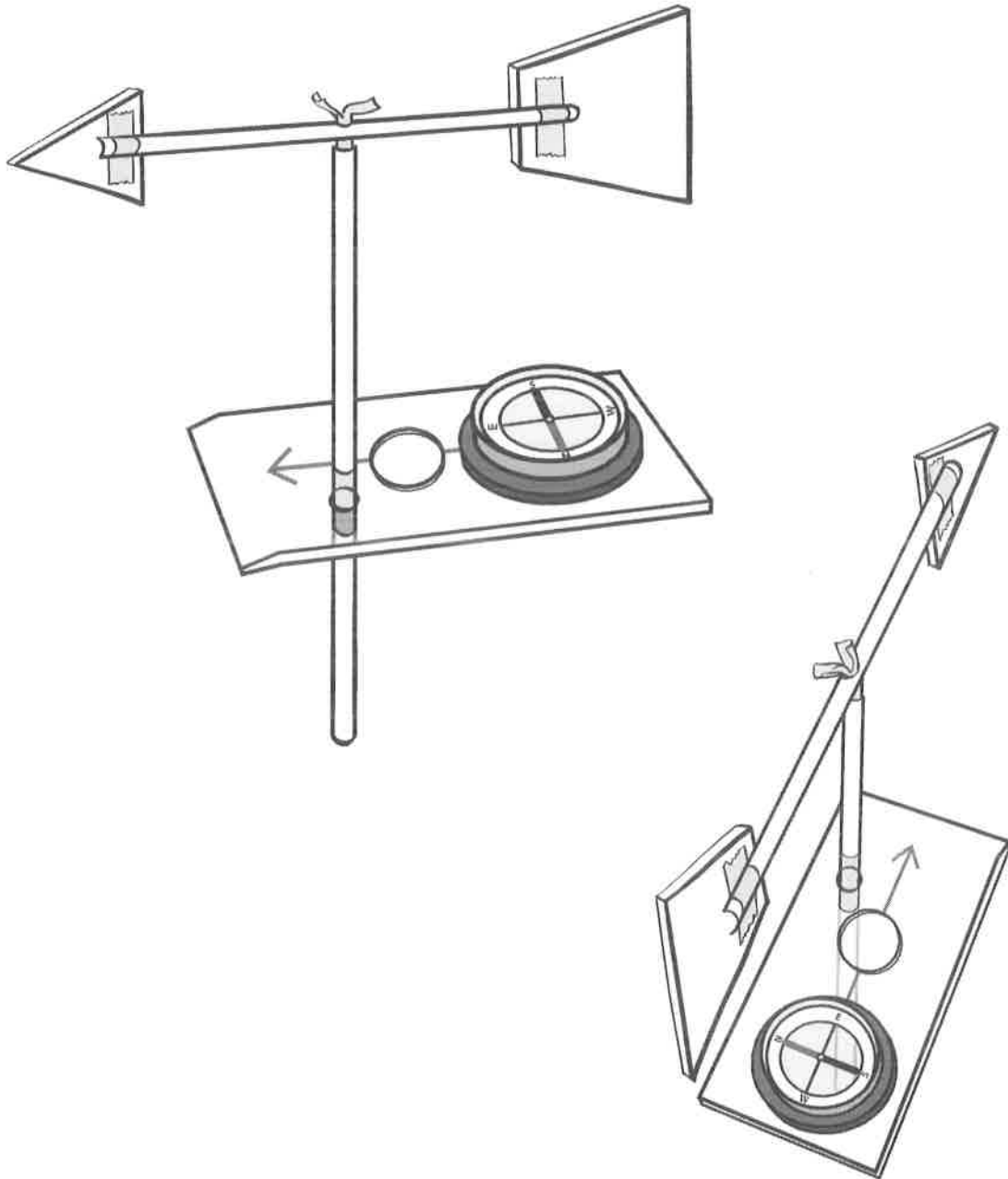


ORION



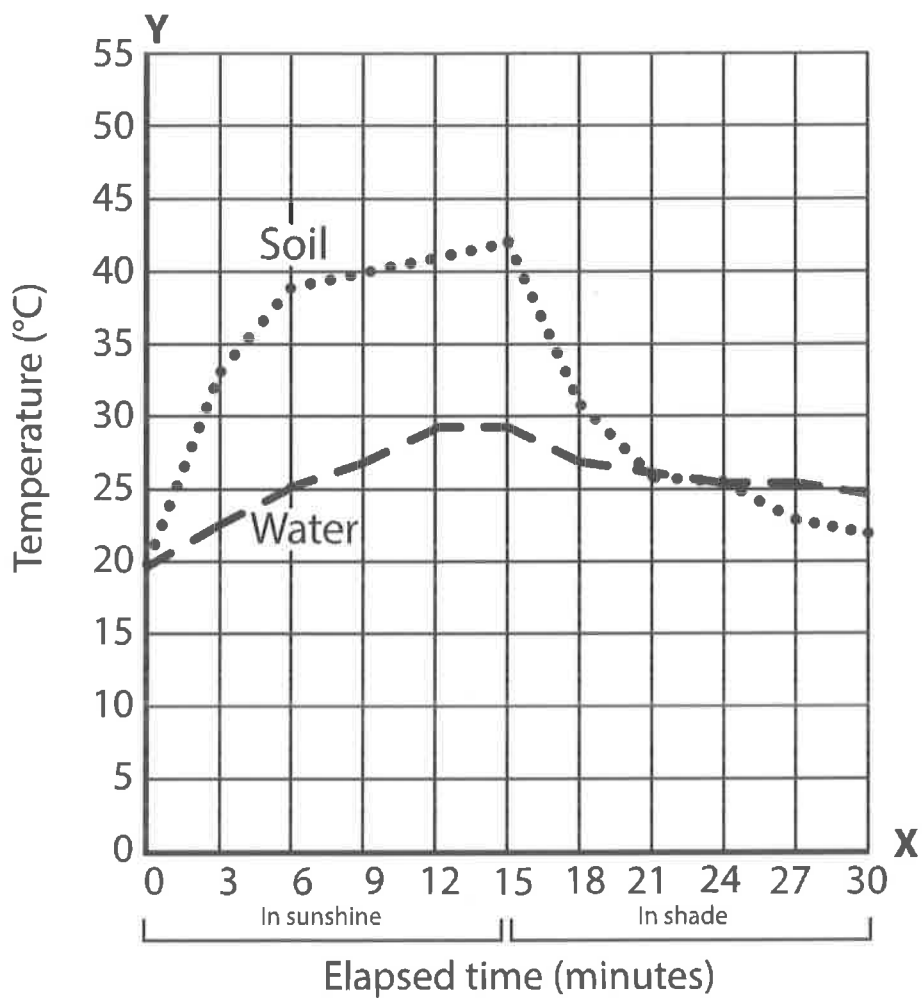
WIND VANE AND WIND DIRECTION

Wind direction is measured with a wind vane and reported as the compass direction from which the wind is coming. This homemade wind vane is mounted on the base of the compass.



SAMPLE GRAPH OF HEATING EARTH MATERIALS

Typical results on a sunny day

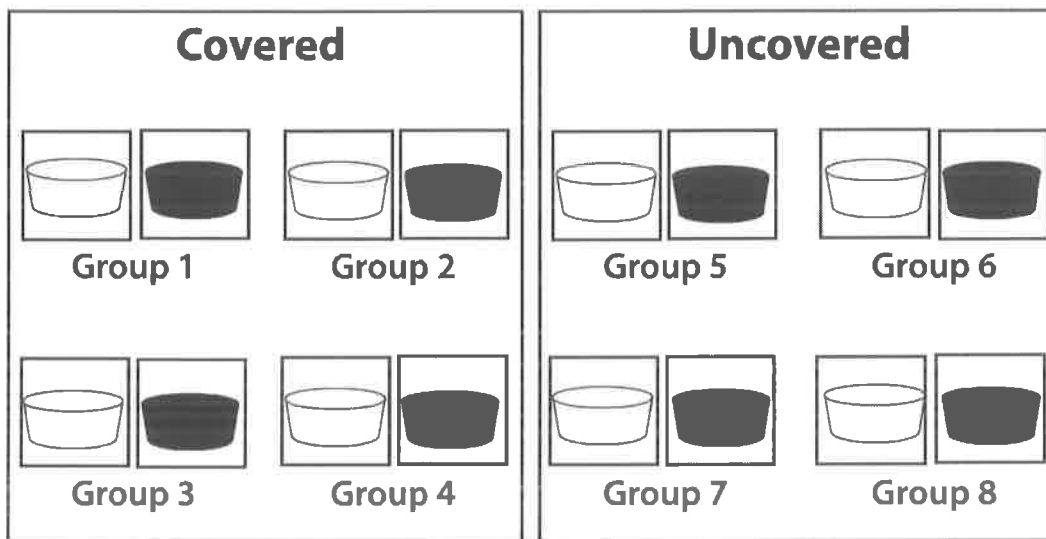


HEATING COLD WATER.....

- Each group can have two cups, two vials, and four thermometers.
- You may reorganize into pairs if you choose to.
- When you have decided on the procedure you will use, go to the water station for samples of hot red water and cold clear water.
- Keep records of your procedure and data as your experiment progresses.
- Try to warm the cold water to a temperature of 30°C without actually mixing the cold clear and hot red water.

WATER-HEATER SETUPS.....

Water-Heater Setups



CONFERENCE TABLE

Circle your team's experiment.

Black/Covered

White/Covered

Black/Uncovered

White/Uncovered

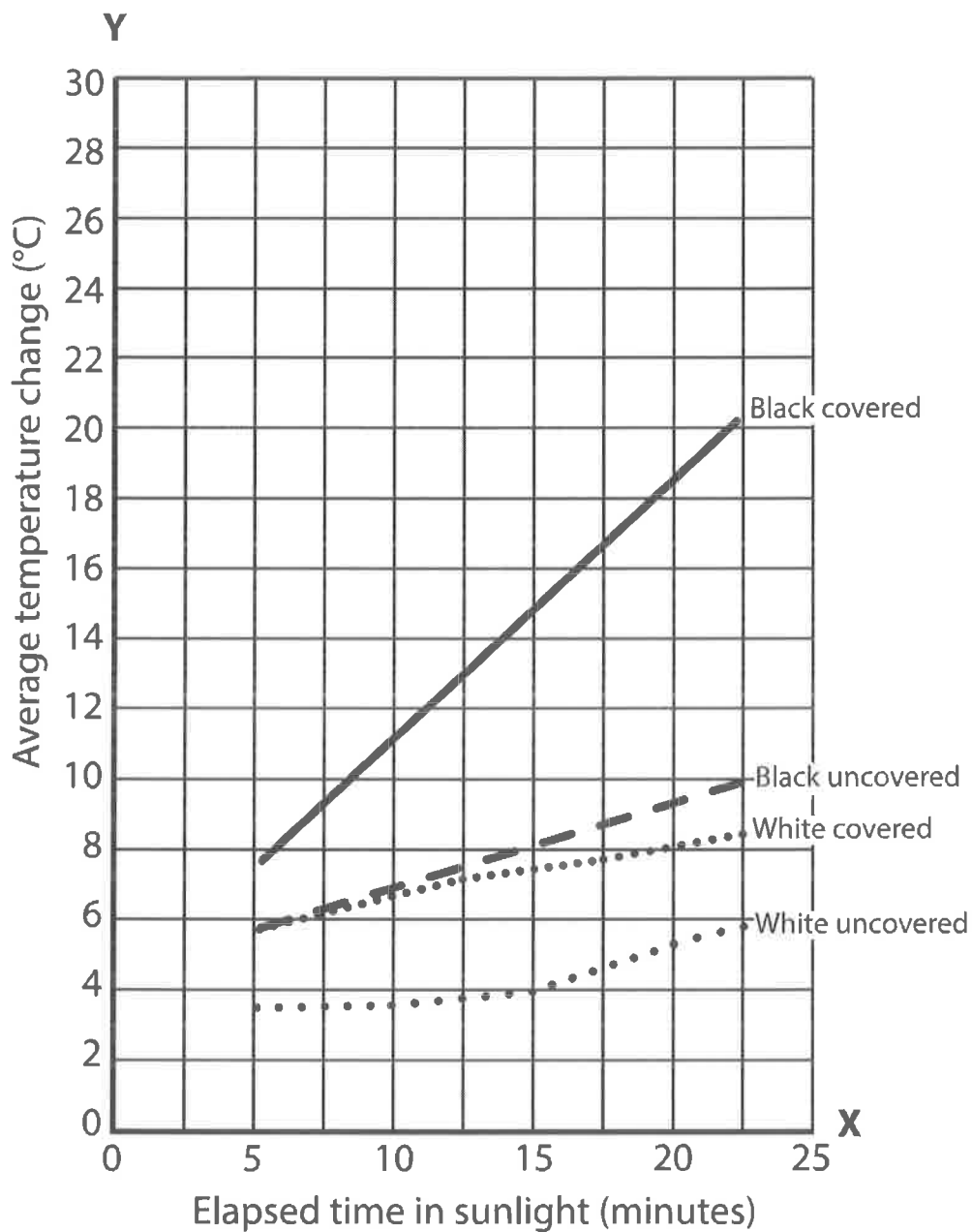
Elapsed time (minutes)	Temperature change from starting temperature				Average all teams
	My team	Other team	Other team	Other team	
5					
10					
15					
20					

Directions

- Each team of two students gets its own conference table.
- Circle the experiment your team did.
- Write your team members' first names in the box "My team."
- Record your team's temperature changes in the first column.
- Pass your sheet around the conference meeting so the other teams can record their data in one of the "Other team" columns. Each team will record their temperature-change data on four sheets, one for each team.
- When your team gets your conference-table sheet back, calculate the average temperature change after 5, 10, 15, and 20 minutes and record it in the column "Average all teams."

SAMPLE GRAPH OF WATER HEATERS

Typical results on a warm, sunny day



Water-Location Poster

Animal

Number	What happens	Where you go
1-2	Excreted	Soil
3-5	Respired or evaporated	Atmosphere
6	Stays in body	Animal (roll again)

Water-Location Poster

Atmosphere

Number	What happens	Where you go
1	Condenses and falls to the soil	Soil
2	Condenses and falls on a glacier	Glacier
3	Condenses and falls on a lake	Lake
4-5	Condenses and falls on the ocean	Ocean
6	Stays as vapor	Atmosphere (roll again)

Water-Location Poster

Glacier

Number	What happens	Where you go
1	Melts and flows into soil	Groundwater
2	Turns into water vapor	Atmosphere
3	Melts and flows to a river	River
4	Melts and flows to the ocean	Ocean
5-6	Stays frozen	Glacier (roll again)

Water-Location Poster

Groundwater

Number	What happens	Where you go
1	Filters into a river	River
2-3	Filters into a lake	Lake
4-6	Stays in ground	Groundwater (roll again)

Water-Location Poster

Lake

Number	What happens	Where you go
1	Soaks into soil	Soil
2	Animal drinks	Animal
3	Flows into a river	River
4	Heats up and evaporates	Atmosphere
5-6	Stays in lake	Lake (roll again)

Water-Location Poster

Ocean

Number	What happens	Where you go
1-2	Heats up and evaporates	Atmosphere
3-6	Stays in ocean	Ocean (roll again)

Water-Location Poster

Plant

Number	What happens	Where you go
1-4	Transpires and evaporates	Atmosphere
5-6	Stays in plant	Plant (roll again)

Water-Location Poster

River

Number	What happens	Where you go
1	Flows into a lake	Lake
2	Filters into soil	Soil
3	Flows to the ocean	Ocean
4	Animal drinks	Animal
5	Heats up and evaporates	Atmosphere
6	Stays in river	River (roll again)

Water-Location Poster

Soil

Number	What happens	Where you go
1	Absorbed by root	Plant
2	Flows through soil	River
3-4	Heats up and evaporates	Atmosphere
5-6	Stays in soil	Soil (roll again)

WORLD MAP

