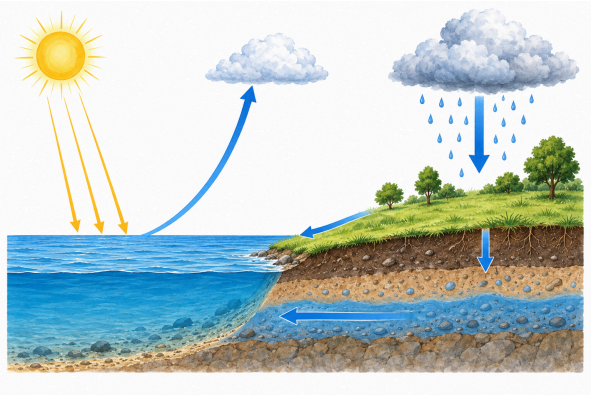
水循环

观察卡

选1–3项试试；可指、说、画，书写可选。

1 · 看一看

找出云、地表水和地下水。它们分别在哪里？



部分水循环路线示意；箭头表示过程，不是流量。

2 · 选一选

沿一条路线说：水怎样上去、又怎样下来？云一定会下雨吗？

一定　不一定

3 · 选一选

看到白云，是直接看到了水蒸气，还是微小水滴或冰晶？

水蒸气　微小水滴或冰晶

4 · 写一写

在知识卡找到“蒸发”。读一读，再选着写。

蒸发

5 · 画一画

为一滴雨画两条可能路线：沿地面流，或渗入地下。给箭头标方向。

6 · 记一记

我看到了：____

我不能仅凭图确定：____

还想观察：____（可画或口述）

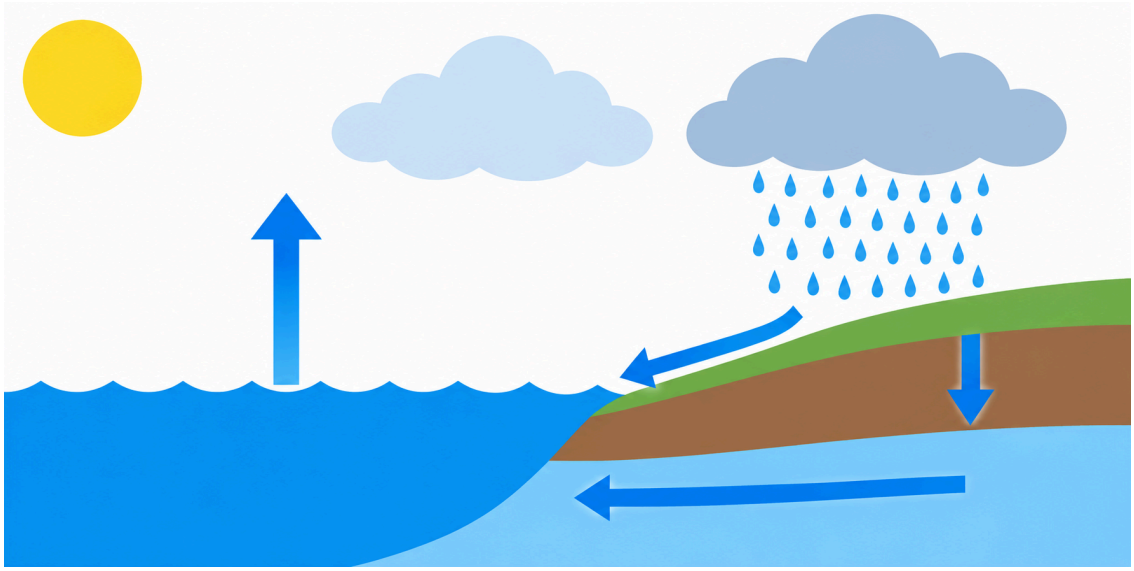
水循环

知识卡

水去哪里?

水在海洋、陆地、大气和地下储存与移动，形成水循环。

看图找路线



过程示意 · 无统一比例

蒸发 → **凝结** → **降水**

- **蒸发：**液态水 → 水蒸气
- **降水：**云 → 地面；雨是其中一种
- **部分已知:** 仅部分路线；非每滴水必经
- **冷却凝结：**水蒸气 → 微小云滴
- **分岔：**地表流动 / 渗入地下
- **部分已知:** 能量与水量未量化

两种驱动

- 太阳 → 能量 → 蒸发
- 重力 → 降水下落、水往低处流

云 ≠ 水蒸气

- **水蒸气：**看不见的气体
- **云：**微小水滴 / 冰晶
- 有云 ≠ 一定下雨

多条路线

- **海洋、土壤、河流、地下：**可停留
- 不必走完整圈；没有固定循环天数

- 箭头表示过程方向，非水量；上升箭头不是白烟
- 简图非现场测量或天气预报
- 成人陪同；远离水边，不尝雨水

资料：USGS · NWS

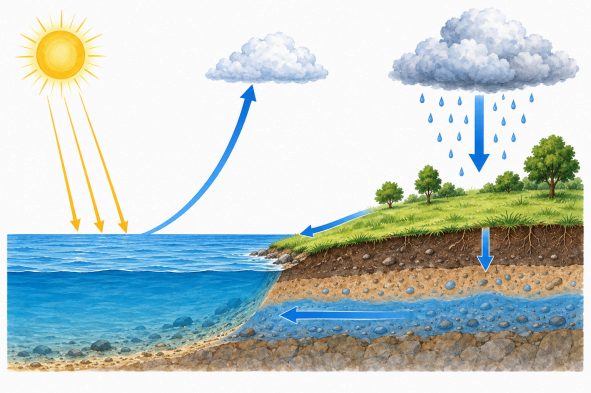
The water cycle

Observe

Choose 1–3 tasks. Point, say or draw; writing is optional.

1 · Look

Find clouds, surface water and groundwater. Where is each?



Selected water-cycle paths. Arrows show processes, not amounts.

2 · Choose

Follow one path: how does water go up and come down? Must every cloud rain?

Always | Not always

3 · Choose

Are visible clouds water vapor, or tiny drops and ice crystals?

Vapor | Tiny drops or ice crystals

4 · Write

Find “Evaporation” on the knowledge card. Say it; write it if you wish.

Evaporation

5 · Draw

Draw two possible paths for a raindrop: over land or underground. Add arrowheads.

6 · Record

I notice: ____

The diagram cannot tell me: ____

I want to observe: ____ (or draw/say)

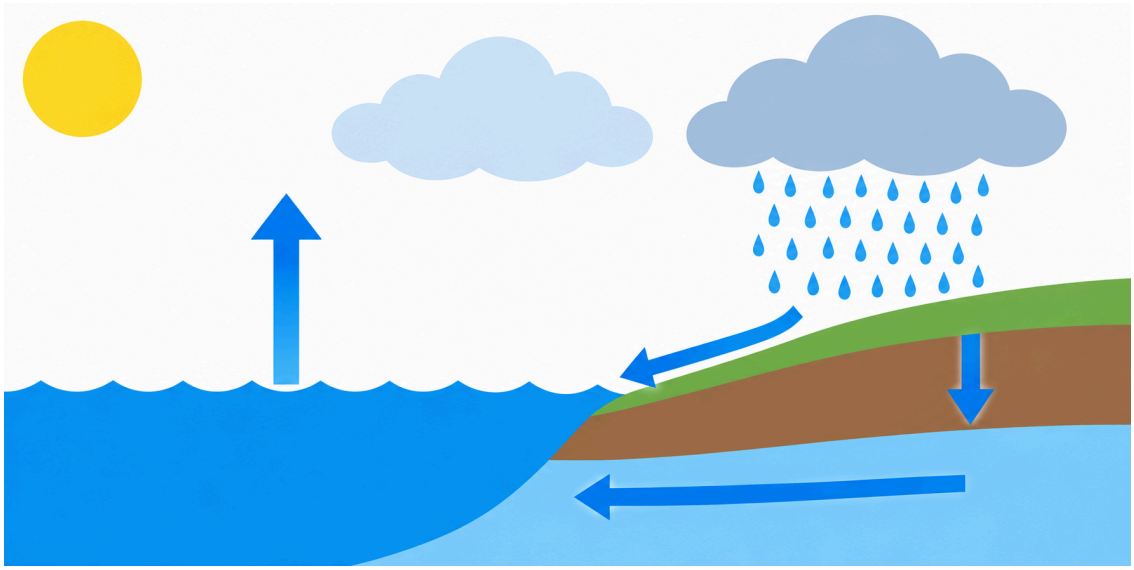
The water cycle

Discover

Where does water go?

Water moves and is stored among oceans, land, air and underground: the water cycle.

Trace the routes



Process diagram · not to scale

Evaporation → **Condensation** → **Precipitation**

- **Evaporation:** liquid → vapor
- **Precipitation:** cloud → ground; rain is one type
- **Partly known:** Selected paths, not required for every drop

- **Cooling and condensation:** vapor → tiny cloud droplets
- **Branches:** surface flow / soaking underground
- **Partly known:** Energy and amounts not measured

Two drivers

- Sun → energy → evaporation
- Gravity → falling rain, downhill flow

Cloud ≠ vapor

- **Vapor:** invisible gas
- **Cloud:** tiny droplets / ice crystals
- Cloud ≠ guaranteed rain

Many routes

- **Oceans, soil, rivers, underground:** storage
- No compulsory loop or fixed number of days

- **Arrows:** process direction, not amounts; rising vapor is not smoke
- **Diagram:** no field measurement or forecast
- With an adult; away from water edges; do not taste rainwater

Sources: USGS · NWS