Nature Trivia

Use this key to check answers and read the explanations.

1. A trailside tree has white bark that curls back in thin, papery strips. Which tree fits that clue?
   - A. Paper birch
   - B. Black walnut
   - C. Eastern hemlock
   - D. Red maple

   Correct answer: A. Paper birch
   Mature paper birches are recognizable by their light bark, which peels back in thin layers.

2. A park guide calls a broad, shelf-shaped growth on a decaying tree a dryad’s saddle. What kind of organism forms that growth?
   - A. A fern
   - B. A moss
   - C. A fungus
   - D. An insect

   Correct answer: C. A fungus
   Dryad’s saddle is a wood-decaying fungus. The visible shelf is its fruiting body, which is the part involved in releasing spores.

3. As the tide goes out, small hollows in a rocky shore remain filled with seawater. What are these hollows called?
   - A. Sandbars
   - B. Tide pools
   - C. Salt marshes
   - D. Estuaries

   Correct answer: B. Tide pools
   A tide pool forms when seawater remains in a depression in the rock after the surrounding water retreats.

4. In a sheltered freshwater pond, broad round leaves float on the surface. Their long stalks lead to a plant rooted in the pond bottom. Which plant fits the description?
   - A. Duckweed
   - B. Cattail
   - C. Milkweed
   - D. Water lily

   Correct answer: D. Water lily
   Water lilies root in the bottom and send floating leaves up on stalks. This lets the leaves reach light at the surface.

5. What feature of a cactus shows why it is called a succulent?

A. Its spines are modified leaves.
B. Its thick, fleshy stems hold water.
C. Its flowers can develop into fruit.
D. Its roots can spread near the soil surface.

Correct answer: B. Its thick, fleshy stems hold water.
Succulence refers to water storage in thick tissues. In a cactus, the fleshy stem holds the water.

6. A park sign describes a lichen made up of a fungus and a green alga. Which task does the alga perform in this partnership?

A. It makes sugars using light.
B. It builds the lichen’s protective outer layer.
C. It draws minerals from soil through roots.
D. It breaks down dead leaves as its main source of energy.

Correct answer: A. It makes sugars using light.
The green alga uses light to make sugars through photosynthesis. The fungus provides most of the lichen’s visible structure.

7. Some lodgepole pine cones open after a wildfire. Why can those old cones release seeds soon after the fire?

A. The cones contain young trees that already have roots.
B. Heat makes fresh seeds grow in the cone within hours.
C. Wind pushes seeds from outside into the cones as they open.
D. The seeds were already held inside by a resin seal.

Correct answer: D. The seeds were already held inside by a resin seal.
Some lodgepole pines retain seeds in cones sealed with resin. Heat from a fire can loosen the seal and release that stored seed crop.

8. A field guide describes a North American bog with acidic water and deep peat. Which kind of vegetation typically forms its thick living carpet?

A. Cattails
B. Duckweed
C. Sphagnum moss
D. Water clover

Correct answer: C. Sphagnum moss
Sphagnum moss holds water and thrives in the acidic conditions typical of bogs. Its remains contribute to the peat below the living layer.

9. A diver sees kelp blades moving in the current, but the base of each kelp stays fixed to a rock. Which part keeps the kelp attached?

A. The holdfast
B. The blade
C. The stemlike stipe
D. The gas-filled float

Correct answer: A. The holdfast
The holdfast grips the rock. In kelp with gas-filled floats, those floats help lift the blades toward the light.

10. A red mangrove’s seed begins growing while still attached to the tree. After it drops, what lets that young plant reach a new stretch of shore?

A. It travels along roots growing underground from the parent.
B. It glides on wings that unfold before it drops.
C. It is carried in pollen blown from the tree.
D. It can float and drift with the tide.

Correct answer: D. It can float and drift with the tide.
The young plant, called a propagule, can float away from the parent. It may settle in soft coastal sediment and begin to root there.

11. A fictional field notebook tracks two neighboring dune patches after a windy week. A patch with sea oats gained 4 cm of sand. A bare patch gained 1 cm. Which interpretation fits both the figures and what sea oats do?

A. The grassy patch gained 5 cm more, consistent with the plants catching windblown sand.
B. The bare patch gained 3 cm more, consistent with the plants keeping sand out.
C. The grassy patch gained 3 cm more, consistent with the plants catching windblown sand.
D. The two patches gained the same amount because both were exposed to wind.

Correct answer: C. The grassy patch gained 3 cm more, consistent with the plants catching windblown sand.
The difference is $4 - 1 = 3$ cm. Sea oats can catch moving sand, which helps it accumulate around the grass.

12. A forest observer finds a straight row of trees with roots that arch over a long, low gap. Once, seedlings rooted above the ground along that same line. Which vanished feature best explains the pattern?

A. A canopy opening that let sunlight reach the soil
B. A fallen log that supported the seedlings before decaying
C. A temporary puddle on level ground
D. A living forest edge that shaded the seedlings

Correct answer: B. A fallen log that supported the seedlings before decaying
A fallen tree can serve as a nurse log. Seedlings take root along it, then their roots reach the ground. When the log rots away, a gap can remain under the roots.

13. Two fictional woods have equally warm springs. Assume the flowers’ window of bright light begins on the same day and ends when the canopy fills with leaves. Those leaves fill in on May 8 in Wood A and May 14 in Wood B. Which site has the shorter bright window, and by how many days?

A. Wood B, by 14 days
B. Wood A, by 14 days
C. Wood B, by 6 days
D. Wood A, by 6 days

Correct answer: D. Wood A, by 6 days

The canopy shades Wood A six days earlier. Early spring wildflowers in deciduous woods can take advantage of the bright period before the trees leaf out.

14. Two fictional aspen groves have equally spaced trunks. In Grove A, the trunks all grew as new shoots from the roots of one tree. In Grove B, each grew from a separate seed. Which record identifies a single aspen clone, and why?

A. Grove A, because the shoots came from one original plant.
B. Grove B, because each trunk came from its own seed.
C. Both groves, because all aspen trunks look similar.
D. Neither grove, because a clone can only have one visible trunk.

Correct answer: A. Grove A, because the shoots came from one original plant.

Quaking aspen can send up shoots from its roots. Many stems can look like separate trees above ground while sharing a single plant of origin.

15. After a fictional rainstorm, the same muddy water moves quickly into a beaver pond and slowly across it. There is no new sediment source inside the pond. Where is fine sediment more likely to build up, and why?

A. At the pond surface, because slowing down makes suspended particles rise.
B. In the fast inlet, because faster water makes suspended particles drop sooner.
C. On the pond bottom, where slower water lets particles settle.
D. Evenly along both stretches, because the same muddy water flows through them.

Correct answer: C. On the pond bottom, where slower water lets particles settle.

At the dam, water backs up and the current slows. Some of its suspended material can settle to the pond bottom instead of continuing downstream.