

Phenophase Matching

Answer Keys

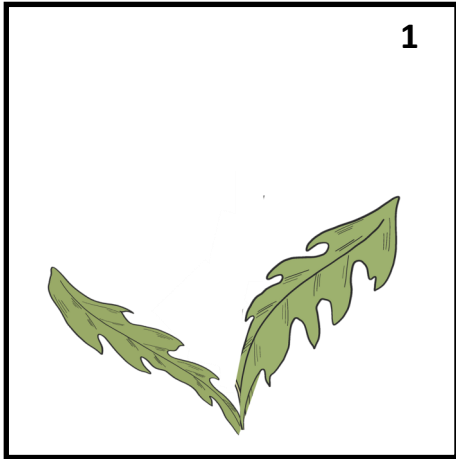
Page 2: Wildflowers and Herbs

Page 3: Deciduous Trees & Shrubs

Page 4: Conifers

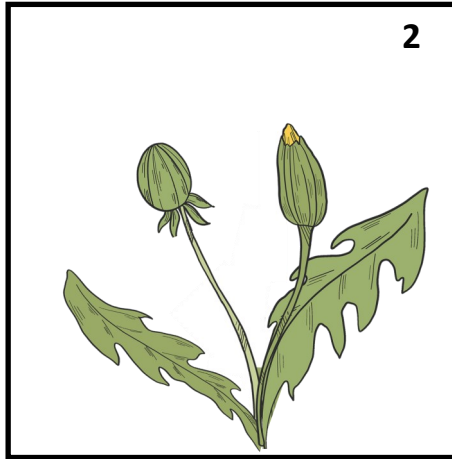
Page 5: Grasses

Note: These activities depict an annual life cycle for generic plants belonging to different Budburst plant groups. Depicted phenophases will vary between species within the same plant group depending on their fruit and flower structures, growth habits, etc. The exact order of the phenophases may also vary. The best way to learn about this variation is observe many different species! (For example, some trees may only produce pollen, only produce fruit, or produce both!)



1

All Leaves Unfolded: All emerged leaves are fully visible in their mature form.



2

Flower Bud Burst: A bud has started to open to reveal the emerging flower. The color of the flower can be recognized.



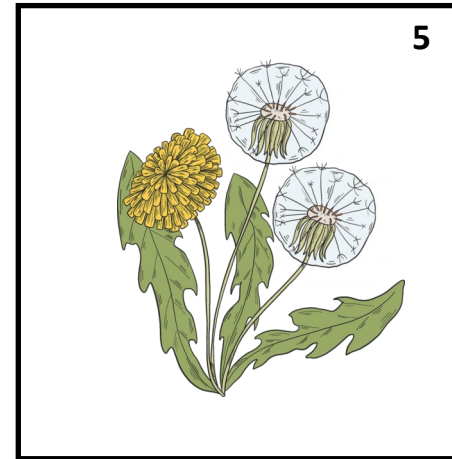
3

First Flower: The petals of the first flower are fully open.



4

Middle Flowering: Half or more of the flowers are fully open.



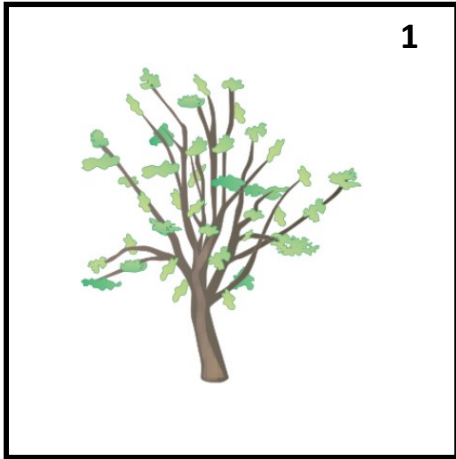
5

Middle Fruiting: Half or more of the fruits are completely ripe or seeds are dropping naturally from the plant.



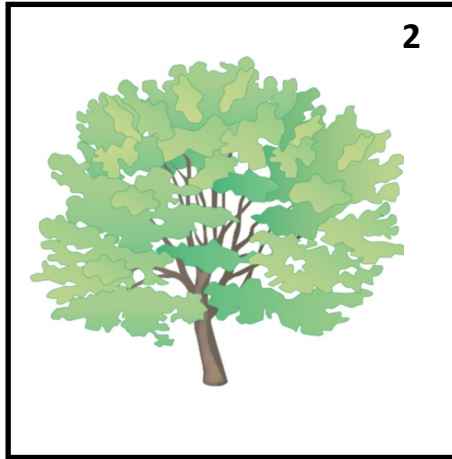
6

Late Fruiting: Most fruits or seeds have been dispersed from the plant (over 95%).



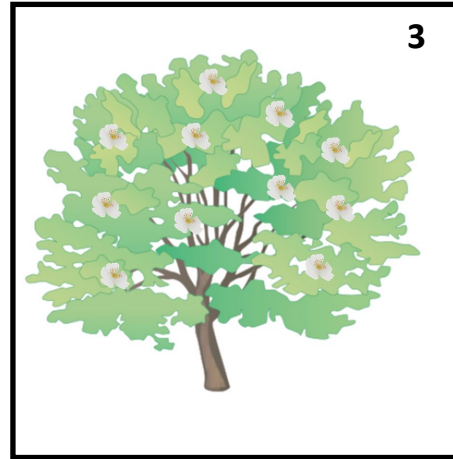
1

Early Leaves Unfolding: Only a few leaves have completely unfolded from their buds (less than 5%)



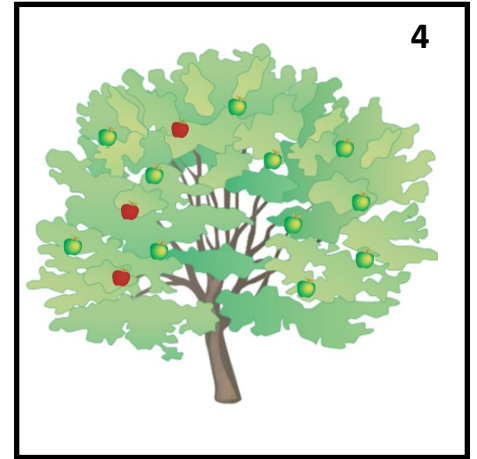
2

All Leaves Unfolded: All or most leaves are fully unfolded



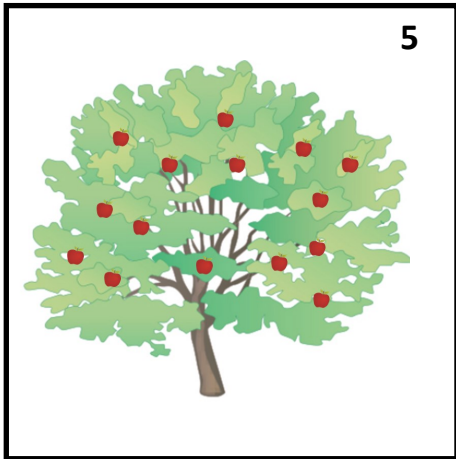
3

Middle Flowers: Half or more of the flowers are fully open or releasing pollen on three or more branches



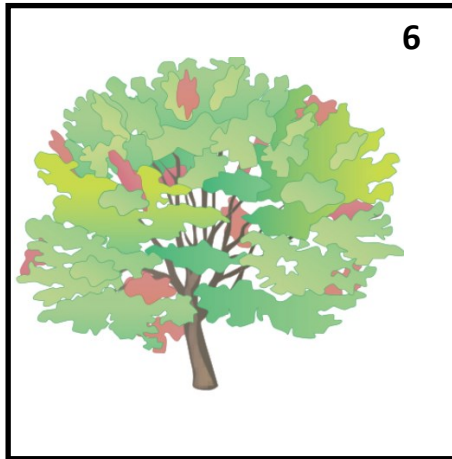
4

First Fruit: First fruits become fully ripe or seeds drop naturally from the plant on three or more branches



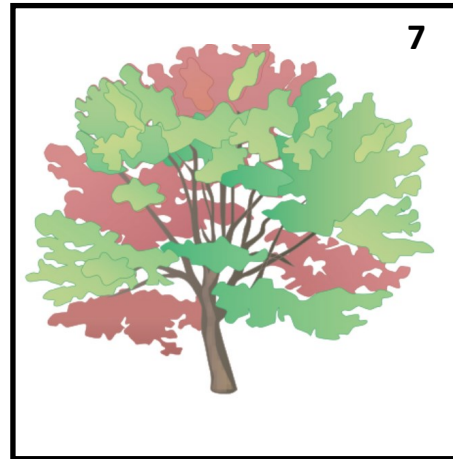
5

Middle Fruit: Half or more branches have fully ripe fruit or the seeds are dropping naturally from the plant



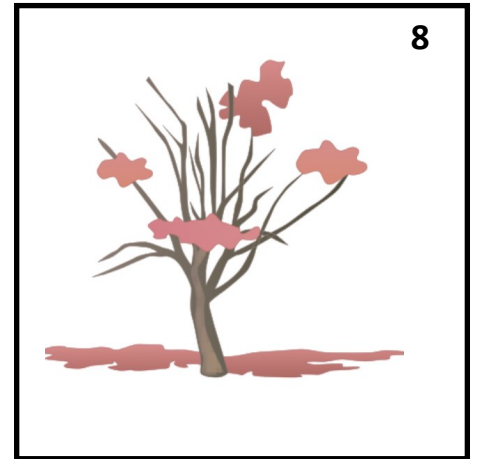
6

Early Autumn Leaf Color Change: Only a few leaves have changed color (<5%)



7

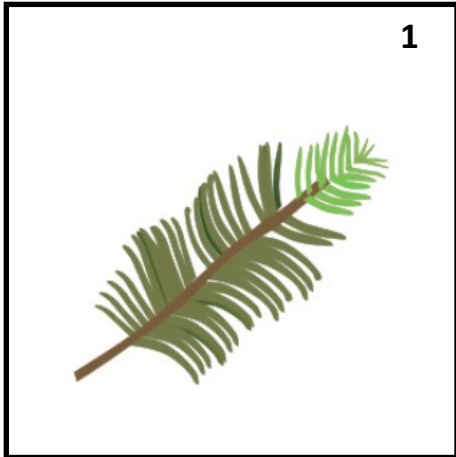
50% Autumn Leaf Color Change: Half or more of the branches have leaves that have started to change color



8

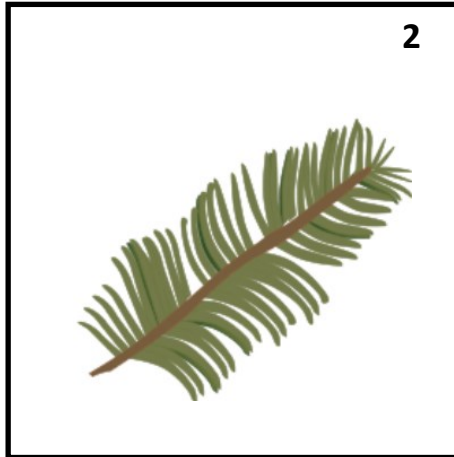
All Autumn Leaves Dropped: All or most leaves have dropped

Plant Group: Deciduous Trees and Shrubs



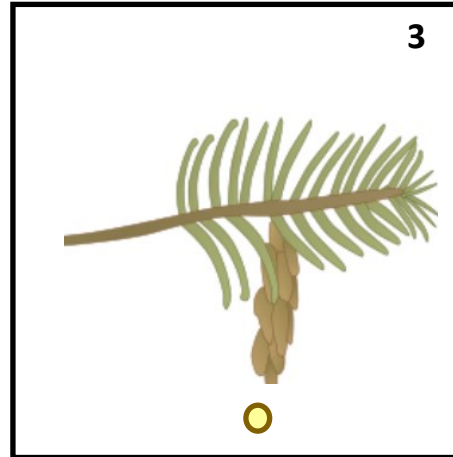
1

First Needle Emergence: New needles emerge from tips of buds or are visible from the side of the buds.



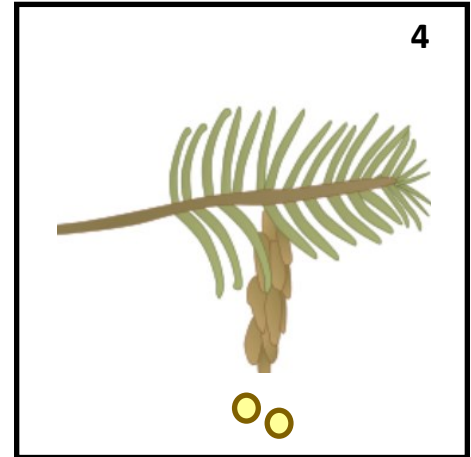
2

No Needle Emergence: No new needles are emerging (In this case, the new needles have already matured!)



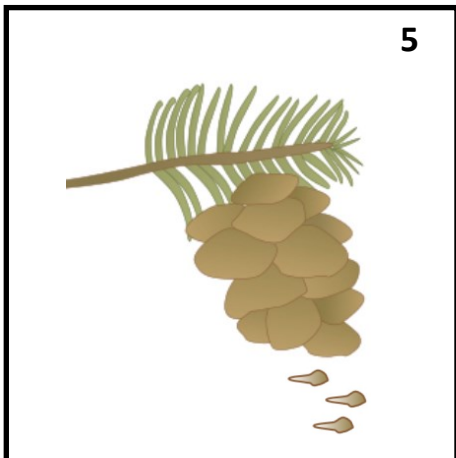
3

First Pollen: Plant starts releasing the powdery yellow pollen from cones (from male cones, which are usually small).



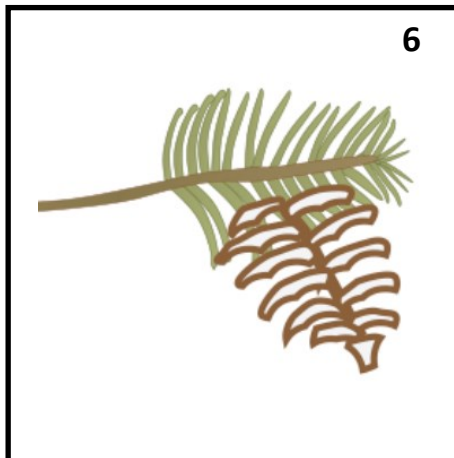
4

Early Pollen: Some pollen is falling (less than 5%)



5

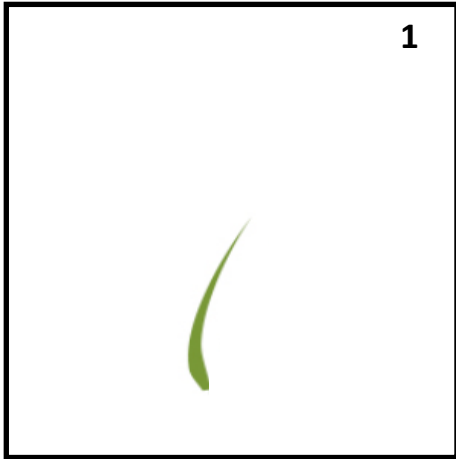
First Cones: First seed cones becoming fully ripe or seeds dropping naturally from the plant.



6

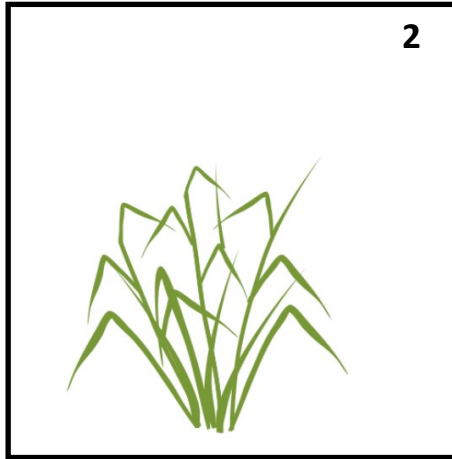
Late Cones: Most cones are open and seeds have been dispersed from the plant (over 95%)

Plant Group: Conifers



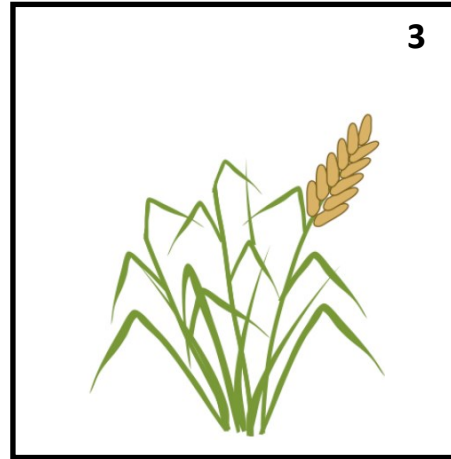
1

First Leaf Emerged: First leaf has emerged. The leaf shape should be clearly visible above ground.



2

Middle Leaves: Most or all leaves that developed this season are green and healthy at their base.



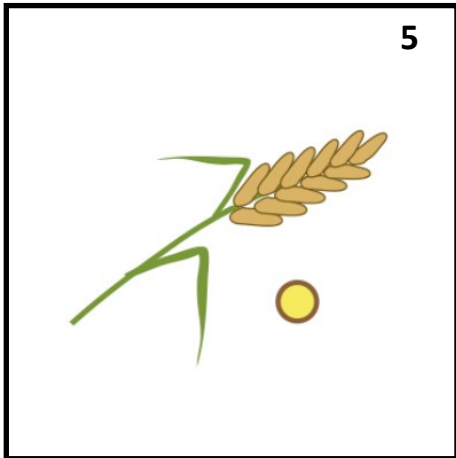
3

First Flower Stalk: First flower stalk is emerging from the stem of the grass, and you can see the first flower cluster rising above the leaves of the stem.



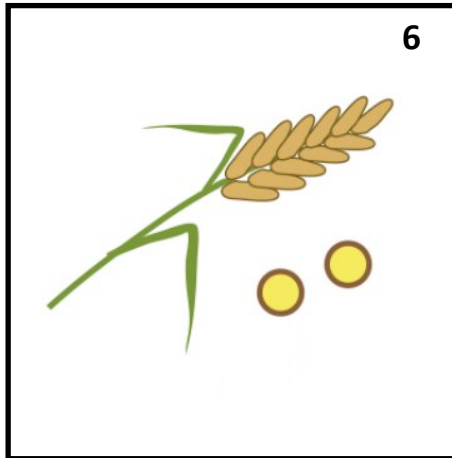
4

Middle Flower Stalk: Many flower stalks have emerged.



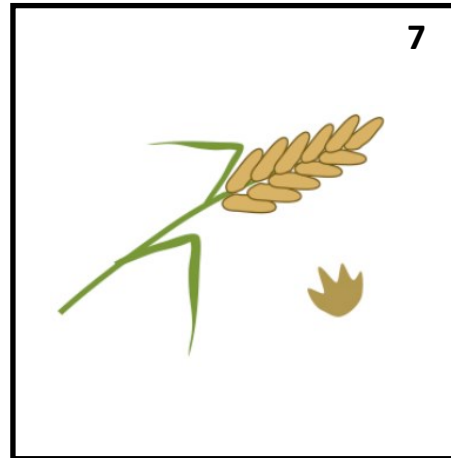
5

First Pollen: Plant starts releasing powdery yellow pollen when touched.



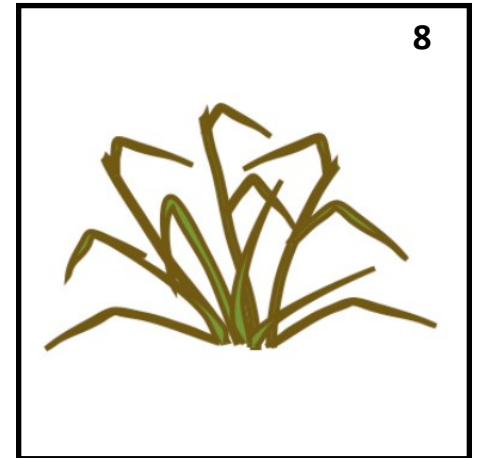
6

Early Pollen: Some pollen is falling (less than %5)



7

First Fruit: First fruits becoming fully ripe or seeds dropping naturally from the plant.



8

Leaves All Withered: Most or all of the leaves that developed this season are dried and dead.

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