

# Card sort – Teacher’s answer sheet

## Unhealthy



### Rose black spot

A disease of roses caused by the fungus *Diplocarpon rosae*. Purple or black spots develop on the leaves. The rest of the leaf may turn yellow and can drop off the plant. Rose black spot fungus produces spores and can spread through the environment by the movement of wind or water.



### Powdery mildew

Powdery mildew is a fungal disease in plants. The symptoms include white powdery patches that spread on the upper and lower surfaces of the leaf, stem and sometimes flowers and fruit. The powdery coating reduces photosynthesis by reducing the light intensity and leads to a decrease in the crop yield.



### Rusts

Rusts are the most common fungal diseases that affect plants. Rust disease causes pustules, ranging in colour from orange, yellow, brown, black or white. These are usually found on the leaves, but can also be seen on fruit or stems. Leaves with lots of pustules can turn yellow and drop off. Plants with severe infections will lose vigour and sometimes die.



### Tar spot

This is a leaf disease caused by the fungus *Rhytisma acerinum*. Usually found on sycamore trees but can affect other trees in the *Acer* genus. The fungus causes raised, shiny black lumps on the leaves. The leaves may fall early but otherwise the disease doesn't cause much damage to the tree.



### Knopper gall

Galls are abnormal growths produced by a plant in response to an outside organism, in this case a parasite. Knopper galls are caused by a parasitic wasp. It lays its eggs on developing acorn buds, then the oak develops a growth which protects and feeds the larvae as it grows. The larvae don't cause much damage to the oak tree, but the acorns can be reduced in size or may be pushed out of their cups by the gall.

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### ***Monstera deliciosa***

Also known as the Swiss-cheese plant, Monstera’s are native to the tropical rainforest of South America. They are common house plants. The leaves have holes in, but they have not been damaged; they grow this way so that they can spread out over larger areas without having to use more energy for growth. This helps them to get more light. The holes also help the plant to cope with heavy rainfall.



### **Jade plant – *Crassula ovata***

The jade plant is a succulent – it has thick leaves that store water with a waxy cuticle to prevent water loss and predation. These leaves are thick, glossy and healthy.



### **Beech tree – *Fagus sp.***

These are young beech leaves. There are no visible signs of damage. The leaves are green and healthy. We can see sunlight shining on the leaves so we know the plant is getting enough light. Younger leaves like this are often more at risk from predation however, as they are more tender.



### **Fern – *Platycerium sp.***

Ferns reproduce through spores, found on the underside of the leaves. These spores are in cases called sporangia which are grouped into bundles called sori – these are what you can see on the leaf. Spores can be similar in colour to rust virus but are usually more regular shapes – straight lines or circles. This fern leaf looks green and healthy with no sign of any damage.



### ***Maranta bicolor***

Marantas are tropical plants native to Central and South America and the West Indies. Their leaves are “variegated”, meaning they have patterns and splotches of colour. This not a sign of disease but an adaptation. This adaptive colouration acts as camouflage from predators.