

A type of honey fungus in USA is thought to be the largest. It is 2.4 miles across.	Start: What do the Great Basin Bristlecone Pine tree and Stonehenge have in common?	They are both 5 000 years old	Trees are plants . Which part of a plant is most adapted for photosynthesis?
The leaves.	Why are leaves green?	Because their cells contain chlorophyll .	Where is chlorophyll found in a plant leaf cell?
It is found inside chloroplasts .	Which leaf cells contain the most chloroplasts?	The palisade cells.	Why do leaves have a waxy layer covering their upper surface?
This layer protects the leaf and reduces the amount of water lost from it.	There are many small openings in the leaf's surface layer, called stomata . What are these openings for?	They allow water vapour and gases to move in and out of the leaf.	Air is a mixture of gases. Which gas in air is crucial for photosynthesis to work?
Carbon dioxide	And which gas is produced during photosynthesis?	Oxygen	What percentage of the Earth's atmosphere is oxygen?
21%	How are leaves adapted to allow these gases to move through them?	They are very thin and have air spaces inside.	What food substance is produced during photosynthesis ?
A type of sugar called glucose.	Why is light important to photosynthesis?	It provides energy for the chemical reaction .	Water is important too. How does water get inside a plant?



It is absorbed by the roots .	What adaptations do roots have to help them absorb water?	They have special root hair cells which create a large surface area for water to cross.	To store energy plants change glucose into a different substance. What is this called?
Starch	What chemical do we use to test for starch?	Iodine	How do we know a leaf contains starch?
The iodine changes colour. It goes from yellow to blue-black.	Why is a leaf put into boiling water and then ethanol before it is tested for starch?	Firstly to kill the leaf and then to remove the chlorophyll from it.	Why is it important to turn off the Bunsen burner before heating ethanol ?
It is very flammable .	At what time do leaves produce the most oxygen?	During daylight hours.	Do plant cells ever produce carbon dioxide?
Yes, when the cells are using glucose like a fuel, to give them energy .	All plant and animal cells use a chemical reaction to get energy from glucose. What is this called?	Respiration	Plants use glucose for energy. What else do they use glucose for?
They use it to build cell walls and tubes.	When we eat plants the cell walls provide an important part of our diet. What is this part called?	Fibre	Long ago, the remains of dead plants built up over millions of years. Which fossil fuel did this create?
Coal	Why are plants important to the fashion industry?	They are spun into threads such as cotton.	Plants also change the glucose they produce during photosynthesis into which energy-rich food?



Plant oils such as rapeseed and olive oils.	Plant cells can also manufacture proteins . What elements do they need to do this?	Nitrogen, sulfur and phosphorous.	Which plant cells absorb the elements needed to make proteins?
The root hair cells.	What type of organism helps many plants absorb these substances through their roots?	Fungi	Which organism is the largest living thing in the world?



Teaching notes

There are 32 cards, allowing it to be used with a whole class. The activity could also be done individually, in pairs or in small groups to produce a complete ordered set of cards. Print and cut up the required number of sets of dominoes before the lesson.

Most of the dominoes have a keyword/phrase highlighted. These can be used in several ways once the activity has been completed once or twice, done against the clock.

- Students could offer a definition for the word they have. They could choose another person to define it.
- Students could be asked to group themselves according to the keyword they have e.g. reactants and products in photosynthesis equation, structures involved, test for starch, nutrients/diet.
- Students give out their keyword. Another student is picked or volunteers to describe how their keyword connects to the given one.