Forests & Water
EXPERIMENT 1 WORKSHEET

Experiment 1: To investigate transpiration in trees/plants:

Transpiration is the loss of water from leaves of plants through the stomata. To see how much water a plant looses through its leaves you can cover the leaves with a plastic bag as shown below. Leave the bag in place for an hour. After an hour investigate any changes.

Different types of leaves loose different amounts of water. You can compare the water loss from deciduous broadleaved trees, (like ash, sycamore, apple, birch or beech) with coniferous trees (like pine, spruce or larch). You can also compare with trees/plants with waxy leaves like holly or ivy.

Type of Leaf	Species of Tree	Volume of water in bag *	Why do you think the tree lost this much water?
Broadleaved in sunny area	*e.g. Oak*		
Coniferous in sunny area	*e.g. Pine*		
Waxy in sunny area	*e.g. Holly*		
Plant in shaded area	*Any species*		
Branch with leaves removed in sunny area.	*Any species*		

- ***you can measure the volume of water with a small syringe, with a teaspoon or write an estimation such as - none, little, a good bit or a lot.***

Forests & Water
EXPERIMENT 1 WORKSHEET

Transpiration Worksheet Questions:

1. **What is transpiration?**

_____
_____
_____
_____

2. **S __ __ __ __ __ __ are tiny pores on the underside of leaves, which allow water to transpire from the leaf. They also allow gases to enter and exit.**

3. **Name 3 factors which speed up transpiration**

__e__t S__ __ __ __ __ __ __ __ __ __ d

4. **Why do coniferous trees have needle like leaves?**

_____
_____
_____
_____

5. **Why do some plants have waxy leaves?**

_____
_____
_____

6. **Do deciduous plants transpire in the winter? What evidence have you for this?**

_____
_____
_____