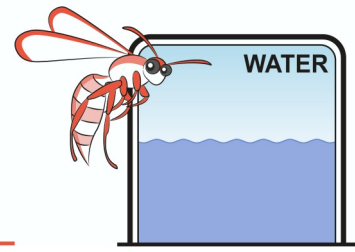


## Cohesion & Adhesion – Teacher Review Notes



*Using what you have learned, please explain your answers to the following puzzles.*



1. My little hairy dog Rory likes walking on the golf course, even after it has been raining. Why is it that although the grass is always cut short and hardly reaches to the top of his paws, his hair is wet half way up his legs. Rory does not roll on grass as he is rather old.

ANS. The water has risen up the hair fibres by capillarity. Rory's hair acts like a microfiber mop.

2. When I get Rory home I use an old cotton towel to dry my dog. A plastic bag just doesn't work for this. Why?

ANS. The towel is made of plant fibres that absorb the water onto their veins. The plastic bag is not made of fibres and will not absorb water.

**Interesting fact** Modern towels were invented when a weaving loom developed a fault that caused threads to pucker into loops. Weavers noticed that this was better for mopping up spills than flat weave.

3. My mother hated water on the bathroom floor so we were always very careful to mop up after baths. She was really angry to find an enormous puddle one morning? My sister explained that the towel on the edge of the bath was the culprit not her. Explain what she meant.

ANS. The towel had fallen with one side into the bath and the other onto the floor. Water had migrated up through the cotton fibres of the towel and dropped onto the floor of the bathroom.

4. Blue carnation flowers do not occur in nature however some florists sell them. How can this be?

ANS. They place cut white carnations in blue coloured water. Capillarity causes the water to rise through the flower stem to the petals, which then turn blue.