S05 – Forces – Pupil Sheet

Complete the passage below:

_ _ _ _ _ _ _ _ is a force which acts between two objects sliding over one another. It always acts in the direction

_ _ _ _ _ _ _ _ to the movement and tries to slow things down. There are times when we need friction and times when we want to get rid of it.

We need friction when we don't want things to slide _ _ _ _ _ _ ; for example, _ _ _ _ _ . We want cars to grip the road well so that they can turn corners without _ _ _ _ _ _ _ off the road. Shoe soles, bike tyres, car and bike brakes are all examples of times we _ _ _ _ friction. We can _ _ _ _ _ _ _ _ friction by making the surfaces _ _ _ _ _ _ _ . We do this with tyres by making a tread pattern on them.

There are times when we want to _ _ _ _ _ _ friction, for example winter sports such as _ _ _ _ _ _ _ _ _ _ _ and skiing, wheels have _ _ _ _ _ _ _ _ _ _ _ _ to reduce friction. Car engines use oil to _ _ _ _ _ _ _ _ _ _ moving parts. This reduces heat and wear. _ _ _ _ _ _ _ _ _ _ _ _ use a cushion of air to reduce friction between them and the ground (though this does make them more _ _ _ _ _ _ _ _ _ to steer!). There is also friction between objects and _ _ _ particles and between objects and _ _ _ _ _ . This is why cars and

_ _ _ _ _ _ _ _ _ _ _ have long, sleek shapes, to try and "cut through" the air rather than "crash" into it. The same is true of boats. They try to part the water instead of crashing into it. This is why most boats have a _ _ _ _ _ _ _ bow.

rougher	easily	tyres	Hovercrafts	need	difficult	
Increase	air	reduce	opposite	lubricate	ball bearings	ice-
skating	sliding	pointed	water	aeroplanes	Friction	