**1.5 Science Forces Online Lesson 1: Streamlining**

**Task 1**

1. Look at the pictures below and decide if the friction is useful or not:



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1. Look at the picture of the Formula 1 car below, what forces may be acting upon the car?



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1. Air resistance and friction are some of the forces acting upon the car. What are the advantages and disadvantages of these forces?

Advantages: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Disadvantages: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Watch the videos labelled cycling and dolphin in the ‘Class Documents’ section of the Team.

How did the dolphin and the cyclist reduce the affect of drag (air/water resistance)?

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1. Look at the picture of the Formula 1 car again, what steps have been taken to reduce drag on the car?

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When an object is streamlined, corners and rough edges are removed. Making the object smoother and curvier reduces the friction and allows the air/water to more easily flow around it.

1. Surface friction can be reduced by smoothing surfaces or by reducing surface contact area. Hovercraft and curling stones are a good example of this in action.

**Challenge:**

Ask an adult if you have the following items:

* An old CD/DVD,
* Blue-tack,
* A sports cap from a bottle,
* A balloon.

If you have these items, try the challenge below. Record your results on your phone and email them to me and I will upload to your file in the team.

