**Science-**

**Forces and Magnets**

**Some useful links:**

<https://www.bbc.co.uk/bitesize/topics/znmmn39>

<https://www.bbc.co.uk/bitesize/topics/zyttyrd>

<https://www.theschoolrun.com/homework-help/magnets>

**Lesson 12:**

**LO: To use my knowledge of how magnets attract some materials.**

**Answer the following:**

1. Can you name a metal that is attracted to magnets?

2. Will the north pole of a magnet attract or repel the north pole of another magnet?

3. Can you name a magnet other than a bar magnet?

4. Will an aluminium drinks can be attracted to a magnet?

5. Will the south pole of a magnet attract or repel the north pole of another magnet?

6. Will an iron nail be attracted to a magnet?

**Key Information:** Magnets have a magnetic field around them that produces a pulling force on some materials.

This pulling force can go through other materials such as paper or wood.

Try it! Place a magnet behind a piece of paper and see if a paper clip is attracted to the magnet through the paper.

**Can you think of some everyday examples where you can see this in action?**

**This magnetic force can be used…**

To point north in a compass.

To hold a fridge door closed.

To sort coins in a vending machine.

In a laptop lid so that the computer can tell if it is open or closed.

**Watch the video of some magnetic games:**

<https://www.youtube.com/watch?v=hZyWiWcF_0I>

Can you identify how the magnet is being used in them?

**Task:** You are going to design a game that uses magnetic force to attract materials. (If you have access to suitable materials you may even be able to create and test out your game)

**Some ideas:**

Racing Game

Fishing Game

Magnetic Maze

**How would you go about designing these?**

**How would the magnet work in each?**

**What material would you need to use?**

**Design and label your magnetic game in the box below. Remember to clearly label each part. Then, write a set of instructions explaining how your game works.**

**My Instructions:**

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**Explain clearly how your game uses magnetic forces to work:**

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**Use these words to help you explain your ideas.**

Magnet, attract, iron, steel, paper clip, force, pull