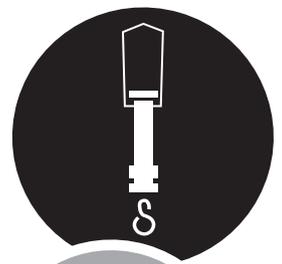
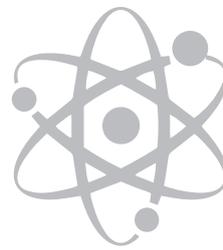




making physics matter



Age
5-7
years

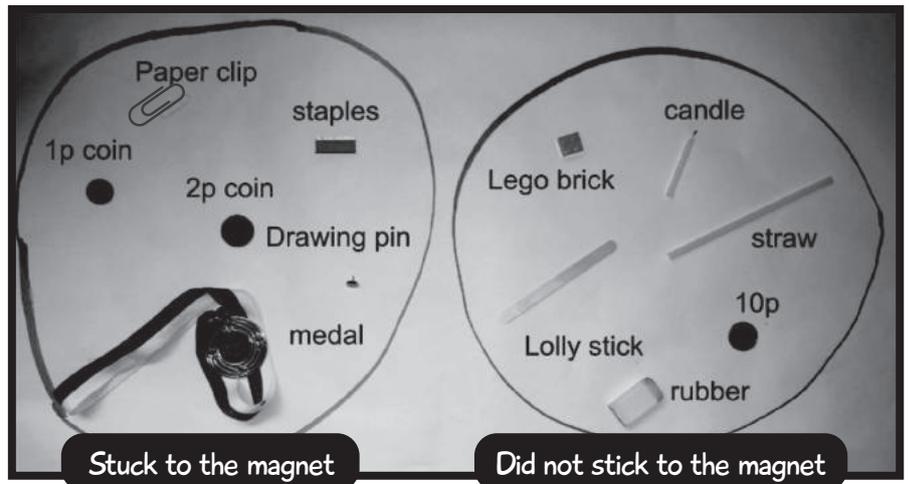
Phizzi problem solving

Magnetic fishing game

Problems to solve

1

Miss Greet's class decided that they would like to make a magnetic fishing game to raise money at the summer fair.



(a) Complete the tally chart below to record their results:

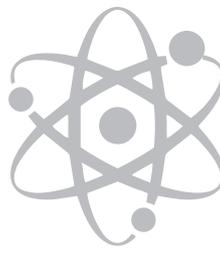
Sticks to the magnet	<input checked="" type="checkbox"/>	
Does not stick to the magnet	<input checked="" type="checkbox"/>	

- (b) How many objects did the class test?
- (c) How many of the objects stuck to the magnet?
- (d) How many objects didn't stick to the magnet?
- (e) Ruby says "fewer materials stuck to the magnet than didn't". Use the results to decide whether you agree or disagree with her.
- (f) Shannon says "all metals stick to magnets". Use the results to decide whether you agree or disagree with her.



Plan your own investigation to find out what objects in your classroom will stick to a magnet?

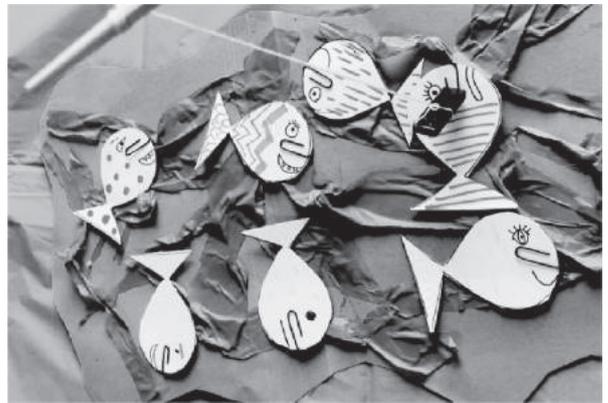
Do your results agree with the ideas that Ruby and Shannon have about their results?



2

Jonah and Alisha make a magnetic fishing game. They put paper fish in their pool with paper clips stuck to them so they are pulled towards a magnetic fishing line. The aim of the game is to catch as many fish as you can in one minute; there are always seven fish in the pool at the start of the game.

- (a) Jonah manages to catch three fish.
How many fish are left in the pool?
- (b) Alisha catches two fish in a minute.
How many fish are left in the pool?
- (c) Miss Greet tries out the game.
She catches seven fish. How many more fish than Jonah did she catch?
- (d) Who won the game?



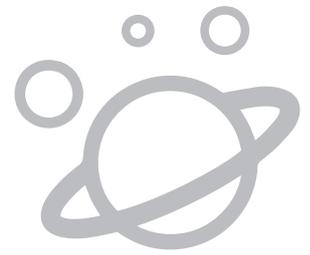
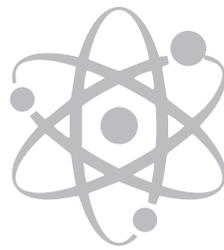
3

Rahul and Leon decide that they want to make their fishing game a little trickier, they will only stick paper clips to half of the paper fish.

- (a) If they want 10 fish in their pool,
how many paper clips will they need?
- (b) If they want 20 fish in their pool,
how many paper clips will they need?
- (c) Miss Greet gives them six paper clips,
how many fish will they make for their pool?



In pairs, make your own magnetic fishing game. Why not investigate how wearing a blindfold affects how many fish you can catch in a minute?

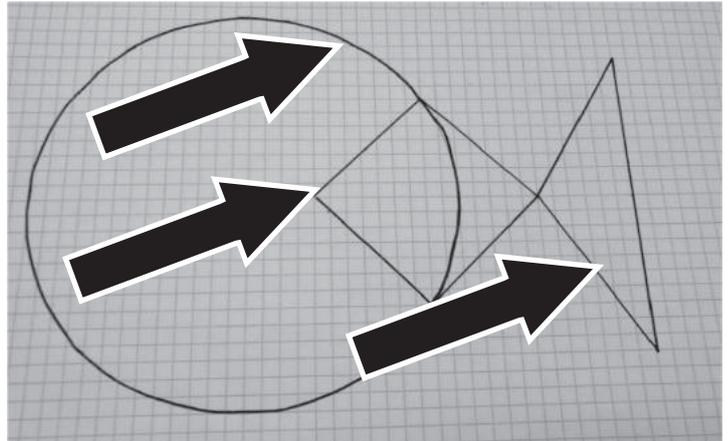


4

Miss Greet made a template for the children to draw around to make their paper fish.

(a) Label all of the shapes you can see in the template.

(b) How many other ways can you find to create a fish shape with 2D shapes?



Investigate how many different ways you can make a fish shape by drawing around different shapes.

You could use triangles, squares, rectangles, circles, semicircles, diamonds and kite shapes.



Did you know?

The Marine Conservation Society is the UK's leading marine charity. They work to ensure our seas are healthy, pollution free and protected. Perhaps you could make a magnetic fishing game to raise money for this charity or another one that protects ocean life.

How much do you think people would pay to play your game? How many children are there in your school? If they all have a go on your game, how much money could you make for the charity?

