Fidget Spinner Designing, Making and Evaluating



Aim

 To investigate and analyse fidget spinners before designing, making and evaluating my own spinner. The spinner should be for children aged between 7 and 11.

Success Criteria

I can work to the design criteria.

- I can research different types of fidget spinners to aid my design.
- I can design a spinner, keeping in mind the audience it is intended for.
- I can accurately use a wide range of equipment to make my spinner.
- I can make improvements as I work.
- I can give opinions on my own work and on the work completed by my peers.

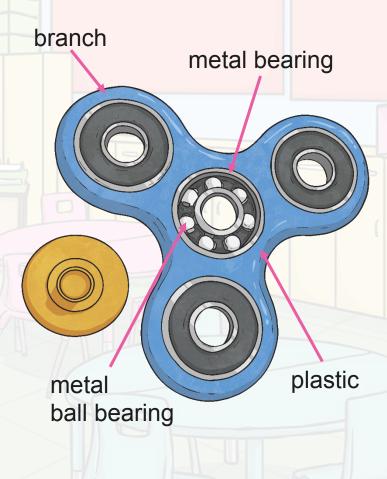


Fidget Spinner Parts

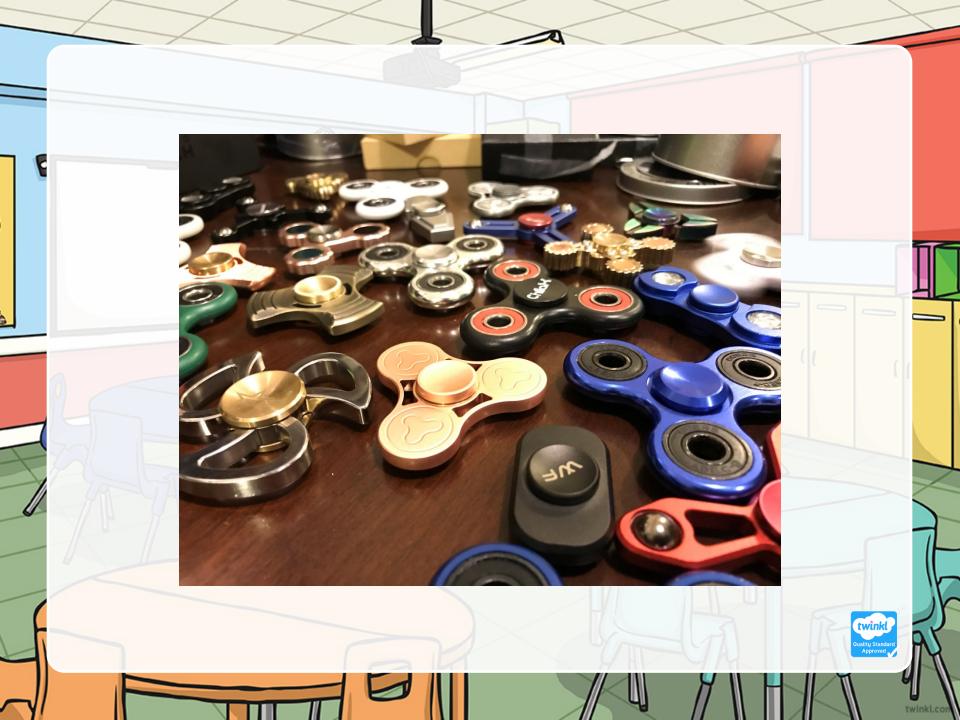
Spinners can be made from a range of different materials, including stainless steel, brass, plastic or titanium.

The spinner has a bearing in the centre.
These can be metal or ceramic (silicon nitride). Ceramic bearings are believed to produce less friction, which improves spin time.

Fidget spinners can have a cap covering the bearing and it is here where the user rests their thumb and index finger. With your other hand, you flick a branch of the spinner and it is the tiny ball bearings which turn, helping the outer branches to spin.





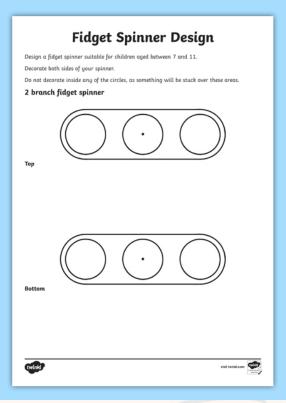


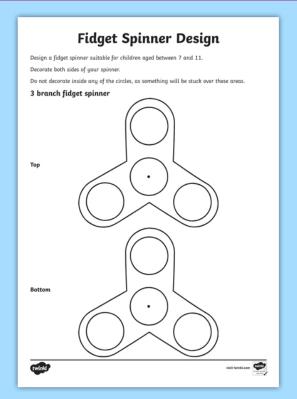


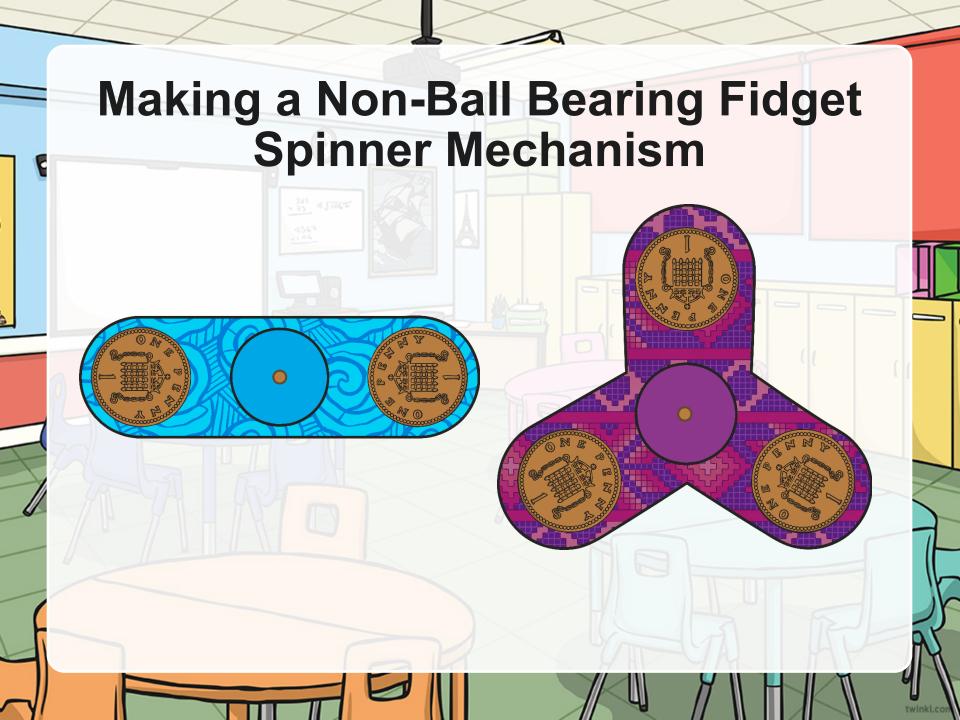
Fidget Spinner Design Task

Design a fidget spinner suitable for children aged 7-11.

Choose from a two or three branch spinner design and decorate it.







Making a Non-Ball Bearing Fidget Spinner Mechanism

To make one spinner you will need:

- 2 or 3, 1p coins (depending on if you are making a 2 or 3 branch spinner)
- 1p coin to use as a template
- Good quality card
- Wooden toothpick/cocktail stick (cut off both of the sharp ends before starting)
- Pin/needle
- Ball of modelling clay
- Scissors
- Glue stick
- Strong glue (e.g. glue gun)
- Spinner template to draw around (with either 2 or 3 branches)



- First, take either the two or three branch template and draw around the shape twice onto card. Be sure to mark the centre points too. These two pieces will form the front and back of your spinner and give it more stability.
- Next, carefully cut out the front and back pieces and decorate with your chosen design.
- Take your pin/needle and make a hole through the centre point of each piece of card, one at a time. Position the modelling clay underneath the centre hole and ensure you push the pin/needle slowly.

Top Tip – When you line up the two pieces, you should be able to get a cocktail stick through both holes. The hole needs to fit the cocktail stick quite loosely - the looser it is, the better the spinner will spin.

4 Now, glue the two halves together using a glue stick and leave to dry.

Instructions

- 5 Once dry, put the cocktail stick through your spinner.
- Next, stick coins on the ends of the branches using a strong glue. (An adult could do this for you if necessary.) There should be a border between the coins and the edge of your spinner. Leave to dry.
- To create the centre spinning mechanism, take some more cardboard and draw around a 1p coin twice so that you have two card circles. Cut them out carefully.
- Now, take your pin/needle again and using the modelling clay once more, safely make holes in the very centre of both card circles.

Top Tip – This time, the holes need to be just big enough for the cocktail stick to fit tightly inside.

Next, push the cocktail stick right through one circle of card, pushing the stick through to the very end. Only a small amount of the cocktail stick needs to poke through the card circle at one end.



- 10. Then, push the other card circle up from the bottom end of the cocktail stick. Ensure a small gap is left between both card circles and the spinner, to allow it to rotate easily.
- Glue the top card circle in place with a blob of strong glue (where the cocktail stick is slightly poking out). Also glue the underside of the bottom card circle to the cocktail stick. Leave to dry, by sticking in modelling clay to ensure it remains upright.

Top Tip - Another idea is to put your mechanism inside the top of an empty bottle to make sure it doesn't fall over.

12. Once completely dry, using scissors, cut off the long length of cocktail stick.

Get spinning!

Evaluation

Complete the evaluation sheet, thinking carefully about your finished product.

How could you improve on it?	Fidget Spinne A photograph of my finished spinner:	Did you face any problems? If yes, how did you c	Fidget Spinne	Fidget Spinner Evaluation
What new skills have you learned?		If you could give one piece of helpful advice to so what would it be?		
Did you face any problems? If yes, how did you c	Part of the design criteria was to design and r and 11. What do children of this age think abou for their ideas or let them write their thoughts	What would you score your finished spinner out :	Part of the design criteria was to design and m and 11. What do children of this age think abou for their ideas or let them write their thoughts	Part of the design criteria was to design and make a spinner for children aged between 7 and 11. What do children of this age think about your finished design? You could either ask for their ideas or let them write their thoughts in this box.
what would it be? What would you score your finished spinner out i				
	Do you like the finished product? Why?		Do you like the finished product? Why?	What do you like most about your spinner? How could you make your spinner even better?
Color ***	Did your design change? if yes, how?	~	How could you improve on your spinner?	What would you score your finished spinner out of 10? /10

