

REFLECTIVE MOBILES

Make mobiles out of recycled materials and investigate how light reflects from different surfaces.

Overview



Have you ever wondered what causes different materials to sparkle and shine? Make these reflective mobiles using any sparkly materials you have in your home, scissors, glue and string.


 [Printable version](#)

This page will print, but looks a little funky. Click the button for a PDF version which looks a bit better.



What you'll need

- String
- Scissors
- A pencil
- A lump of sticky tack
- Glue
- A foil container such as a take away dish or a piece of card as a base
- Shiny materials such as foil, glitter, Christmas wrapping paper and ribbons, CDs,

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- Scissors
- A pencil
- A lump of sticky tack
- Glue
- A foil container such as a take away dish or a piece of card as a base
- Shiny materials such as foil, glitter, Christmas wrapping paper and ribbons, CDs, tinsel, washed yoghurt lids, sweet wrappers...

tinsel, washed yoghurt lids, sweet wrappers... anything shiny!

anything shiny!

Duration

10-15 min

Suitable for...

Age 4 and up.

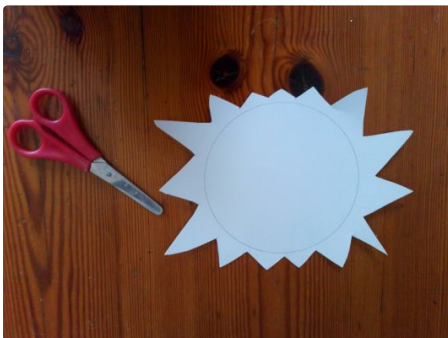
Safety notes

You know your children better than anyone, and you should judge whether they're ready for this activity. You might want to think in particular about:

- Always take care when using scissors.
- Small objects can cause choking.
- Glue can cause damage to carpets and furniture.

What to do

Step 1



If you are using a piece of card as your base, decide on the shape you want the main part of your mobile to be and cut this out.

If you are using a foil container as a base, go straight to step 2.

Step 2



Stick your shiny materials onto your base.

If you are using card, try to cover as much of the surface as possible.

Step 3



Next, make holes in your mobile. Do this

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STEM Career: Optical Engineer

Optical Engineers research, design and build devices that use light, like cameras or telescopes. In telescopes, they use what they know about how light travels and reflects off different surfaces to create technology that allows us to see distant stars and detect planets!



by putting the sticky tack underneath the card and poking your pencil firmly through the card from the top.

Step 4



Tie a loop of string to the top of your mobile for hanging it up. Add any string or ribbon to the bottom of your mobile, ready to attach more materials to.

Step 5



Add any extra material to the bottom of your mobile by threading it through or tying it to your string or ribbon.

Don't make it too heavy or it might rip your foil or card base.

Hang your mobile in a sunny place in your home.

Things to discuss

- Which materials on your mobile are the shiniest?
- How did you decide this?
- Are there places in your house (or garden if you have one) where your mobile looks shinier?
- Which time of the day does your mobile look shiniest?

How it works

Light comes from a source like the Sun or a light bulb and travels in straight lines. When light hits an object, it bounces off it (is reflected) and enters our eyes. This is how we see.

Some things, like mirrors or metallic objects, are better at reflecting light than others. It's their ability to reflect light well that makes them look shiny.

Watch this video to find out more:

<https://www.bbc.co.uk/bitesize/topics/zbssgk7/articles/zqdx82>

Other things to try

Make a foil spiral

You will need:

A 60 cm length of foil

String or ribbon

Scissors

A weight such as a CD, bauble or stone.

First get a piece of foil about 60 cm long and begin rolling it up tightly from long side.

Step 1



Continue rolling until you have a long, thin length of foil. If there is any space between the layers, squash them together to make a solid shape.

Step 2



Take hold of one end of the foil and wrap the other end around and around your hand.

Step 3



Carefully take it off your hand and you should have created a foil spiral.

Step 4





Cut a piece of string or ribbon about 20 cm longer than your spiral. Tie your CD, stone or other object to one end. Thread the other end through the middle of the spiral and tie it to the top of the spiral. If the string is long enough, use it to make a loop to hang the spiral up or to tie it to your reflective mobile.

If you don't have string left, cut a new length to make your loop.