



# Indoor Mobile

Make a simple mobile using everyday household items. This is really just an idea to get you started, and you should be able to come up with some improvements to make your mobile look better and work better as well. So feel free to adapt or improve it!

How many objects can you hang from your mobile so that it still balances?



## Equipment

1. Four plastic drinking straws. If you can't find any straws, you could use wooden skewers or even two pipecleaners joined together.
2. Some sticky tape (the kind that you can't see, such as Sellotape, or 'invisible tape' is best).
3. A few sheets of drawing paper or card. The bigger your mobile is, the more card you'll need!
4. A pair of scissors and some paper glue.
6. Some coloured pencils and pens, or paints and paintbrushes. Acrylic or poster paints are best, but you can use watercolour paints.
7. A needle and thread.

## Safety Stuff

Check with an adult before you begin making any of these mobiles, as you may need their help. If you're going to make the outdoor mobile, you'll probably need an adult's help to hang it up.

Working with items such as scissors can be dangerous, so be very careful when you use them, and make sure that you never leave them open or lying around where smaller children can reach them. Before starting to make your mobile, cover the work surface with some newspaper or an old cloth, and make sure you're wearing an apron or some old clothes. Gather together all the items you'll need before you begin. Most things will be found by simply hunting around the house or garden, but remember to check with an adult before you take anything.

When you've made your mobile, ask an adult to help you hang it up. If you're hanging your mobile from a lampshade, make sure that it's well away from the actual bulb, so that it doesn't cause a fire hazard (light bulbs can easily get hot enough to burn plastic, wood or paper!).

If you've made the outdoor mobile, remember to select a sturdy branch or other fixed location to hang it from. And make sure that you hang it where nobody's going to be walking, so they don't hit their heads.

## Steps

### Step One

Choose a theme for your mobile. You'll need at least four different shapes, or pictures. The mobile could be a school of fish, for example, or a circus full of animals, a sky full of stars and planets, or an underwater scene. Or use pictures or photos of your favourite team or pop group, for example, sticking each one onto a small piece of card.

Alternatively you could choose four simple shapes - like a triangle, circle, star or crescent.

### Step Two

Start by drawing out four shapes for your mobile. When you've drawn out your shapes, cut them out around the edges. Do this carefully with a pair of scissors.

Colour or paint one side of each shape and then leave it to dry.

When your shapes are all completely dry, turn them over and paint the other side. You could paint each side a different colour, or you could make the two sides the same colour.



### Step Three

Next make the frame that will support your shapes. Join two of the drinking straws together by taping them in the middle with some sticky tape. Then join the other two straws together in the same way.

When both sets of straws are joined together, place one on top of the other to form a cross shape. Then use some sticky tape to hold them together in this position, making sure that the join is quite secure.



### Step Four

Hang your shapes or pictures to the straw frame using a needle and cotton.

Start by threading the needle with some cotton. Then push the needle and thread through the top of the first picture, and knot the end securely. Leave a length of cotton (between about 10cm long and 40cm long) and cut the cotton.

Repeat this with the other three pictures, making sure that the cotton is a different length for each picture.

## Step Five

Once the cotton is attached, tie it to the drinking straws. Take one thing at a time and knot the cotton around the end of the drinking straw. How can you stop the cotton slipping off the end?

Repeat this with each of your four pictures, until you have one object hanging from each end of the drinking straws.

## Step Six

Your mobile is now ready to hang up, so tie a loop of thread around the centre of the straws.

Now comes the balancing act! Before you hang your mobile up, make sure that it is balanced. To do this, slide each piece of cotton along the straws until the straws are hanging horizontally (that's level). If each picture is a different shape or size, each one will weigh different amounts. Experiment to make sure that the whole thing balances.



## Step Seven

Once the mobile balances, dab a small amount of glue where the cotton is tied onto the straw.

Ask an adult to help you hang your finished mobile from a lampshade or ceiling. The figures will float, dance and twist through space, and when you touch them or blow on them they will move.

## Step Eight

What other materials could you use to make a mobile? Try different items made of wood, plastic or metal to hang from the mobile. Can you get these to balance too? Or how about adding more layers to it, so that you can hang things at different levels?

Can you think of a way of making your mobile turn around automatically, so that it moves even if there is no moving air? (Hint: you'll need to design something to turn the straws, such as an elastic-band powered stick).