

45 min
Science
Workshop



Ages
3-8

Learn-Through-Play Workshop

This OKIDO downloadable workshop is designed for families and can be easily delivered in the home by YOU. It is designed in collaboration with the British Science Association and follows learning to facilitate Early Years and KS1 development using easy-to-find objects from around the home.

This 45 minute learn-through-play workshop includes:

- Watch an episode of Messy goes to OKIDO together
- Discuss the science with easy-to-follow pointers around the subject
- Complete a make-and-do science activity
- Reinforce the learning with a fun, follow-up worksheet



Theme - **How the world works**
Subject - **Inventions - machines and levers**

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Watch and learn together

Together with your child, watch this 10-minute episode of Messy goes to OKIDO - 'Rub A Dub Messy'.

[Link to Rub A Dub Messy episode](#)

In this episode, Messy wants to get to a sock to eat from under a piece of furniture but isn't strong enough to lift it. So off he goes to OKIDO to see if he can get some help.

Here, we learn how to lift and move heavy objects with the help of different types of **levers**. Felix and Zoe use a wheelbarrow and Farmer Fuddle gets his animals into the bath by using a see saw and springboard – both very good examples of levers that your child will recognise.

Talk about the science

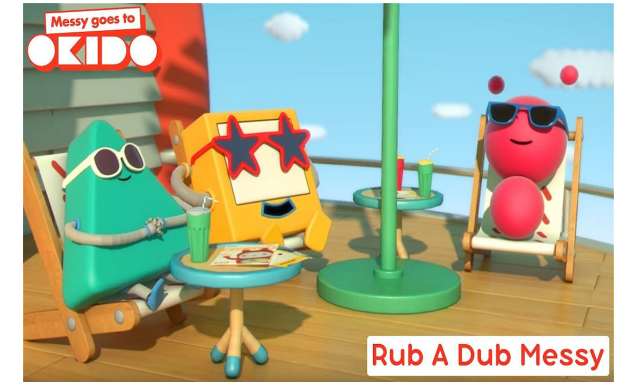
Right after watching, ask your child some questions about what they've seen:

- How did Farmer Fuddle get his animals into the bath?
- How did Messy eventually manage to get to the sock under his chest of drawers?
- What's the problem to watch out for when using a wheelbarrow?

Now talk to your child about where they may have used levers in their own life:

- Can you think of a lever they have seen or used?
- Where did they use these – at the park, the pool or maybe on holiday?

If your child asks a question that you don't know the answer to - just investigate together to find out!



Don't worry - all the information you need to know is explained in the episode :)

New words: Lever

Now make some lever-inspired catapults

You will need:

- Lolly sticks - at least five per child
- Rubber bands - at least three per child
- Bottle top, strong glue and tiny bits of tissue

First, teach your child how to 'lash' by wrapping a rubber band around the end of a lolly stick. This is very hard for young children and a great skill to learn. You can tell them that this **life skill** could help them escape from a treasure island on a raft one day!

- Next, give your child five lolly sticks
- Lash one block of three lolly sticks together on both ends
- Lash two lolly sticks together, but this time only at one end
- Now force the open end of the two lolly sticks around the middle of the block of three - like a crocodile's mouth eating a log - you can help with all of these steps :)
- Lash at the join
- Stick on the bottle top - this is your launch pad!

Using a firm surface, hold down the lashed end of the two lolly sticks and try to launch little bits of scrunched-up paper by resting it on the bottle top or end of the lolly stick underneath and 'pinging' this end with their nail or the end of their finger.

Experimenting and data collecting

You can experiment with:

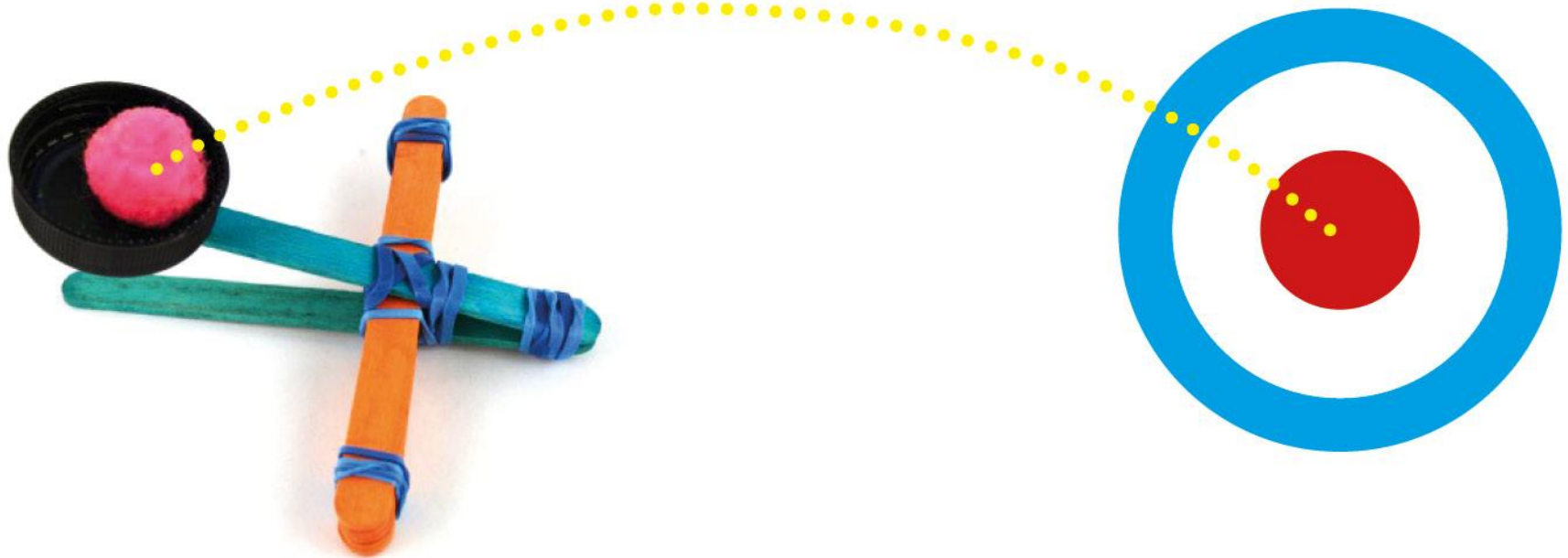
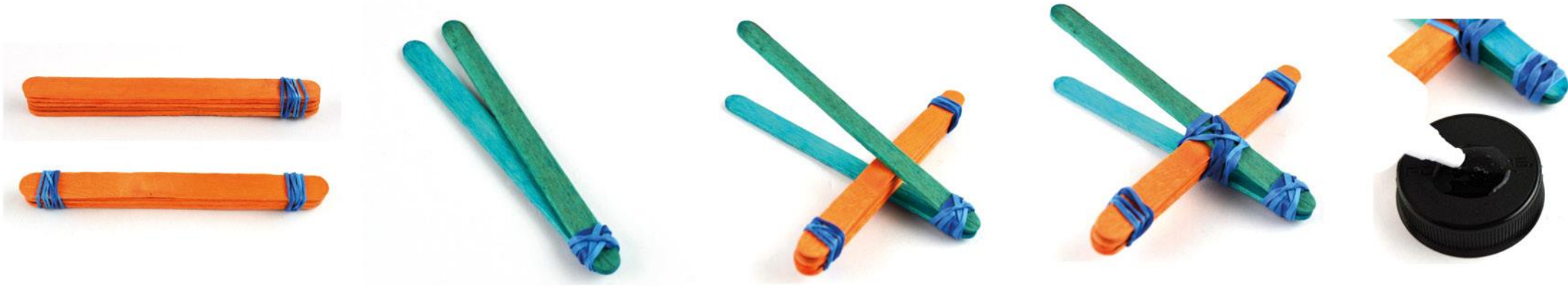
- Different types of ammo
- Different launching / 'pinging' methods
- Different surfaces

For very young children be sure to work together to create the catapult. For older children, try letting them try alone, without instruction, with the lolly sticks and rubber bands and see what their imagination comes up with first.

If you have a tape measure, try measuring each different launch attempt and collect the data by making a note of it in a notebook - how about creating a science notebook for them - or on a piece of paper.

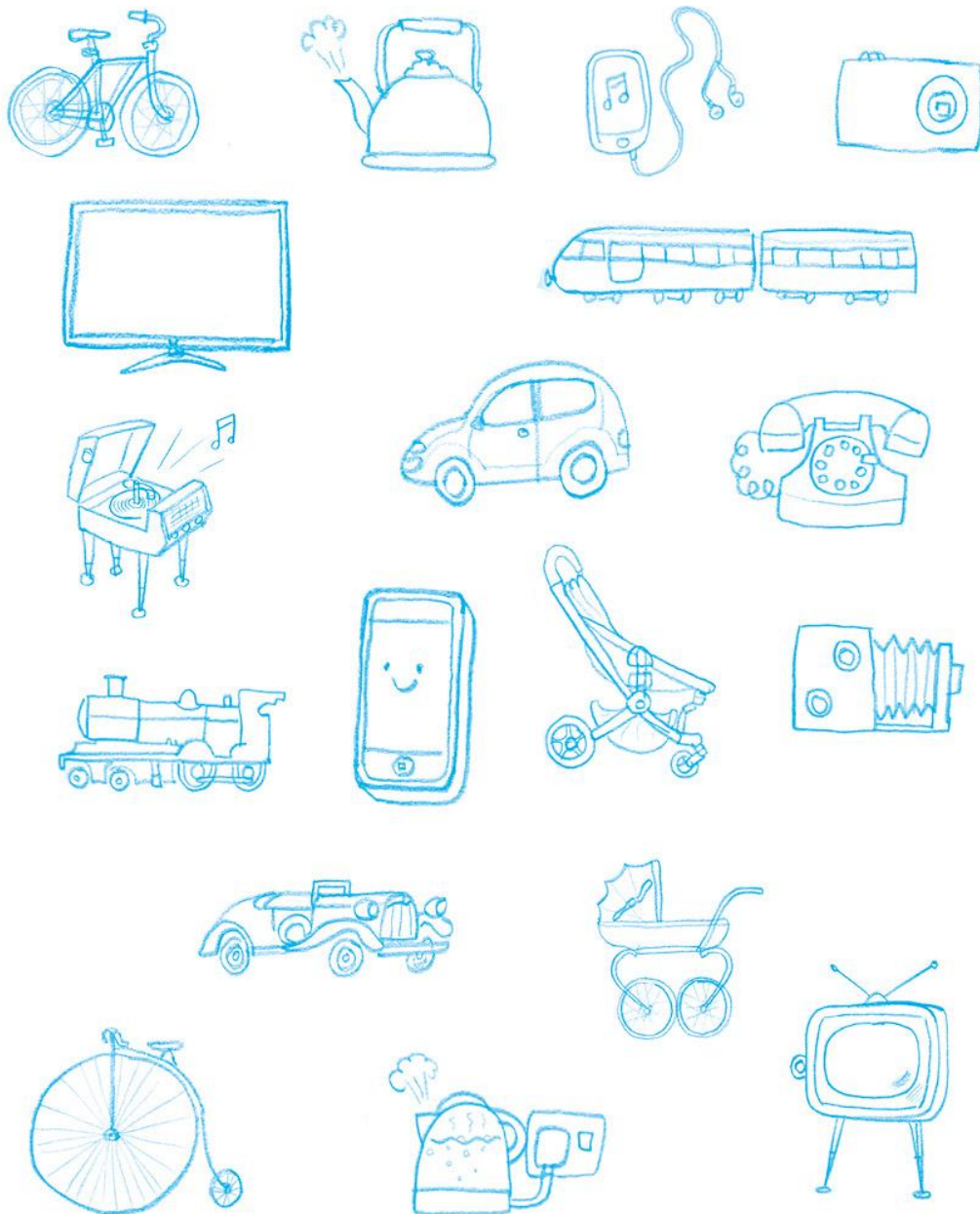
Older children love to design their own lever machine in their science notebook too!

Talk about sustainability with your child and let them know that when finished being played with, this catapult can easily be dismantled to provide useful household materials again.



Pairing up

Match the old machines with their new versions



Clock cog odd one out

Which detail doesn't appear on this clock cog picture?

