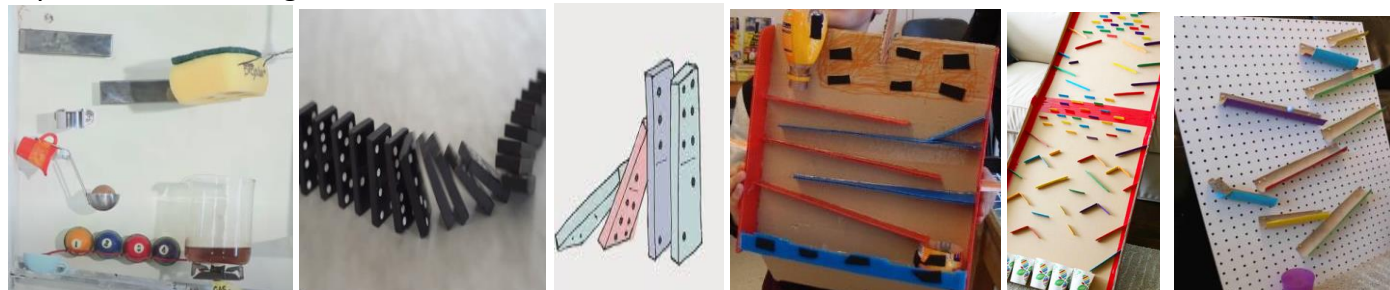


Adult support/ supervision is essential**Forces****Marble Run**<https://youtu.be/GOMIBdM6N7Q>

Watch the following video on a chain reaction.

Using a range of equipment- marbles, golf ball, tennis ball, football, tubes (kitchen/ cling film rolls) slopes, levels, pulleys, dominoes, Jenga blocks, tracks, plastic bottle lids, lolly pop sticks, straws, lego and/or guttering.

Try and make the longest marble run.



What factors could you change to make the ball (marble) travel slower down?

Does the angle of the ramp effect the speed the ball travels?

What could you do to slow the pace of the ball without stopping it?

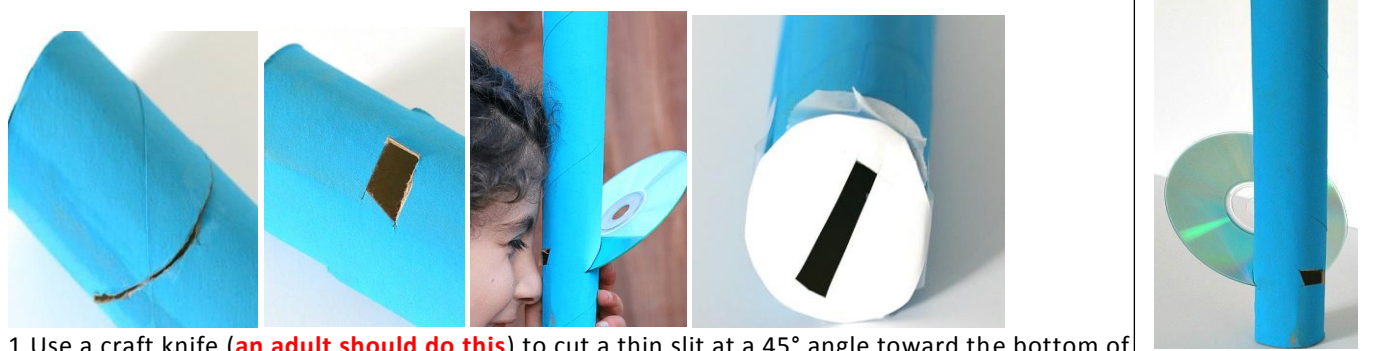
Liquid- dissolve/ diffusing

Equipment: Bag of Skittles, white plate and water.

Arrange the **Skittles** in a single row coloured pattern around the edge of the plate. Pour over enough warm **water** to cover all the **Skittles** and the plate itself. Watch and wait as a rainbow appears on the plate, the colours will move towards the middle and create a whirl of colour.

Light - How to Make a Homemade Spectroscope

Equipment: empty kitchen towel roll, scissors, blank or old CD, pencil, small piece of cardboard or cardstock, tape and paint (optional).



- 1, Use a craft knife (**an adult should do this**) to cut a thin slit at a 45° angle toward the bottom of
- 2, Directly across from the slit, make a small peephole or viewing hole using your craft knife (**another step for an adult**).
- 3, Trace one end of your paper towel roll onto your small scrap of cardboard or cardstock. Cut it out.
- 4, Cut a straight slit right across the center of your cardboard circle.
- 5, Tape the circle to the top of your spectroscope.
- 6, Insert the CD into your 45° angled slit with the shiny side facing up.

Please send us your learning

On eschools or Twitter @CTK_CPS

Adult support/ supervision is essential**Plants- Be a tree detective**

Every tree has something special about it. You could look in your garden or your local park for a tree you like. **Take an adult and take extra care around trees that might be damaged or very old.** There's much to discover on a tree – so get your detective hat on and pack a magnifying glass if you have one



Some trees have hollows so big that you can climb inside, while others have tiny cracks where minibeasts hide. You'll have to investigate every nook and gnarl of your tree to really get to know it.

Crouch down to look at the roots of your tree. Measure how wide its trunk is with your arms. And use your hands to feel the texture of its bark – is it bumpy, rough or smooth? You could make a rubbing with paper and a crayon to reveal the lines and patterns.

Look up. Are your tree's leaves dancing in the breeze? Are there any flowers or seeds growing there? Listen for birds or squirrels who may be hiding or making their home. You could even search your tree for scars, and try to imagine what may have caused them: a storm, an animal or something else?

Animals- Make a mini-beast home.**What are you building a house for?**

You can obviously build a home for any wildlife you think of, but it's probably best to go with smaller ones for this challenge. Hedgehogs, for example, don't need a lot of space, but you could choose to build somewhere for even smaller things like woodlice, spiders or worms and you'd need even fewer materials and less garden space.

How will the animals use the home you've built?

Do you think that they will want to live in the home you make? Or maybe just visit it and explore? Or could they use it for hibernating? Ladybirds hibernate, so they might make a good guest for your wildlife hotel.

What else do you need to think about?

- Does the home need to be dry or wet?
- What sort of home does the animal currently live in?
- Can you learn anything from that about what it likes and dislikes?
- Where are you going to build it - can it be on the ground, underneath it, or in the trees?
- What will you make it from?

It's probably best to go for something very similar to the animal's current home, so natural materials like moss, sticks and stones will be better than plastic and metal. You could also try cardboard if you wanted to make something really detailed. Remember in the wild, animals choose where they live. So even if you go to a lot of trouble creating what you think is a dream home, they might still decide to find a pad of their own design. If you find your wildlife home empty at first, don't despair - take a look back in a week or so and you may find an unexpected guest has moved in.

Please send us your learning

On eschools or Twitter @CTK_CPS