

CoVid-19 is a brand new type of infection in humans. It was noticed in December 2019 at an animal market in China. The infection is caused by a virus which has been called SARS-CoV-2. This virus belongs to a group of viruses known as Coronaviruses.

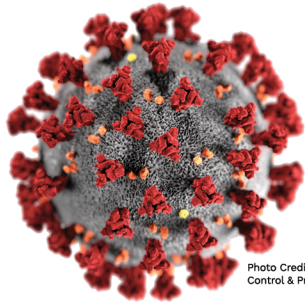


Photo Credit: CDC - Centers for Disease Control & Prevention

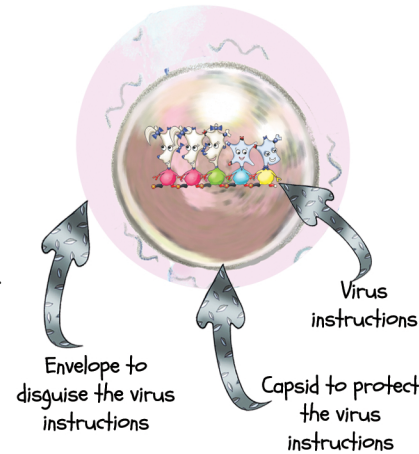
A virus is a tiny package of Dinky Amigos instructions that can get into your body and make you ill. There are hundreds of thousands of different viruses. Scientists have collected them into groups based on how similar they are to each other and what type of infections they cause.



Coronaviruses are so called because under the microscope they look like they have a ring around them. "Corona" is the Latin word for "halo" - but these viruses are not very angelic! The SARS-CoV-2 virus can cause a cough and fever and may make it difficult for you to breathe. Sometimes it can also give you sickness and diarrhoea. If you are already poorly with something else, it could make you really ill.

The SARS-CoV-2 virus has a disguise to help it infect people. Dinky Amigos live in the centre of the virus and are protected by a shell called a **capsid**. The disguise is around the outside of this capsid. It is called an **envelope** and confuses the body's immune system.

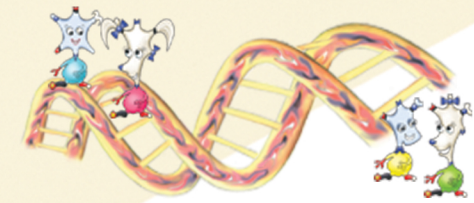
Luckily if you use soap to wash your hands, the envelope starts to crack and the virus is no longer infectious.



If you rub your hands whilst washing them, you also knock some of the viruses into the sink, where they go down the plughole and can't infect anyone else.



Double whammy!

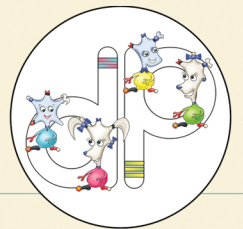


CORONAVIRUS: SARS-COV-2

GENETICS FOR KIDS

DNA

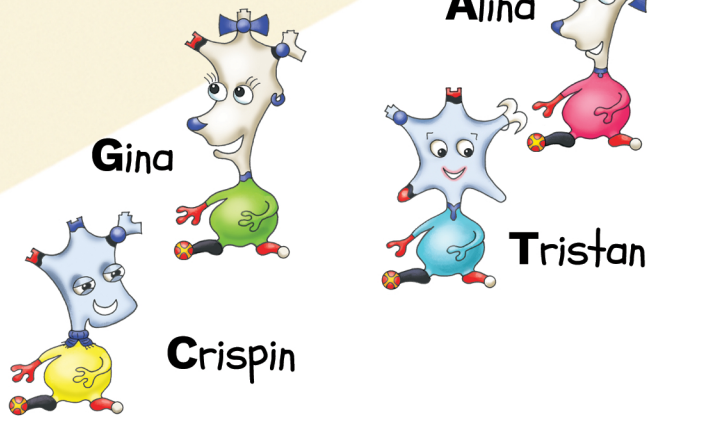
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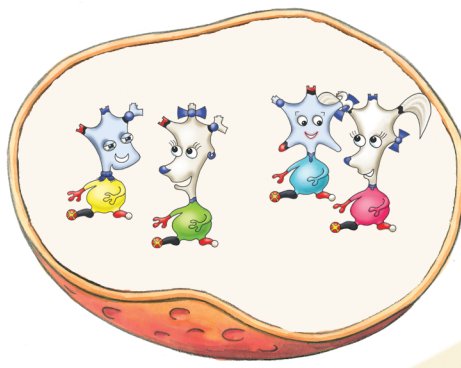
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Creative DNA Education

Your Dinky Amigos are:



They make up all the **INSTRUCTIONS** your body needs to survive and together they are known as **DNA**.

Every living thing on the planet needs instructions. And the instructions need a home.

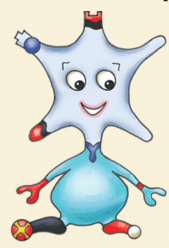


That home is called a **CELL**.

Tristan doesn't always make the instructions.

Sometimes he sends his twin brother **Udan** instead.

Then the instructions are known as **RNA**.

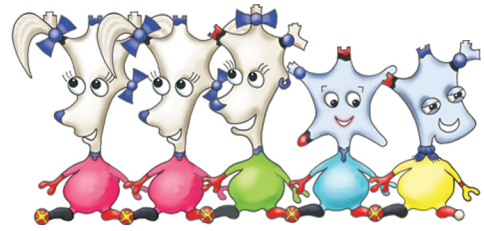


The instructions in the SARS-CoV-2 virus don't have a cell to call home - so they need to move in with someone else.



They used to live in bats, but the Dinky Amigos had to line up in the same order all the time. (Just like words, the letters have to stay in the same order, otherwise you can't read them)

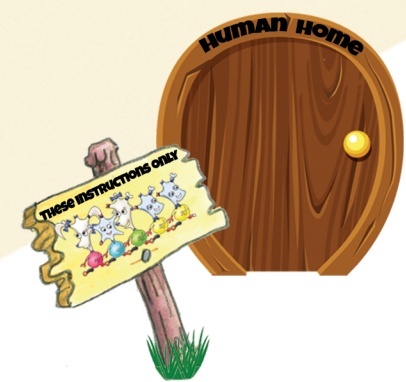
But some of them swapped places...



...and the bats didn't recognise them anymore. So they had to look for a new home.

They found one - in us!

The SARS-CoV-2 virus has RNA instructions.



But we didn't want them in our cells, so the virus Dinky Amigos started **SNEAKING IN** instead!

Their favourite ones are in our airways. Once inside, they make copies of themselves before destroying our cells!

The viruses disguise themselves as a piece of our cell and hide in our mucus and our breath. Then, when we cough, sneeze or breathe out, they escape from our bodies and head for someone else's instead. They had to practice a bit at first, but now they are really good at it. They can sneak in and spread before anyone even gets poorly.

SARS-CoV-2 is really new and our immune system has never, ever seen it, so it doesn't know what the virus looks like. It takes a few days to find, but then our defences can start to get rid of those naughty viruses before they cause too much damage.

