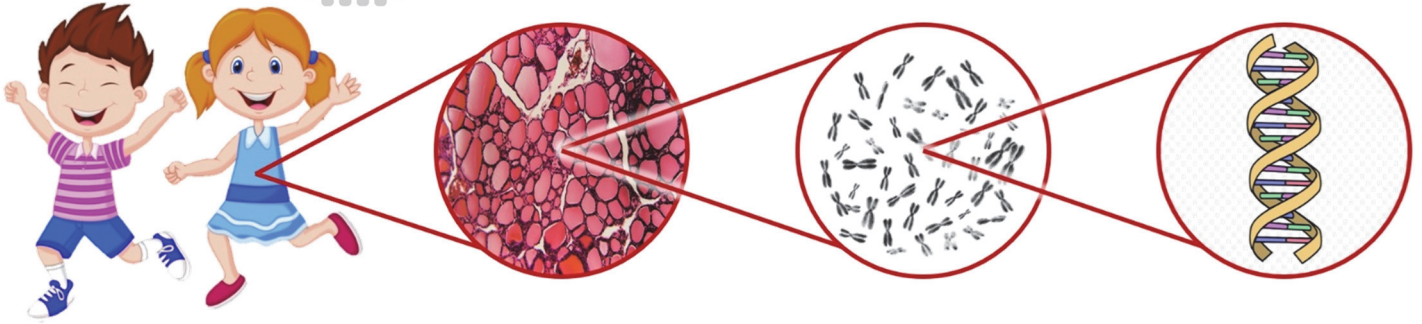
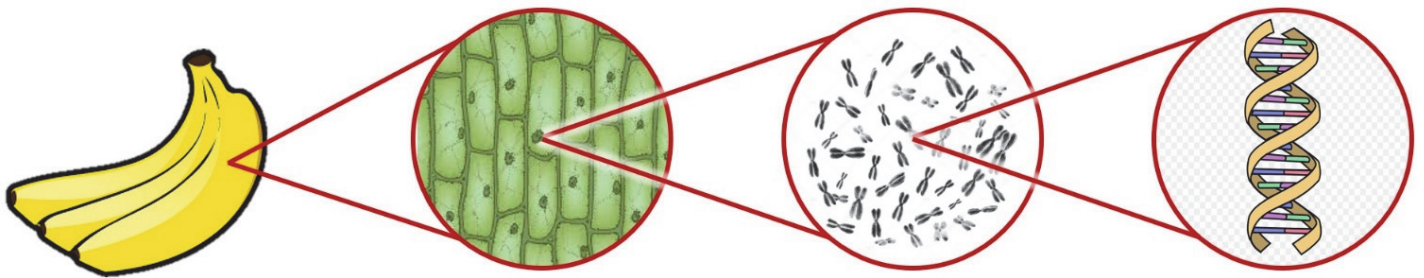


DNA & YOU

Extracting DNA from Banana



Just like you have DNA in your cells, all living organisms on our planet have DNA. Let's try an experiment where we can actually extract the DNA from the cells of a fruit of the banana plant.



What you need:

- Small ripe banana
- Surgical spirit
- Washing up liquid
- Table salt
- Bowl
- Fork
- 3 glass cups
- Small sieve
- Measuring cup/jug
- Tweezers
- Teaspoon
- Chopping board
- Knife



Please make sure to ask an adult to help you use the knife.



DNA Extraction Method

Method:

1. Put the surgical spirit in the freezer at least an hour before you start. The longer the better!
2. Peel the banana and chop half of it up into small pieces (use a chopping board and a knife – careful ask an adult to help!)
3. Mash the chopped banana! You can squash it in a bowl and use a fork to mash it.
4. To make the extraction mixture which will break open the cells and let the DNA escape: measure 90ml water into a glass, add a teaspoon of salt and 2/3 teaspoons of washing up liquid. Stir slowly...we want it mixed but not bubbly.
5. Add 5 teaspoons of the extraction mixture to your bowl of mashed up banana. Mix GENTLY.
6. Sieve the banana into a clean glass.
7. Pour this extract into another glass. The DNA is now free in the mixture instead of being stuck inside cells but it is VERY thin so we can't see it.
8. Carefully pour some cold surgical spirit on top of the banana extract by pouring down the side of the glass. Let it stand for at least 5 minutes. You should see a cloudy white layer appear, this the DNA! The alcohol makes it clump together so you can see it. You can pull this out with tweezers to have a proper look.