

Program workshop for kids: synthetic biology

(September the 17th, 10.30 AM – 12.00 AM)

- Divide the 36 children over 3 groups (based on which month they were born in).
- Show pictures of comic figures and they may guess who it is
- Ask what all these people have in common? → They are all scientists
- Children will be trained to scientists. If they succeed they will receive a certificate ☺!
 - Step 1: why do we need a lab coat? And what else do we need? (Explain that safety is really important!)
 - Step 2: What is DNA? (They tell us what they know and we give more explanation.)
 - Help the children to extract DNA from a tomato.
 - Give each child an eppendorf tube with extracted DNA.
 - Explain that there are 4 different bases or ‘structure’. They determine a lot of our characteristics (color of our eyes, hair color, how hard you can pinch your fingers back,...).
 - DNA not only in people, but also animals and plants. In all living things!
 - Step 3: some scientists change the order (sequence) of the bases to give little animals other characteristics / properties.
 - Give attractive examples: colored leaves, concrete (to restore the houses), little animals that detect bombs (when they have to look for something, maybe a bacteria can help).
 - Step 4: if they could change the order of the bases and so give animals, plants, people new properties, what would they create?
 - Children make a drawing of what they would create
 - Some of the children explain the rest of the group what they have drawn.
 - Step 5: explain that we are participating to the iGEM-competition. We are making a really small animal that you cannot see with your eyes that can help with the freezing and defreezing of water, depending on which ‘food’ you give. (For example grapes and chocolate)
 - Step 6: ask if they may choose one of the two functions which they would give the bacteria. ‘Would they give the little animal chocolate or grapes?’
 - Some kids may explain their idea out loud.
 - Afterwards all the kids make a beautiful drawing.
 - Step 7: All the kids have passed! They receive a certificate. (Make a picture!)
- Interview a few kids.

The End ☺!

Division of the work:

Give the workshop: *Tom, Katrien and Alice*

Film: *Koen, Chris and Stefan*

Help: *Yana and Sarah*