When you’re working at the very forefront of science, theories are often developing so quickly that you’re left waiting for the experimental equipment to catch up. But waiting doesn’t come naturally to many Crick scientists, and all around our institute, there are creative DIY-ers making their own tools. Inspired by this engineering work, as well as processes of cell growth shown within the recent ‘Craft & Graft: Making Science Happen’ exhibition at the Crick, this creative activity sheet invites you to design and invent your very own tool and desktop collage! (Adult supervision is advised at all times when following this activity)

**STEP 1: TOOL MAKING**
Inspired by the engineers at the Crick who use specialist techniques to build and adapt tools for scientific research

**COLLECT MATERIALS:**
Anything from around the house: sponges, tin foil, old toothbrush, paint brushes, a garden twig etc...

**ADAPT:**
Use scissors to cut out shapes, glue to add layered parts and tape for strength

**BUILD:**
Scrunched paper or foil creates interesting texture features and folded paper can create 3D shape stamps

**BUILD:**
Brushes work well as a base to add things to as extension parts

**STEP 2: COLOUR MIXING**
Mix readymade paints or create your own colour inks inspired by liquid growth mediums used in Cell Services at the Crick

**Paints + Inks:** watercolour, acrylics, posterpaint or drawing ink

**Homemade Inks:**
Old tea bags: that have been left to cool in water, then pressed through a colander with a fork to release the pigment of the tea leaves

Frozen or Fresh Berries (any kind): pushed through a colander into a bowl using a fork to press and mash into a pulp, releasing the juices

During this process choose your favourite colours!
STEP 3: MARK MAKING
Creating scientific patterns and textures with your invented tool inspired by the cell formations studied at the Crick.

Using a scrap piece of paper start to test your invented tool with your inks to see if you would like to make any adaptations as you go, this way your tool can evolve or even be made to have removable parts!

TEXTURES:
- Scrunched paper, tape or foil dipped in ink makes irregular scattered marks.
- Folded card triangles create accurate points and controlled lines or dots to add detail.
- Brushes can be used for adding tone and blending.

STEP 4: DESKTOP LAB
Use the colouring sheets as laboratory templates that were designed based on cabinets, equipment and departments at the Crick to fill with your tool patterns!

Use the petri dish circles to fill with your collage patterns inspired by the colouring sheet shape combinations.

You could also cut parts out and rearrange them using your own imagination!

(Adult supervision is advised at all times during this activity)