

MedYSP Online: Molecular Biology & Genetics

Supply List for At-Home Activities

Supplies listed below include common household items and things that can usually be found at your local dollar store

(alternatively, check stores like Walmart or Michaels which offer curbside pickup, or Amazon)

DNA Model Building

- Scissors
- 6 different colours of pony beads:
 - 20 of colour 1
 - 10 of colour 2
 - 16 of colour 3
 - 8 of colour 4
 - 18 of colour 5
 - 36 of colour 6
- 2 different colours of chenille pipe cleaners (6 mm x 12 inch):
 - 2 of colour 1 (uncut)
 - 5 of colour 2 – cut into 18 pieces of 3 inches each



DNA Sequencing Activity

- Black marker (e.g. Sharpie)
- Small dot stickers or something similar - less than 1 cm in diameter, 4 different colours (green, yellow, red and blue are preferred), at least 25 dots of each colour – can be found at dollar stores in the office/school supplies section

These stickers are preferred as it is easier to correct errors as you go through the activity, however, as an alternative, you could use four different coloured markers.



DNA Extraction

- Sodium chloride (table salt)
- Liquid dish soap
- Water (plain tap water is fine)
- Rubbing alcohol (e.g. 70% isopropanol – must have no less than 70% alcohol content) – *you only need a few teaspoons of this – consider borrowing from a neighbour or relative if you don't have any at home*
- A small clear drinking glass (shot glass size would be ideal) or small beaker
- Two small bowls (ramekins are the perfect size)
- Two small spoons for mixing
- A measuring cup (¼ cup size)
- Measuring spoons (¼ tsp, tsp and tbsp sizes)
- A tablecloth to protect your work surface (or work in your kitchen!)
- Paper towels to wipe up any spills
- Cup/Glass jar to collect solid and liquid waste in case you make a mistake along the way
- A small storage container: e.g. mini bottle with cork, or a small test tube/bottle/container with a lid (ideally the volume of the container should be no larger than 20 mL). Mini bottles/ containers are in the craft supplies section at dollar stores.



If you don't want to save your extracted DNA, any small glass or container will do.

- A rod = smooth, skinny rod-like item made of glass, plastic, or metal e.g. stirring rod, cocktail pick, swizzle stick, chopstick, handle of skinny paintbrush, a non-flimsy straw, or similar item. *Wood is not the best option, but a smooth wooden toothpick will suffice if you cannot find another rod-like item.*



The rod will be used to pick up your DNA from inside the small drinking glass/beaker and put it into the storage container, so it must easily fit through the opening of the storage container and it must be long enough to reach into your small glass/beaker.

A dollar store would be the most economical source for the supplies. However, should you wish to order online here are some options from Amazon.ca (delivery) and Michaels Canada (curbside pickup):

Pony beads: [Amazon 1](#) [Amazon 2](#) [Michaels 1](#) [Michaels 2](#)

Pipe cleaners: [Amazon 1](#) [Amazon 2](#) [Michaels](#)

Dot stickers: [Amazon 1](#) [Amazon 2](#)

Mini glass bottle with cork/lid: [Amazon 1](#) [Michaels 1](#) [Michaels 2](#) [Michaels 3](#)