**Resource 3: Edible DNA**

You will need:

Use coloured marshmallows or jelly babies, red rope liquorice / shoe string sweets and toothpicks to construct a DNA Double Helix.

The liquorice rope will be the Backbones. The marshmallows / jelly babies will be the Bases.

**Each pupil / group will need**

**Questions to pose to pupils?**

What would we use the cocktail sticks for?

What would we use the red rope liquorice for?

• 2 pieces of liquorice / show lace sweets

• 20 to 26 coloured sweets

• 10 to 13 toothpicks

**Suggested sweets for base pairs: edible bases**

A (adenine) – red

The proteins always go together in specific pairs T:A and C:G, but it doesn’t matter which side they go on.

Make you own sequence – how many variations can you get in one class?

T (thymine) – black

C – (cytosine) orange

G – (guanine) green

**1**.



**Method:**

1. Put together one side of your DNA Double Helix (ladder) using the sequence above. Place a sweet that matches the correct base (using the colour code chart above) on the end of a toothpick and then push the cocktail stick onto the show lace.



**2**.

1. Match the chemical base pairs. Place the coloured sweet for the matching chemical base on the other end of each cocktail stick. Remember A always pairs with T and C always pairs with G
2. To complete your DNA double helix. Attach the other backbone (shoe lace sweet) so your model looks like a ladder.

**3**.

1. Twist your DNA sweet model to make an alpha helix. Be careful.

**4**.