Sci 9 Makin' Babies Project Baby Maker:

Using your knowledge of mitosis and meiosis your job is to create an egg and a sperm cell, fuse them together to create a zygote and grow that zygote into a baby. Parenting is tough work - good luck!!

**Step 1: Make some gametes!**

1. Choose 3 characteristics from the list below:
* Hair Colour: **brown** and blonde
* Eye Colour: **brown** and blue
* Dimples: **yes** or no
* Widow's Peak: **yes** or no
* Hitch Hikers Thumb: yes or **no**
1. Label the chromosomes below with the 3 characteristics you chose from above. Each chromosome needs a different version of the characteristic

Characteristic 1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Characteristic 2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Characteristic 3:\_\_\_\_\_\_\_\_\_\_



1. Colour each chromosome above a different colour.
2. Using your chromosomes above and the attached template draw out the process of meiosis to create an egg and a sperm. You will need to draw meiosis twice (once for the egg and again for the sperm)
3. You must show at least one example of crossing over for each round of meiosis.

**Step 2: Fertilization!**

1. Using the egg and one of the sperm you created in Step 1 fill in the diagram below.

Egg: Sperm

1. Once the sperm enters the egg, a zygote will be created. Draw your new zygote!

Zygote:

**Step 3: Grow that baby!**

1. Using your zygote above and the attached template, show how your zygote (single celled baby) will grow into a two celled baby

**Step 4: Describe da baby!**

1. If the above process continued (for approximately 40 weeks) you'd have a beautiful new baby – congratulations!! In the space below, describe what your baby would look like. (The bolded trait is expressed if both versions are present)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 5: I need help!**

1. There are many ways making a baby can go wrong – this results in many couples requiring some help to create their baby. There are many reproductive and genetic technologies available to couples looking to conceive. Your teacher will give you two options.

Option A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Option B: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Which would you prefer to use: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. How does your chosen technology help to create a healthy baby?
3. Why did you choose this option and not the other?