**February Notes: Day 6 Cloning**

Name: Period: Date:

**Aim:** How would we clone a human?

**Do now: Write down 1 reason why having a clone of yourself could be beneficial. Write down having a clone of yourself would not be good.**

**What is a clone?**

A clone is an individual that has the same information (DNA) as another individual.

Clones can occur naturally

1. Cells or organism that reproduce (mitosis, , ect.)
2. l twins - because they come from the same and they have the same

Clones can also be made by means of human intervention (scientist).

**How to make a clone?**

**Step 1**- You need a reason to clone something because cloning something is very .

Scientists clone organisms because the organism has a trait or characteristic that is (wanted)

Example: Produces a certain hormone, taste great, insect resistant, reintroduce extinct species, bring back a dead pet, grow new tissue, clones can be used as spare parts..

**Step 2-** Get a from the desired .

Why do you have to use a body cell and not a sex cell like an egg or sperm?

You must use a body cell because it contains the amount of chromosomes (REMEMBER: sex cells only have the chromosome number)

**Step 3** – Take an from organism and remove its .

**Step 4** – Take out the from the and put it in the egg cell.

**Step 5** – Stimulate the “ ” to begin cell division ( ) by placing it in a special chemical.

**Step 6** – Take out the ball of cells (morula) and it in another organism ( mother).

**Step 7**– Baby is born having genetic influences from surrogate mother and is to body cell donor.

**Drawbacks to Cloning**

Clones take to grow. Clones need to like all organisms (they start out as babies). Cloning takes time.

There is no . All the organisms are the same.

 - Do clones have like the original individual who gave the genetic information? Some people would like to grow clones to make spare parts for us. Is this right?

Comparing

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| Selective breeding | Cloning |
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