**BIOTECHNOLOGY NOTES**

Trying to determine who are the biological

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of a child.

The DNA fragments in the child comes from the \_\_\_\_\_\_\_\_

 and father.

A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ present in the child must come either

from the mother or from the father

**To Do: Compare male 1 with the child then**

**male 2 with the child.**

**Interpretation**:

The bands on the child's fragments are either found on

the mother or the male1.

**\_\_\_\_\_\_\_\_\_\_** therefore is this father of this child.

None of the \_\_\_\_\_\_\_\_\_\_\_\_ bands appear in the child

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**FORENSIC INVESTIGATION**

A specimen of \_\_\_\_\_\_\_\_\_\_\_\_ is taken from the victim

or the crime scene.

DNA samples are taken from the 3 \_\_\_\_\_\_\_\_\_\_\_\_.

The bands are compared to associate the suspects

but to eliminate the victims \_\_\_\_\_\_\_\_ from the specimens

**To Do: Compare victim with the specimen; then compare**

**Specimen with all 3 suspects**

**Interpretation:**

Note that the bands on the specimen are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

by the bands on the Suspect \_\_\_\_\_\_\_\_\_.

This means that Suspect\_\_\_\_\_\_\_ was present at the crime scene.

The law will still require to prove a crime was committed

and then that Suspect \_\_\_\_\_\_committed the crime

**Gene transfer involving plasmids, a host cell (bacterium, yeast or other cell), restriction enzymes (endonucleases) and DNA ligase. (2)**

Outline / brief account of summary.

**Stage 1: obtaining the \_\_\_\_\_\_\_\_\_\_ for transfer:**Restriction enzymes are used to \_\_\_\_\_\_\_\_\_\_\_\_\_ out the useful gene that is to be transferred.

Note the 'sticky ends' of unattached \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ bonds.

**Stage 2. Preparing a vector for the transferred gene:**

Plasmids are small \_\_\_\_\_\_\_\_\_\_\_\_ DNA molecules found in \_\_\_\_\_\_\_\_\_. These can be cut with the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ enzyme as above. This leaves the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 'sticky ends' in the plasmid. The plasmid can be cut at particular sites. These are called restriction \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and some are named in the diagram.

Stage3. Recombinant DNA

**(a)** plasmid that will be the \_\_\_\_\_\_\_\_\_\_\_\_ **(b)** plasmid cut at restriction site Pstl

**(c)** Source \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cut with same restriction enzyme as plasmid to **(d)**

(**e)** Recombinant DNA **(f)** unaffected \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

