**11 HUMAN BIOLOGY SKIN BACTERIA INVESTIGATION**

**PART ONE: PLANNING**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ /15

Washing hands is recommended as a way of reducing the spread of bacteria. Antiseptics are used to further reduce the risk of infection.

The purpose of this investigation is to determine the effect of hand washing on the bacterial population of the skin.

The presence of bacteria on the skin of the fingers can be demonstrated by pressing the fingers onto the surface of a thin layer of agar jelly sitting in a Petri dish (this is called a culture plate).

The agar contains nutrients for any micro-organisms that may grow on its surface.

After pressing fingers onto the agar, the plate can be incubated (kept in a warm place or in an incubator) for several days. Bacteria that were transferred from the fingers to the agar will reproduce and form colonies that can be seen with the naked eye. The more colonies, the more bacteria there were on the skin.

**The purpose of this investigation is to compare the bacteria present on unwashed hands to bacteria present on washed hands.**

Suggested materials – petri dish containing agar, Dettol antibacterial soap, sticky tape, incubator.

You will work in a small group to plan the investigation and then in a few weeks your group will carry out the investigation and individually you will write up a report.

**SAFETY NOTE: Once the bacteria is transferred onto the agar, the petri dish MUST be sealed shut with tape and not opened up again.**

**Hypothesis**

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(2 marks)

**Independent variable**

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**Dependent variable**

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**Controlled variables**

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**Material list**

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**Procedure (step by step written in past tense)** (3 marks)

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**Raw data table** (2 marks)

**State a number of ways you will reduce error in this investigation.** (3 marks)

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