11 HUMAN BIOLOGY

**Skin Bacteria Investigation**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 methods 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.

**Your task is to investigate the effectiveness of washing hands in a particular manner on removing bacteria.**

Suggested materials – petri dish containing agar, antibacterial handwash or soap, sticky tape, incubator, timer, camera.

You will work in a small group to plan the investigation and carry it out.

You will write the report and be marked individually.

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

**11 HUMAN BIOLOGY SKIN BACTERIA INVESTIGATION**

Scientific format: Clear headings, in order

1.5 paragraph spacing

Font size 12

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| Scientific format |  |  |  |  |  |  |
| Appropriate Title |  |  |  |  |  |  |
| Aim |  |  |  |  |  |  |
| Introduction |  |  |  |  |  |  |
| Hypothesis |  |  |  |  |  |  |
| Independent Variable. |  |  |  |  |  |  |
| Dependent Variable |  |  |  |  |  |  |
| Controlled Variables |  |  |  |  |  |  |
| Equipment |  |  |  |  |  |  |
| Method  (including control of variables) |  |  |  |  |  |  |
| Results: table |  |  |  |  |  |  |
| Results: graph |  |  |  |  |  |  |
| Results: observations / Diagrams |  |  |  |  |  |  |
| Discussion |  |  |  |  |  |  |
| Conclusion |  |  |  |  |  |  |
| References |  |  |  |  |  |  |
| Total | /42 | | | | | |

Teacher comments:

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