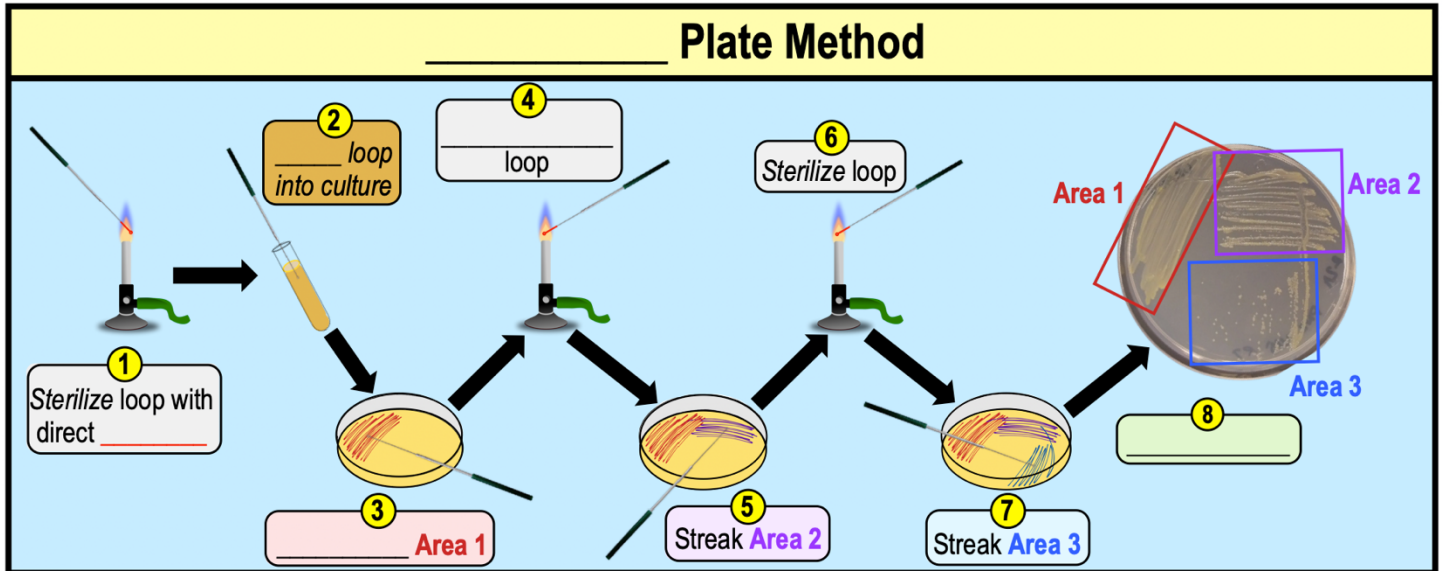CONCEPT: PLATING METHODS

Streak-Plate Method

● _____-plate method: most common & simplest way of *isolating* microbes in a laboratory.

    □ Mixed culture of cells transferred to a *Petri dish* & _____ across the plate using an *inoculator*.

    □ _____: metal or glass *loop* used to isolate & transfer colonies between growth media.

●The method is outlined in a series of _____ steps:

_____ **Plate Method**

PRACTICE: The streak-plate method is useful for:

    a) Quantify the number of cells in a culture.

    b) Measuring the metabolism of a cell.

    c) Isolating a specific species of bacteria.

    d) Determine cell shape of bacteria.

PRACTICE: In the streak-plate method, what is done with the inoculating loop after each streak?

    a) It is discarded and another one is used.

    b) It is re-introduced to the culture stock.

    c) It is disinfected with an antiseptic.

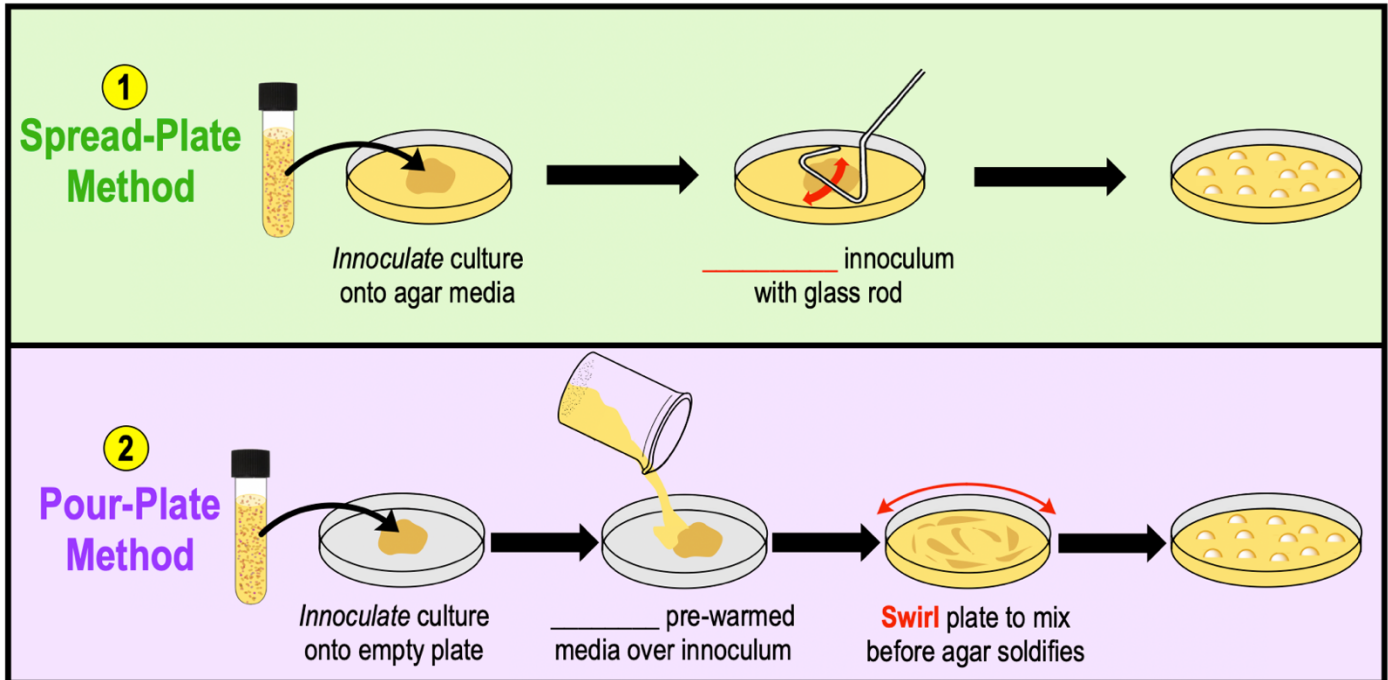   d) It is flamed until the loop is red with heat.

Spread-Plate Method vs. Pour-Plate Method

●When transferring a liquid culture to a plate, cultures can be added to the plate in one of _____ methods:

    1 **Spread-plate:** 0.1-0.2 mL *diluted* liquid culture is added to an agar plate & _____ with a *sterile* glass rod.

    2 _____**-plate:** 0.1-1.0 mL *diluted* liquid culture is poured on an agar plate _____ warmed (liquid) agar is.

        □ Warmed *liquid* agar media _____ *after* it is mixed with the sample.

1 **Spread-Plate Method**
Innoculate culture onto agar media
_____ innoculum with glass rod

2 **Pour-Plate Method**
Innoculate culture onto empty plate
_____ pre-warmed media over innoculum
Swirl plate to mix before agar soldifies

●Unlike the streak-plate method, these can NOT be used to isolate a species of bacteria from a mixed culture.

PRACTICE: The _____ method is used to isolate microbial colonies while the _____ method is used to count the number of viable microbial cells or colonies.

    a) Spread-plate method; Pour-plate method.

    b) Streak-plate method; Spread-plate method.

    c) Pour-plate method; Steak-plate method.

    d) Pour-plate method; Spread-plate method.

PRACTICE: Which plating method can be used to isolate a species of bacteria from a mixed culture of cells?

    a) Pour-plate method.   c) Spread-plate method.

    b) Streak-plate method.   d) All methods can be used.