A Sampling of Bacterial Colony Features

I. Terms used to describe colony morphology ::

WHOLE COLONY

round   irregular   filamentous   rhizoid

MARGIN

smooth, entire   rhizoid   irregular (erose)   lobate   filamentous

ELEVATION

convex   umbonate   plateau   flat

raised   raised, spreading edge   flat, raised margin   growth into medium
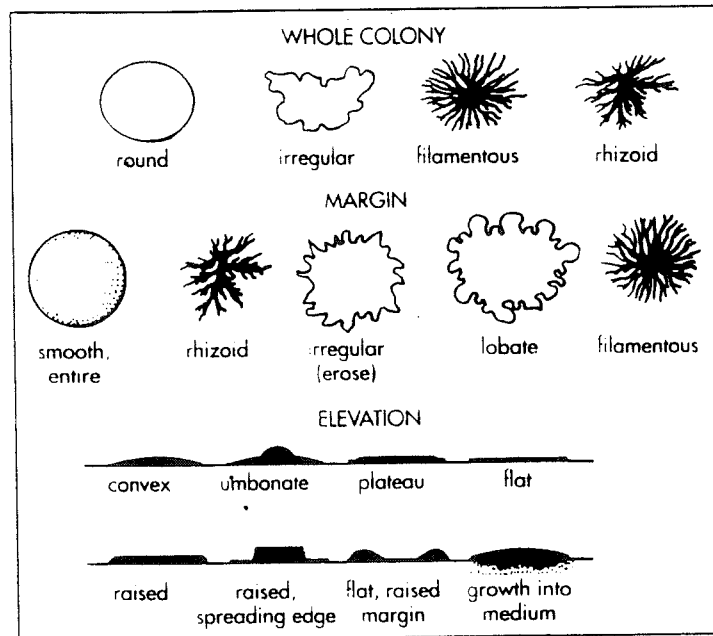
II. Other terms to describe colony morphology include ::

    1. Color (pink, grey)

    2. Surface Characteristics (dull or shiny)

    3. Consistency (dry, moist, buttery)

    4. Optical properties (opaque, translucent)

III. Measure colony diameters with a ruler and include the results in your description. Remember to use the metric system (mm, cm)

These terms are to help you distinguish growth patterns on your cultures and growth patterns may be helpful in determining characteristics of the organism. Distinguishing these growth patterns is a learned skill you will use to help you determine your unknown species. Taking note of all the growth patterns of the organisms you see this semester will help you later !
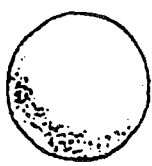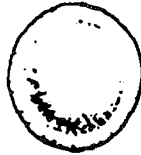
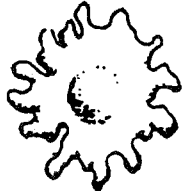Round   Scalloped   Raised   Wrinkled
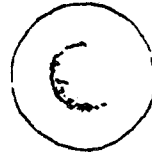
Concentric   Irregular   Filamentous   L-form
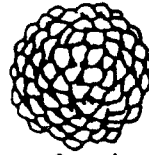
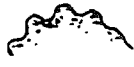Radiating   Filiform   Rhizoid   Complex

Configurations

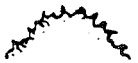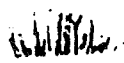Smooth   Wavy   Lobate   Flat   Raised   Convex
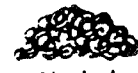
Irregular   Ciliate   Branching   Droplike   Umbonate   Hilly

Wooly   Threadlike   Hairlock   Ingrowing   Craterform
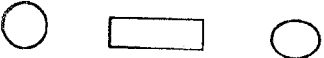
Colony Characteristics

CHARACTERISTICS AND TERMINOLOGY

Cell Morphology

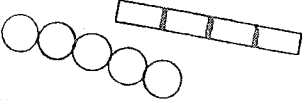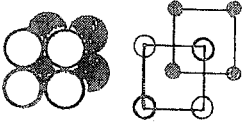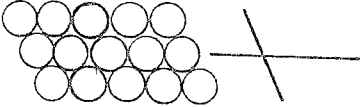| Shape of vegetative cells	Terminology	Description
	bacillary	rod or cylinder
	coccobacillary	rod with tapered ends; short
	coccus	spherical to ovoid may be flat on one side
	vibrio	comma or banana
	spirillum	rigid spiral; long wavelength
	spirochete	flexible spiral, short wavelength; axistyle

Cell Grouping

Cell Grouping	Terminology	Description
	singles	no detectable grouping
	pairs	two attached cells
	chains	more than two cells; one division plane
	tetrad	packages of four cells; two divsiion planes
	sarcina	packages of eigh eight cells; three division planes
	staph	irregular clusters; rows at acute angles

Bacterial Morphology

Bacterial morphology is a result of the cell wall. There are three basic shapes: **cocci** (sust, coccus) are spherical, **bacilli** (bacillus) are rod-shaped, and **spirilla** (spirillum) are spiral or cork-screw shaped. Spirochetes are considered a special type of spirillum. Spirochetes are flexible. Some of the more bizarre forms are waffle-shaped, spindle shaped, and square.

coccus   bacillus   spirillum
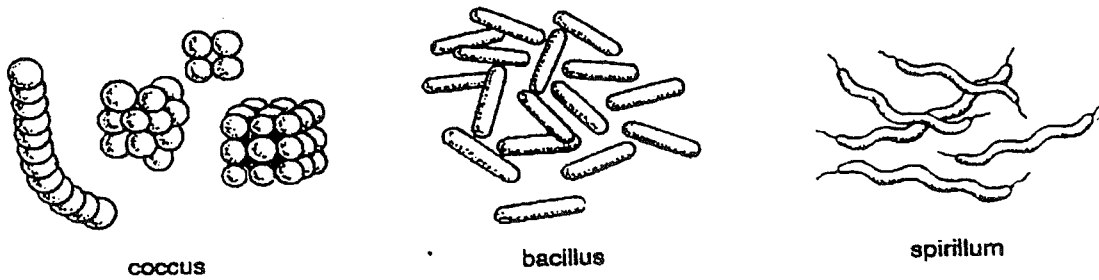
14.1 Basic bacterial morphological shapes

Draw & Label Slides Viewed

_____ _____ _____