Principles of Biomedical Science

Virtual Learning

9-12 / PLTW® PBS

May 14, 2020

Principles of Biomedical Science

9-12/PLTW® PBS
Lesson: May 14, 2020

Objective/Learning Target:

Students will be able to: learn how to identify and describe size, margins, elevation, and color to help in identification of bacteria. *(Reference: PLTW®* 5.1.3 Isolating Bacteria)

Let’s Get Started (Bell Ringer):

Watch the following video:

Bacterial Colony Description

Read over the following article:

Science Buddies Interpreting Plates

Lesson/Activity:

Start by going back to Science Buddies Interpreting Plates
And taking notes over the following concepts about characteristics of bacteria colonies in your lab journal, notebook, or on a seperate piece of paper.

1. Form
2. Elevation
3. Margin
4. Surface
5. Opacity

Answers:

1. **Form** - What is the basic shape of the colony? For example, circular, filamentous, etc.
2. **Elevation** - What is the cross sectional shape of the colony? Turn the Petri dish on end.
3. **Margin** - What is the magnified shape of the edge of the colony?
4. **Surface** - How does the surface of the colony appear? For example, smooth, glistening, rough, dull (opposite of glistening), rugose (wrinkled), etc.
5. **Opacity** - For example, transparent (clear), opaque, translucent (almost clear, but distorted vision, like looking through frosted glass), iridescent (changing colors in reflected light), etc.

Lesson/Activity continued:

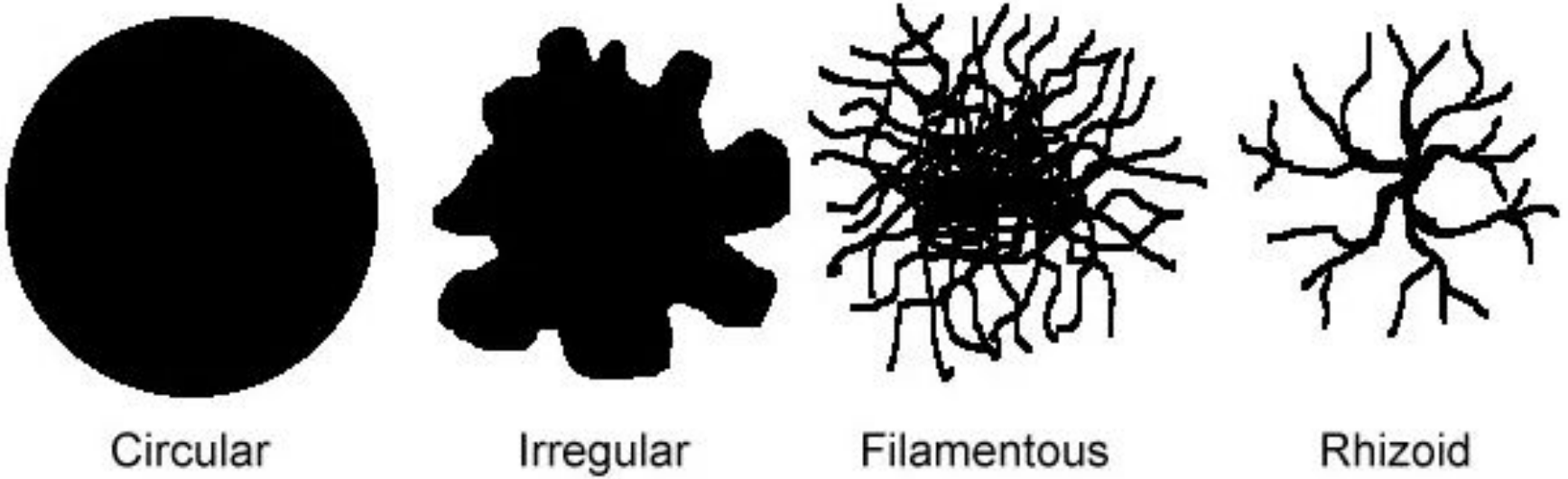
Start by going to MicrobeOnline and drawing examples of the four major types of form that bacterial colonies tend to take shape like. This can be done in your lab journal, notebook, or on a seperate piece of paper.

The 4 major Forms are:

- Circular
- Irregular
- Filamentous
- Rhizoid

Answers:

Major Forms of Bacterial Colonies



Practice:

Start by going to MicrobeOnline and Create your own set of vocabulary flashcards which include the five major types of Elevations and Margins that bacterial colonies tend to take shape like. This can be done in your lab journal, notebook, or on a seperate piece of paper.

The 5 major Elevations are:

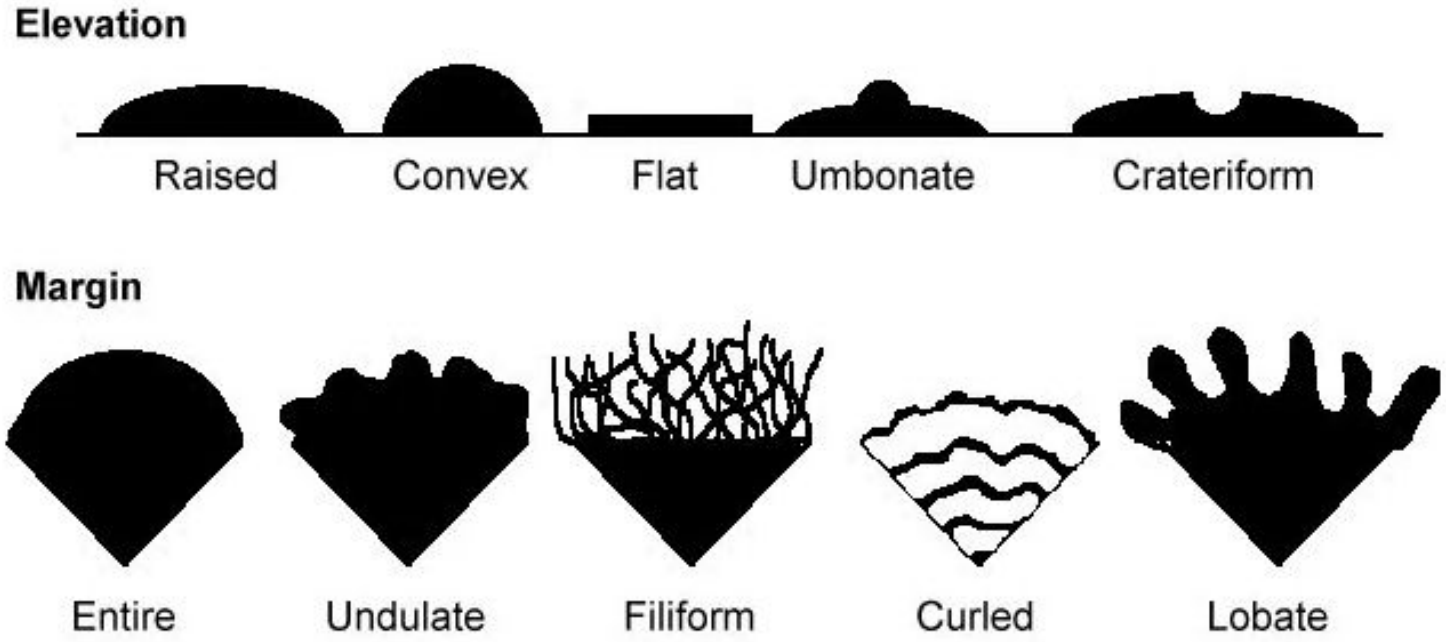
Raised Convex Flat Umbonate Crateriform

The 5 Major Margins are:

Entire Undulate Filiform Curled Lobate

Answers:

Five Basic forms of Bacteria Elevation & Margin



Additional Practice:

Lets see what you can remember by taking the following quiz.

Colony Morphology Quiz

Answers:

Answers given after quiz