

BACTERIA

1. Define a bacterium

2. Name some bacteria. What are their general forms?

3. Match the words and their definitions

rigid	to gradually become narrower toward one end
blunt	a thin straight piece or bar of material
to taper	having an obtuse, thick, or dull edge or point; rounded; not sharp:
pointed	with a point at the end
shape	the external form of anything
rod	- a series of connected spirals or concentric rings formed by gathering or winding - an individual spiral or ring within such a series
corkscrew	egg-shaped
to corkscrew	completely stiff, not able to bend
ovoid /'oʊvɔɪd/	to move or cause to move in a spiral or zigzag course
coil	a device for pulling corks
<u>Clue:</u> <i>a rigid strip of metal</i> <i>a blunt pencil</i> <i>tapering logs like giant carrots with their tips chopped off</i> <i>a pointed nose, chin</i> <i>gold in the shape of gold bricks</i> <i>in all shapes and sizes - všech tvarů a velikostí</i> <i>some partly coiled or even tightly coiled species evolved</i>	

4. Watch the video

a. complete the table

shape	type of bacteria (pl)	type of bacteria (sg)	examples of bacteria	disease
	cocci			infections characterized by boils (vředy)
			pneumococcus	
				gonorhea (kapavka)
	bacilli	bacillus	E-coli	
		spirillum	triplonema pallidum	
	mycoplasma	lack a cell wall		

b. complete the text

Another way of distinguishing bacteria is a _____ technique that divides bacteria into two _____ groups based on chemical differences in their cell walls: _____ bacteria retain the dark violet colour of the stain after the _____ treatment while gram-negative cells lose the stain.

Based on: <http://www.britannica.com/EBchecked/topic-video/560376/83719/There-are-many-different-species-of-bacteria> Accessed: Nov.17, 2009

5. Check the pronunciation

sg.		pl.		shape
bacterium	[bæk'tɪərɪəm]	bacteria		
spirillum	/spɑɪ'rɪləm; 'spɪrɪl əm /	spirilla	/'rɪlə/	
bacillus		bacilli	-'sɪləɪ/	
diplobacillus	/,dɪpləʊbə'sɪləs/	diplobacilli		
coccus		cocci	/'kɒksaɪ, - si/	
diplococcus	/,dɪplə'kɒkəs/			
streptococcus	/,streptə'kɒkəs/			
Staphylococcus	/,stæfələ'kɒkəs/			
gonococcus	/,gɒnə'kɒkəs/			
pneumococcus	/,numə'kɒkəs, ,nyu-/			
flagellum	/flə'dʒɛləm/	flagella	/flə'dʒɛlə/	
coccobacillus	/,kɒkəʊbə'sɪləs/			
spirochaete// spirochete	/'spɑɪrə,kit/	spirochaetes// spirochetes		
actinomycete	/æk,tɪnəʊ'maɪsɪt, -maɪ'sɪt, ,æk tənəʊ-/			
hypha	/'haɪfə/	-phae	/'fi/	
clostridium	/klɒ'strɪdɪəm/			
vibrio	/'vɪbrɪ,əʊ/			
neisseria	/naɪ'sɪəriə/			
sarcina	/'sɑrsənə/	sarcinas// sarcinae	// /-,ni/	
filamentous <i>vláknitý</i>	/,fɪlə'mɛntəs/			
corkscrew	/'kɔrk,skru/			
palisade	/,pælə'seɪd/			
tetrad	/,tɛ træd/			

yaws (frambézie) - an infectious, nonvenereal tropical disease, primarily of children, characterized by raspberry-like eruptions of the skin and caused by a spirochete, *Treponema pertenuis*, that is closely related to the agent of syphilis.

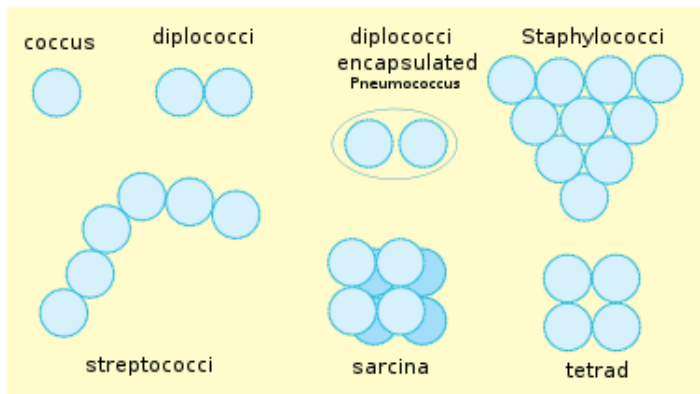
5. Identify the bacteria in the picture

diplococci
tetrad
palisades
helical form
enlarged rod
Vibrio

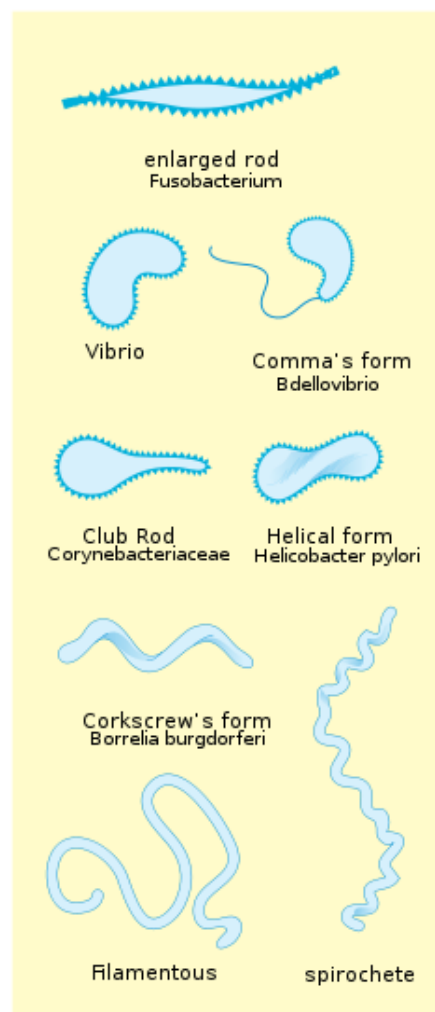
coccobacillus
bacillus
diplobacilli
Staphylococci
Streptobacilli
corkscrew's form

filamentous bacterium
spirochete
streptococci
coccus

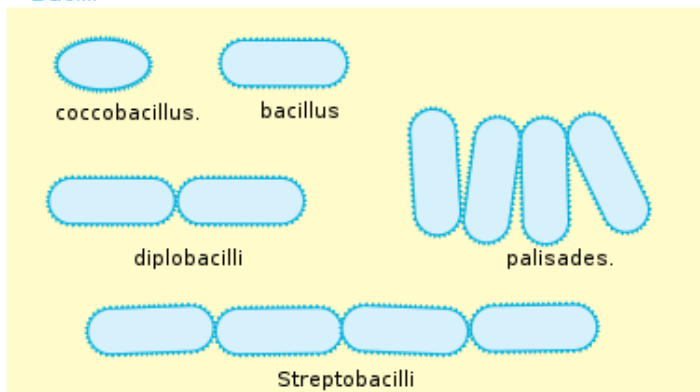
Cocci



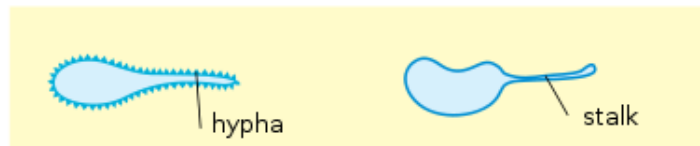
Others



Bacilli



Budding and appendaged bacteria



Based on: <http://commons.wikimedia.org/wiki/Category:Bacteria>

6. Go back to Task 4 (table) and complete the shapes of the bacteria

7. REVISION

a. Complete the text

Shapes of bacteria

The shape of bacterial _____ is of fundamental importance in the classification and identification of _____. The majority of bacterial cells come in three basic shapes: _____, _____, or _____. However, they display a remarkable variety of forms when viewed microscopically:

- Round (spherical) bacteria are referred to as _____.
- Elongated or _____ cells are known as bacilli.
- Ovoid cells are something in between cocci and bacilli. These are known as _____.
- _____-shaped cells can be one of two types: either rigid called spirilla or flexible called _____. Spiral-shaped bacteria are distinguished by their length, the number and size of the spirals, and direction of the coil. Short segments or incomplete spirals are common, as the comma-shaped _____. The spirochetes of syphilis are typical spiral _____. _____ caused by spirochaetes include the following: syphilis, yaws, leptosporosis, and Lyme disease.

Adapted from: <http://www.daviddarling.info/encyclopedia/B/bacteria.html> Accessed: Nov.14, 2009

b. Grammar – irregular plural of Latin and Greek words.

Latin and Greek words often form the plural by the same endings as in their original languages. Look at the examples and put the words into an appropriate column.

Pronounce them correctly.

species, formula, synthesis, coccus, phenomenon, alga, bacterium, bacillus, thesis, vertebra, fungus, spirillum, crisis

sg.	pl.	sg.	pl.	sg. a	pl.
a /ə/	ae /i:/	sg. /əs/	i /ai/	um /əm/	a /ə/
larva	larvae	nucleus	nuclei	medium	media

sg.	pl.	sg.	pl.	sg.	pl.
ies /i:z/	ies /i:z/	on /ən/	a /ə/	is /is/	es /i:z/
series	series	criterion	criteria	analysis	analyses

Source: Milada Pavlovová, handout - Bacteria, 1999