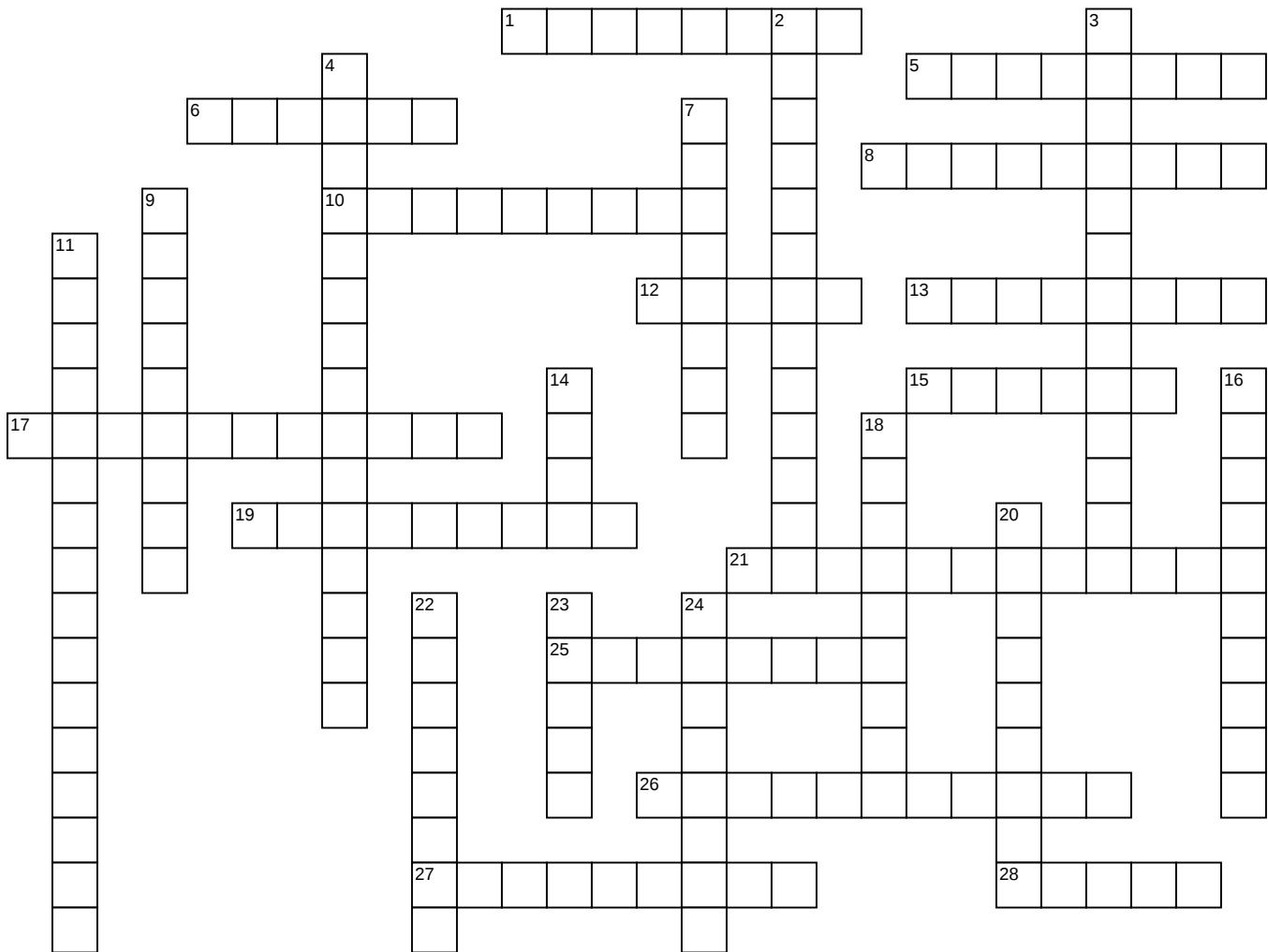


Introduction and Microscopy 5

Name _____ Section _____



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ACROSS

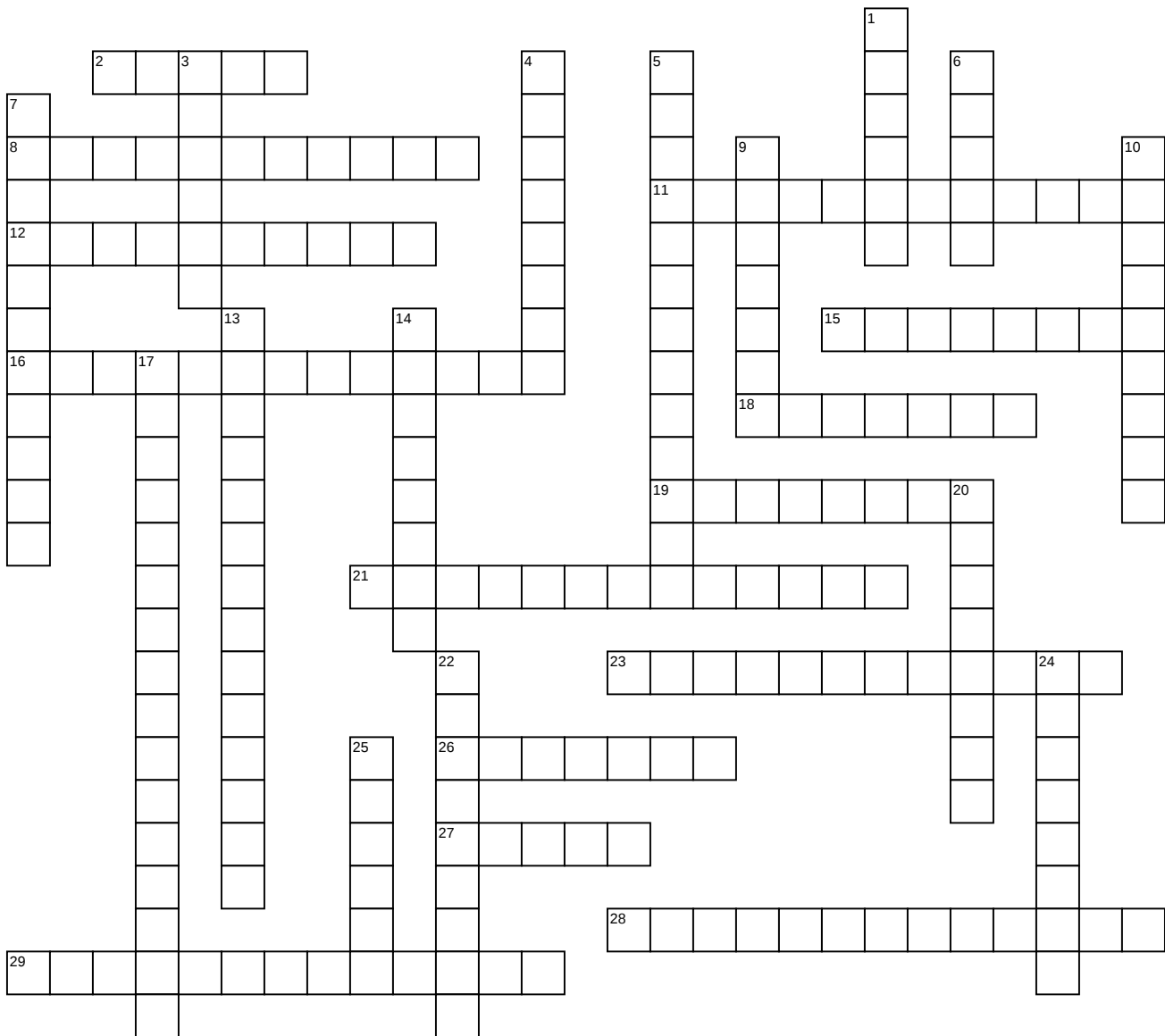
- 1 Tie back _____
- 5 Come to lab _____
- 6 #1 lab priority
- 8 Focuses light onto specimen
- 10 Another name for the 40X objective
- 12 Objective magnification multiplied by ocular magnification = _____ magnification.
- 13 Object being viewed
- 15 Eyepiece
- 17 Produces light
- 19 _____ before and after lab.
- 21 100x lens uses _____
- 25 Changes light intensity
- 26 Large knob used to focus at low magnification
- 27 Holds objective lenses
- 28 Platform on microscope for slide

DOWN

- 2 Controls the amount of light and area of illumination.
- 3 Increase in apparent size
- 4 Moves slide
- 7 All lenses focus to same point
- 9 Having two eyepieces
- 11 Brand of disinfectant in the lab
- 14 _____ the lab manual before class
- 16 Factor in determining resolving power
- 18 Lens responsible for primary magnification
- 20 Small knob used to focus at sharpen focus and at high magnification
- 22 Another name for the 4X objective
- 23 Do not eat, _____, smoke, etc. in the laboratory
- 24 Another name for the 10X objective

Aseptic Transfers, Smears, and Staining 5

Name _____ Section _____



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ACROSS

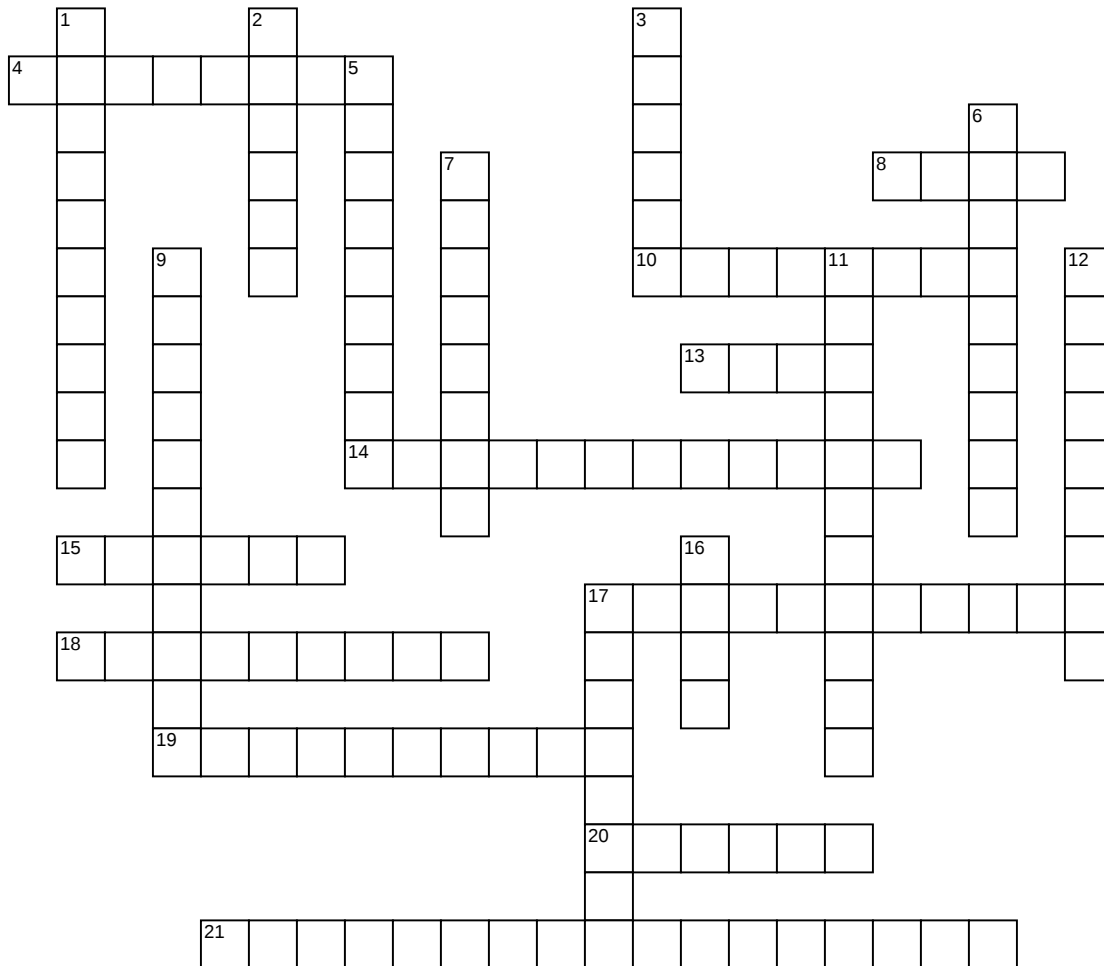
- 2 Dye that is positively charged
- 8 Colored portion of a dye
- 11 Adhere bacteria to the slide using a flame
- 12 Critical step in differential staining
- 15 Paper used to blot slides
- 16 Primary dye in Gram stain
- 18 Decolorizer used for Gram stain
- 19 Red counterstain
- 21 Dye used in simple stain
- 23 Stain that distinguishes two types of cells
- 26 Technique to prevent contamination of bacterial samples during transfer
- 27 Prepared prior to staining
- 28 Primary dye used for Acid-Fast stain
- 29 Bacteria with a waxy coat

DOWN

- 1 Dye that is negatively charged
- 3 _____ staining uses one basic dye
- 4 Property produced by staining
- 5 Another name for the Acid-Fast staining procedure
- 6 Acid-Fast and Endospore stains require the use of _____ heat to drive the primary stain into the cell or spore wall
- 7 Decolorized for Acid-Fast stain
- 9 Gelatinous matrix around a cell
- 10 Survival structure
- 13 Primary stain for endospores
- 14 An acidic dye used for negative and capsule stains
- 17 Another name for the Endospore staining procedure
- 20 _____ staining colors the background
- 22 Stain results based on cell wall structure
- 24 Stain used for mycobacteria
- 25 Mordant for Gram stain

Plating and Exposures 5

Name _____ Section _____



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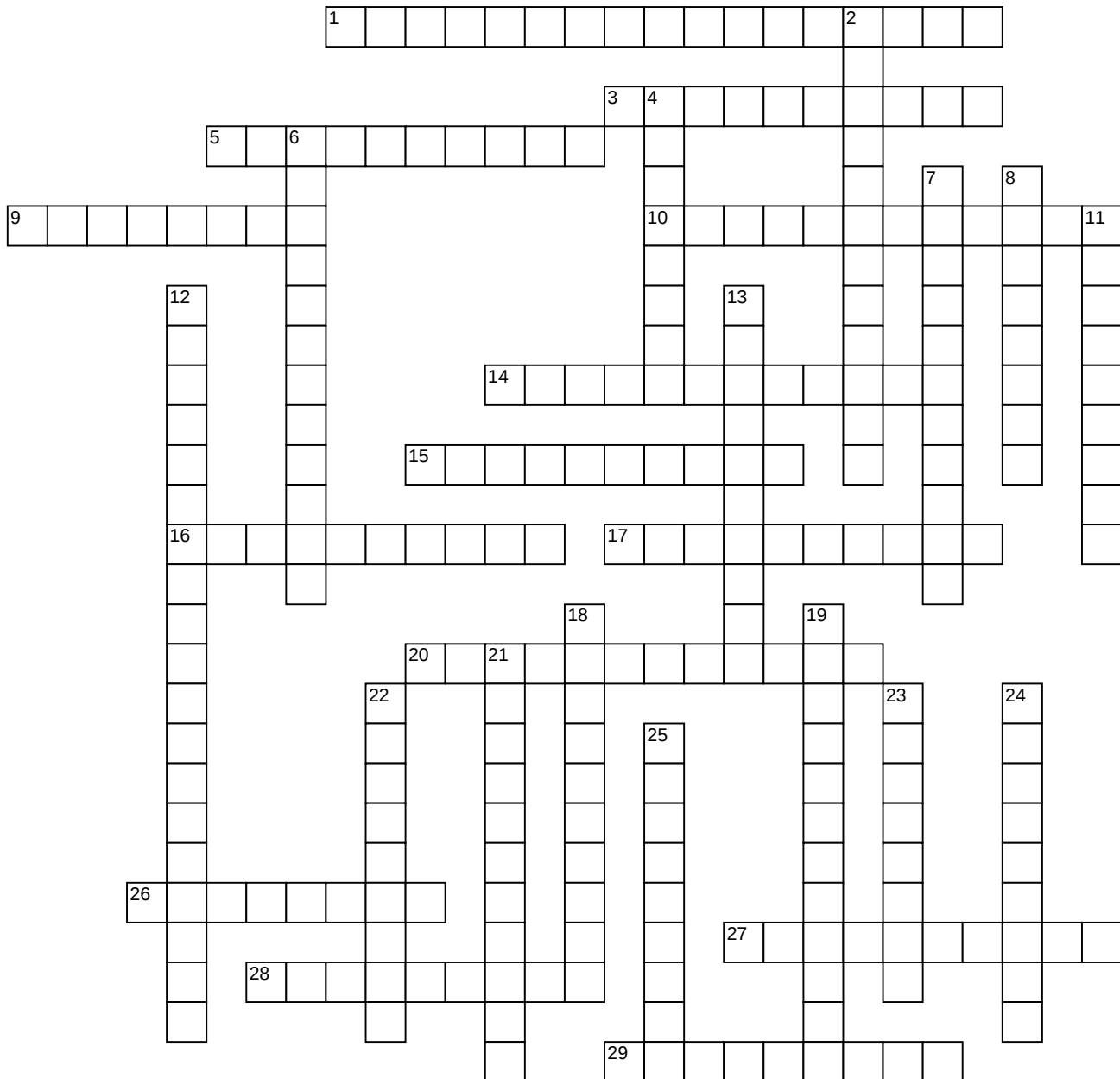
- 4 Colony with wavy edge
- 8 Shape of colony
- 10 Allowing microbes to land on agar
- 13 Solidifying agent
- 14 Commonly used bacterial growth medium
- 15 Visible clone of a single cell
- 17 Transfer of live cells onto/into a growth medium
- 18 Technique of mixing bacteria with liquid agar
- 19 Where microbes are found
- 20 To hold the medium at a lower temperature so it is still liquid but does not kill the bacteria
- 21 Agar for growing molds

DOWN

- 1 Allowing microbes time to grow
- 2 Edge of colony
- 3 Colony with smooth edge
- 5 Growth from surface
- 6 Colony that is not circular
- 7 Colony with bump in the middle
- 9 Growth of one type of bacterium
- 11 Most common technique to isolate pure cultures
- 12 Inoculating for isolation technique
- 16 Exposure with greatest number of microbes
- 17 Culture plates are always incubated in the _____ position.

Growth and Metabolism 5

Name _____ Date _____



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ACROSS

- 1 _____ system involves RedOx reactions to move hydrogens ions.
- 3 Reactions splitting glucose
- 5 Composed of phosphate, pentose, and nitrogenous base
- 9 End product of glycolysis
- 10 Tolerates cold, but grow best at medium

temperatures

- 14 Anaerobic pathways
- 15 Site where regulatory molecule binds enzyme
- 16 Energy lowered by enzymes
- 17 All chemical reactions in cells
- 20 Powerhouses of cells
- 26 Result of a reaction
- 27 Degradation reactions
- 28 Grows at medium temperatures
- 29 Synthesis reactions

DOWN

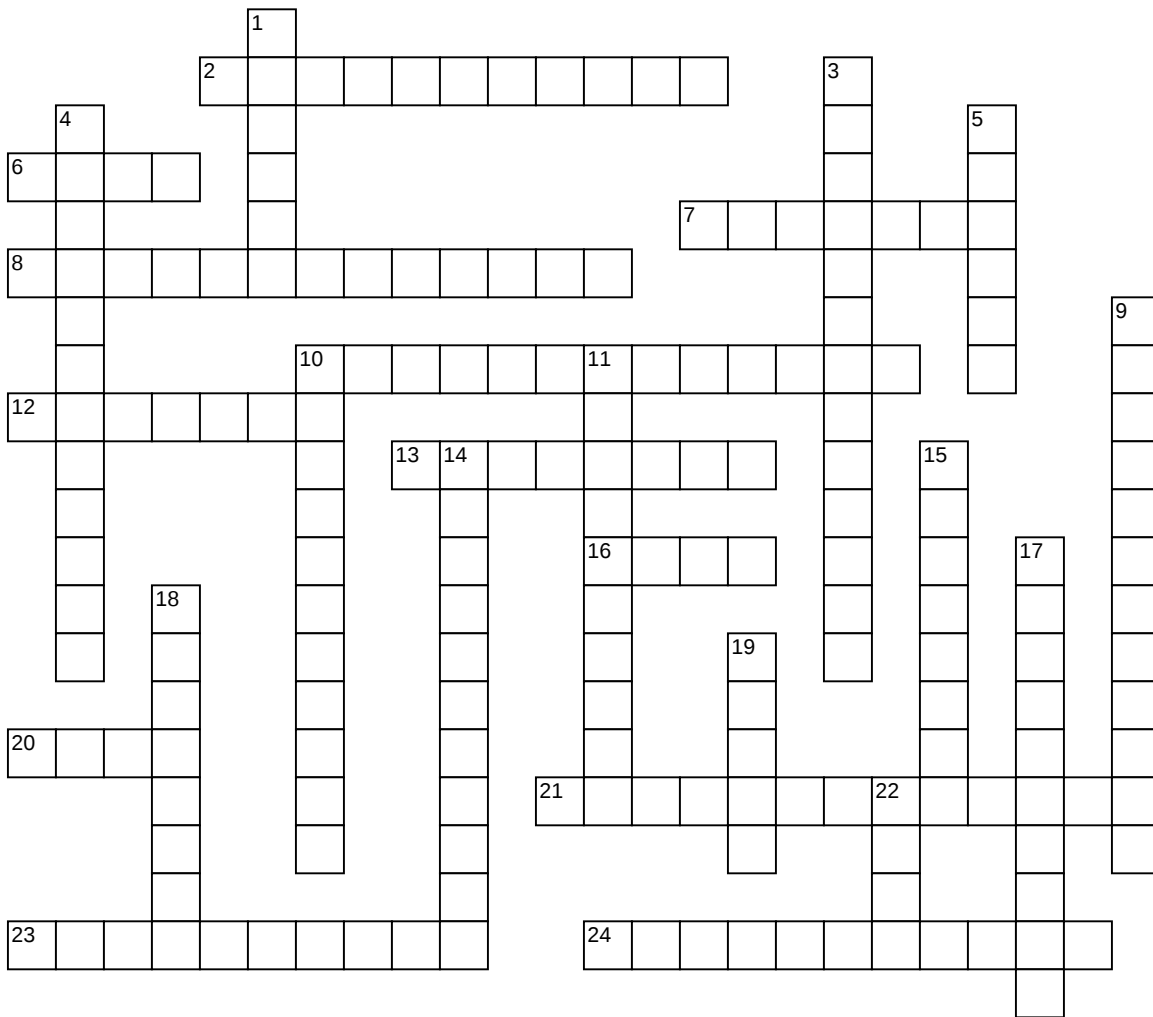
- 2 Grows best at cool temperatures
- 4 Adjustment period of growth curve
- 6 Proton gradient that drives ATP synthesis
- 7 Enzyme that makes ATP
- 8 Period of rapid growth
- 11 Prefers salty conditions
- 12 Grows better with

oxygen than without

- 13 Cycle for oxidizing carbohydrates
- 18 Place where enzyme binds to substrate
- 19 Media that produces varied appearance
- 21 Grows at high temperature
- 22 Loss of an electron
- 23 Cannot grow in the presence of oxygen
- 24 Media with inhibitors
- 25 Gain of an electron

Genetics 5

Name _____ Date _____



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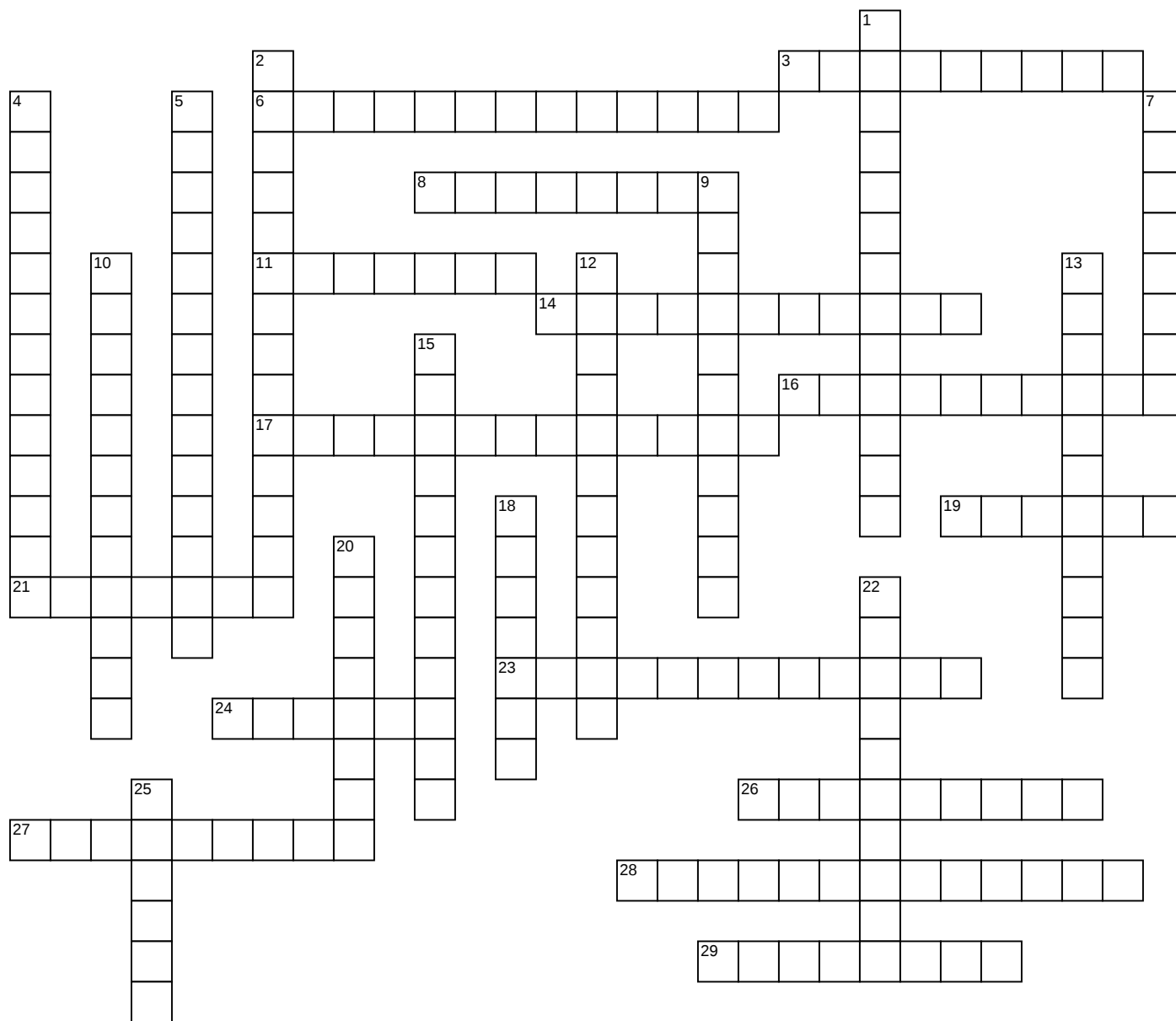
- 2 Making protein
- 6 Carries amino acid to ribosome
- 7 Pairs with thymine
- 8 Enzyme that makes DNA from original DNA
- 10 Caused by UV light
- 12 Pairs with cytosine
- 13 Where the polymerase binds to the DNA strand to make RNA
- 16 All the DNA necessary for a specific function
- 20 Makes up part of the ribosome
- 21 Enzyme that makes RNA from DNA
- 23 Movable gene
- 24 Bacterial gene transfer using a plasmid

DOWN

- 1 RNA base that pairs with adenine
- 3 Making RNA from DNA
- 4 Genes passed by viruses
- 5 Group of genes regulated together
- 9 The two DNA strands have _____ orientation
- 10 Ending macromolecular synthesis
- 11 Extending a polypeptide chain
- 14 Copying DNA
- 15 Organelle where polypeptide is made
- 17 Starting macromolecular synthesis
- 18 Change in DNA sequence
- 19 Triplet bases that determine amino acid
- 22 Has codons for amino acid sequence

Bacteria 5

Name _____ Section _____



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ACROSS

- 3 Fluid portion inside cell
- 6 Flagella in a clump
- 8 Common means of locomotion
- 11 Ancient ones
- 14 Bacterial cells in pairs
- 16 Storage structures
- 17 Method of bacterial division
- 19 Group of 4 spherical cells

- 21 Tightly bound gelatinous layer
- 23 Single flagellum
- 24 Curved bacteria
- 26 Helical bacterium
- 27 Survival structure made by some bacteria
- 28 Component of almost all bacterial cell walls in Domain Bacteria
- 29 Bacterial structure with DNA

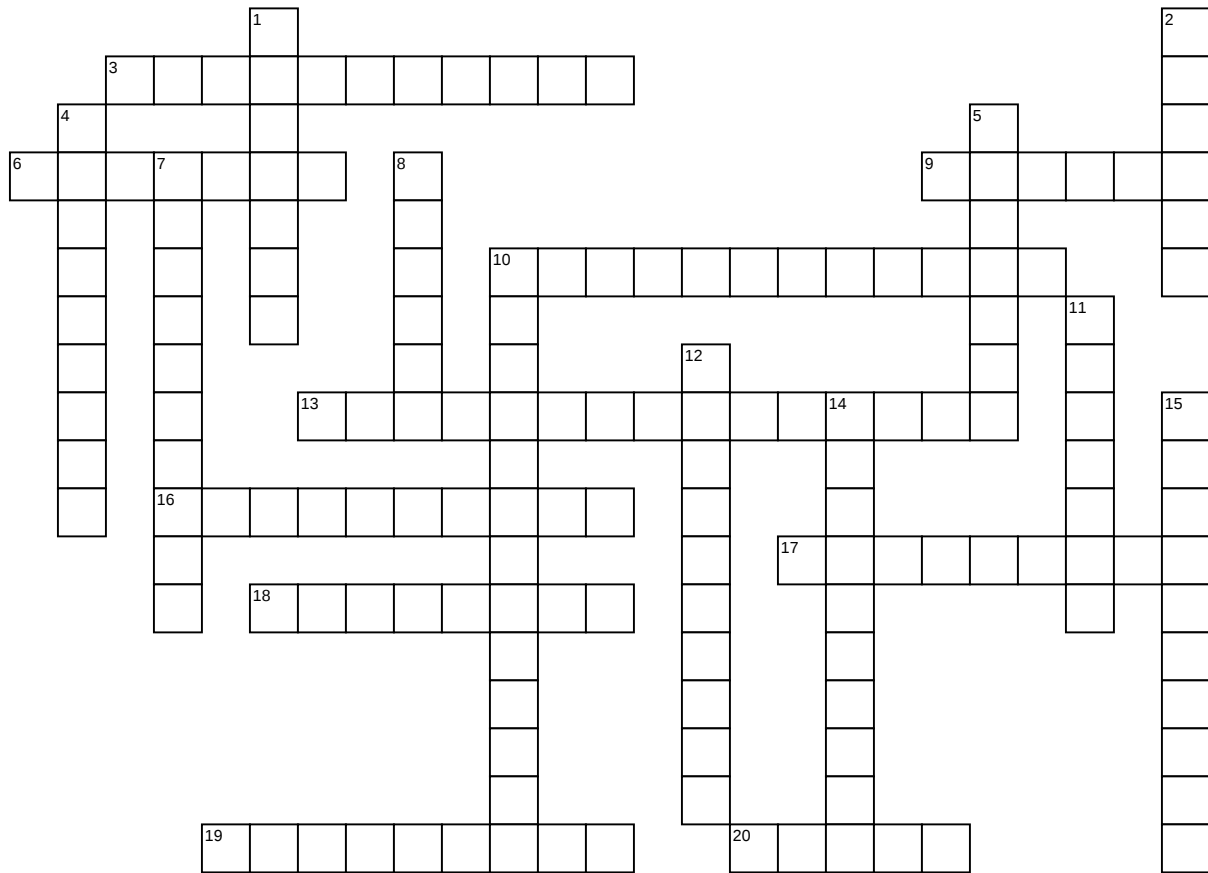
DOWN

- 1 Chain of spherical cells
- 2 Boundary layer of any cell
- 4 Get carbon from organic compounds
- 5 Irregular cluster of spherical cells
- 7 Rod-shaped bacterium
- 9 Make organic compounds from CO₂
- 10 Energy from light

- 12 Basis of molecular taxonomy
- 13 More than one bacterial shape due to environmental conditions and/or stage in life cycle
- 15 Flagella all around
- 18 Extrachromosomal DNA
- 20 Attachment pili
- 22 Cell without a true nucleus
- 25 Spherical bacterium

Viruses 5

Name _____ Section _____



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ACROSS

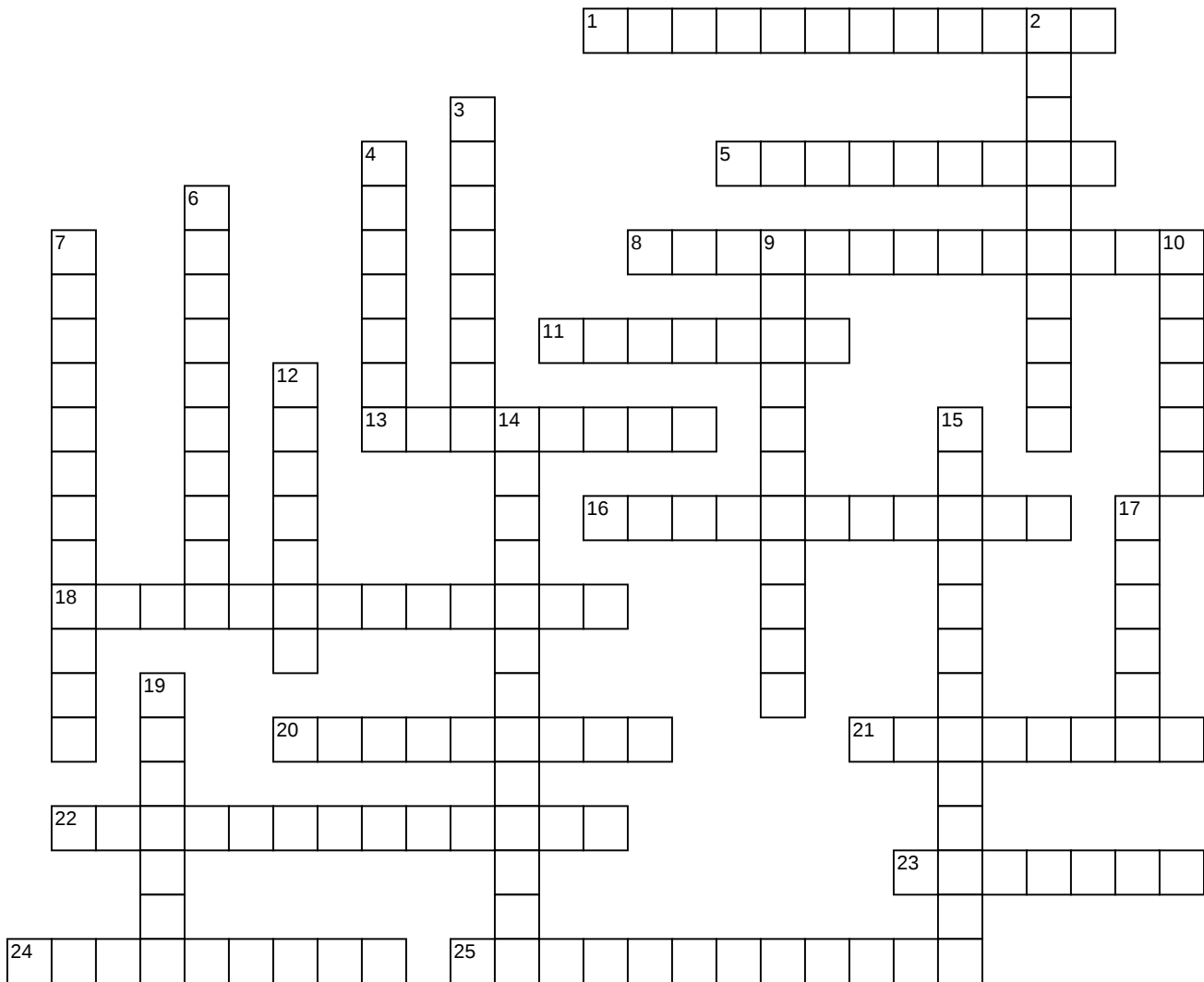
- 3 Viral nucleic acid gets into cell
- 6 Combination of viral structures
- 9 Virus that often becomes latent in nerves and can cause recurring painful small blisters and sores.
- 10 Viral proteins and nucleic acid are made
- 13 Can be DNA or RNA (2wds)
- 16 Virus with reverse transcriptase
- 17 Caused the 1918 and 2009 pandemics
- 18 Membrane around some viruses
- 19 Protein subunit of capsid
- 20 Virus ruptures cell

DOWN

- 1 Virus escapes from cell
- 2 Protein shell of a virus
- 4 Causes highly contagious stomach flu
- 5 Spiral viral structure
- 7 Many sided viral structure
- 8 A complete virus particle
- 10 virus that only infects bacteria
- 11 Virus leaves without rupturing the cell
- 12 Viral particles assemble inside a cell
- 14 RNA virus that causes most colds
- 15 Virus adheres to a cell

Fungi and Protozoa 5

Name _____ Date _____



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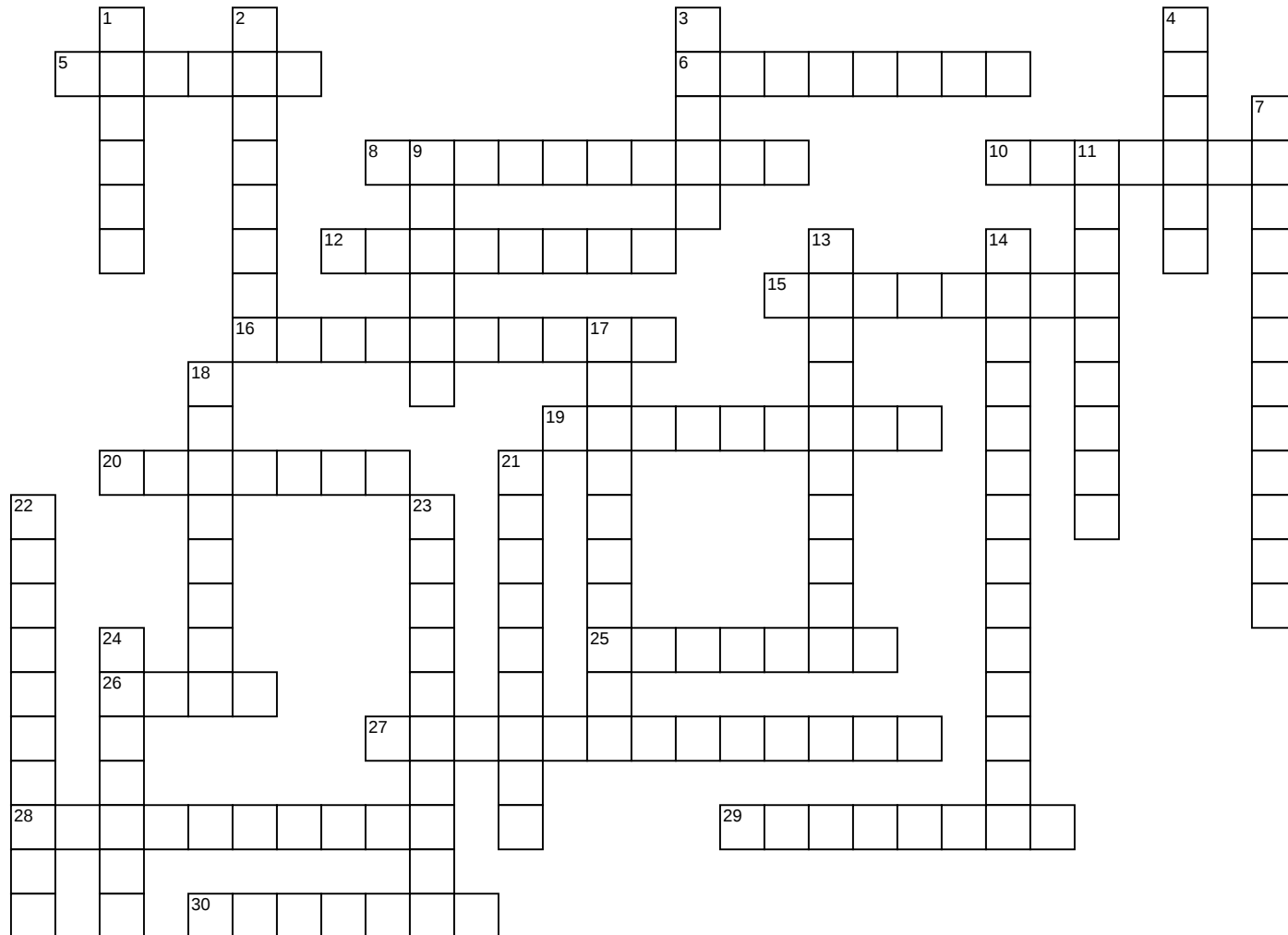
- 1 Fungi in plant roots
- 5 Cytoplasmic extension used for locomotion and capturing prey
- 8 Baker's and brewer's yeast
- 11 Symbiosis of fungi and algae
- 13 Fungus without known sexual stage
- 16 Antibiotic producer
- 18 Carbohydrate storage organelle in Euglena
- 20 Fungus with known sexual stage
- 21 Protozoa with many short hair-like projections
- 22 ATP producing organelle
- 23 Common pathogenic yeast.
- 24 They move by pseudopods
- 25 Location of genes being used in Ciliates

DOWN

- 2 Sac fungi
- 3 Motility filaments
- 4 Gastroenteritis-causing flagellate
- 6 Conjugation fungi
- 7 Decomposes dead material to get energy
- 9 _____ vacuole collects water in certain protozoa
- 10 Light sensing organelle
- 12 Fungi and Protozoa belong to this Domain.
- 14 Parasitic fungi
- 15 Nonmotile parasitic protozoa
- 17 Fungal filaments
- 19 Fungal filaments with crosswalls.

Biochemical Tests 5

Name _____ Section _____



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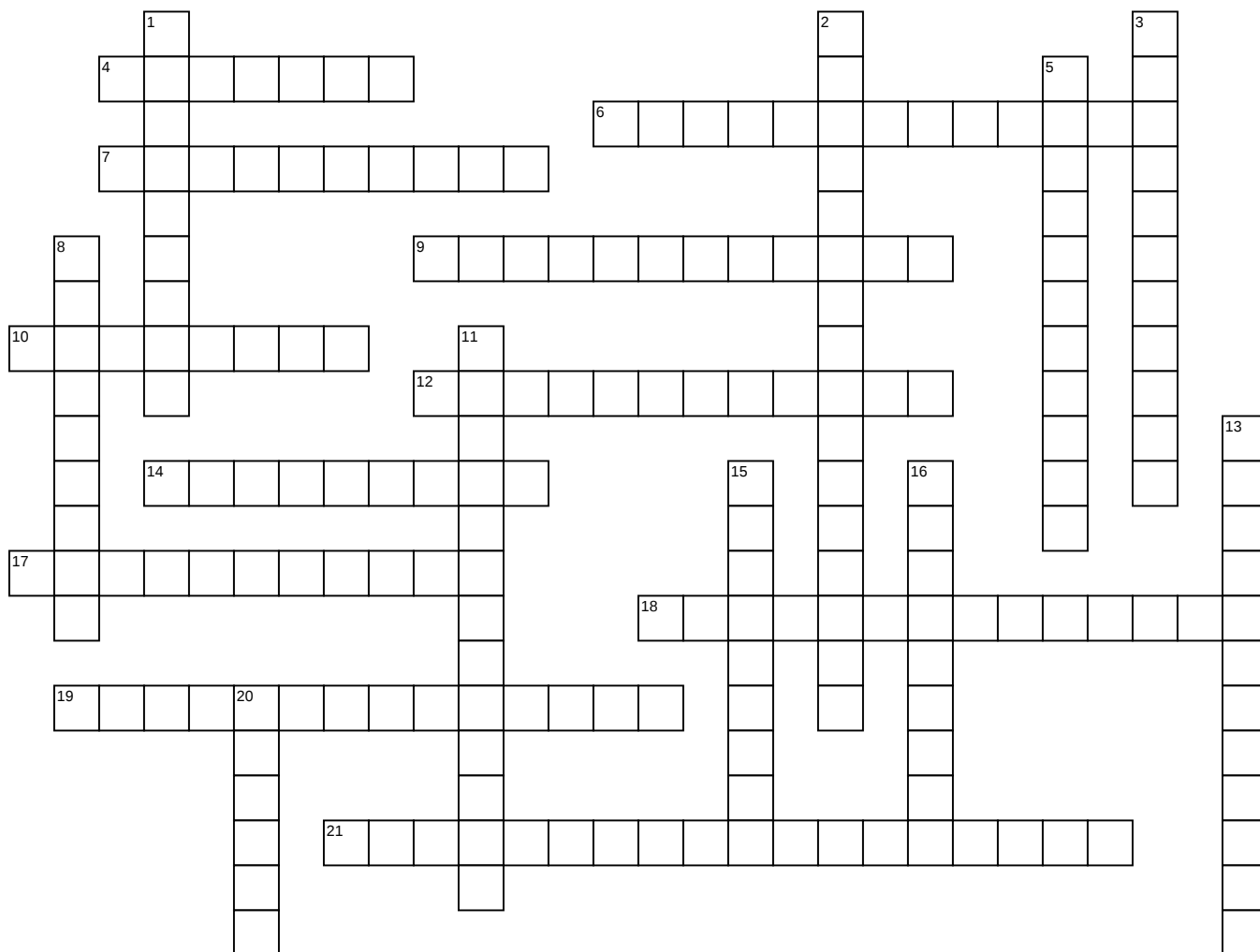
- 5 Inverted tube to trap gas
- 6 Bacterial movement
- 8 Test use of milk nutrients (2wds)
- 10 Milk sugar
- 12 Bacteria settled to bottom of broth
- 15 Another name for glucose
- 16 Catalysts secreted by the cell
- 19 pH indicator in sugar fermentation tubes
- 20 Hydrolyzed collagen
- 25 Enzyme that hydrolyzes starch
- 26 Product of amino acid degradation
- 27 Common liquid general growth medium
- 28 Tests for lipase
- 29 Smooth growth on slant
- 30 Possible sole carbon source

DOWN

- 1 Cloudy growth in broth
- 2 Breaks down hydrogen peroxide
- 3 Group of 4 tests
- 4 Produced from tryptophan
- 7 Anaerobic metabolism
- 9 Reagent added to detect starch hydrolysis
- 11 Produces clear zones in skim milk agar
- 13 Sticky surface growth on broth
- 14 Test for acetoin
- 17 Spiky growth on slant
- 18 Crusty growth on broth
- 21 pH in indicator; red when acidic
- 22 Breaking macromolecules with addition of water
- 23 Snowy appearance in broth culture
- 24 Turns SIM black

Differential Media 5

Name _____ Section _____



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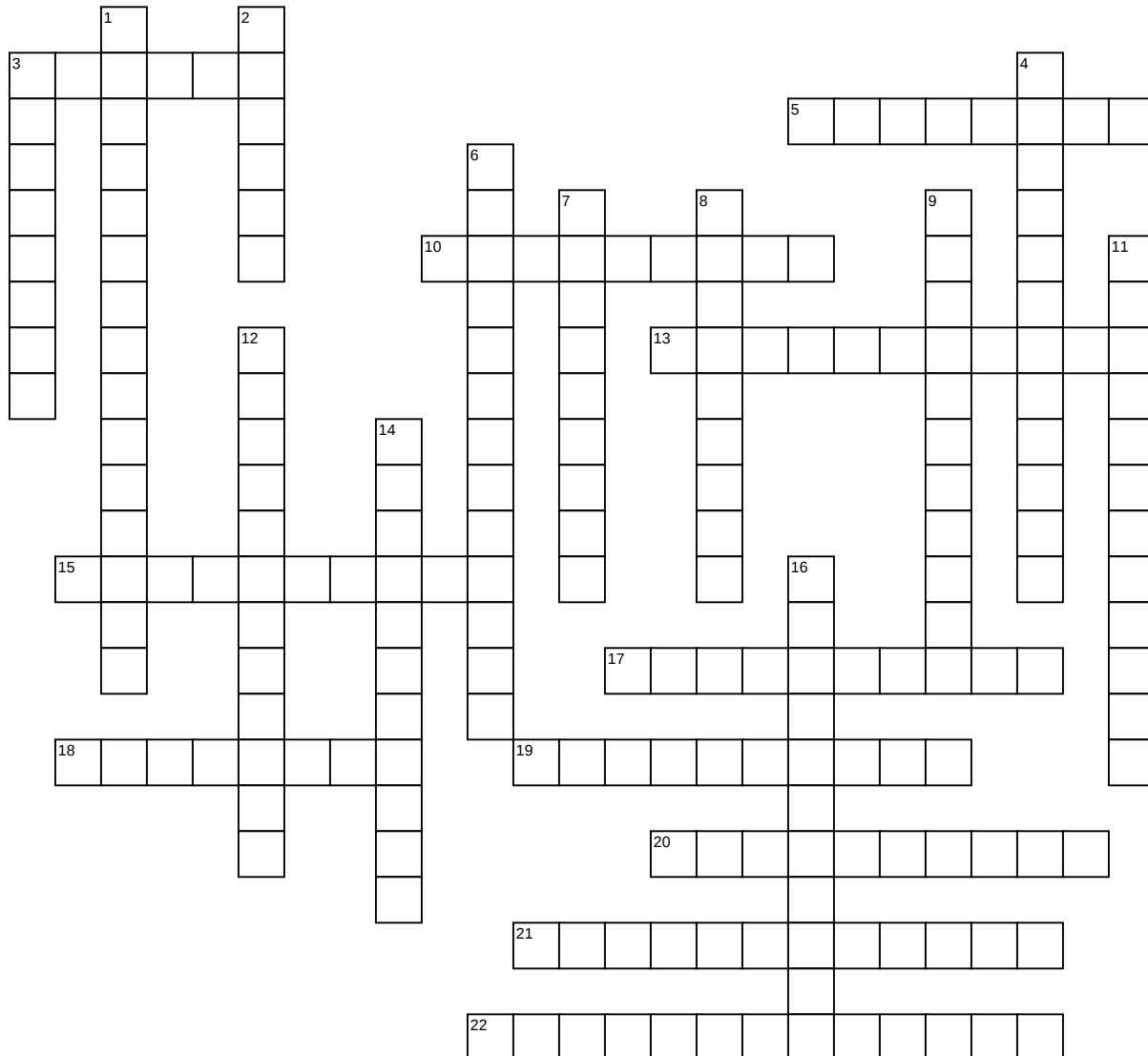
- 4 Microbes that require oxygen
- 6 Oxygen indicator in anaerobic jar
- 7 Test medium for proteases
- 9 Agar used to identify *S. aureus*
- 10 Indicator of fecal contamination
- 12 Don't use oxygen, but oxygen doesn't harm bacterial growth
- 14 Used to collect specimen for MAN
- 17 _____ anaerobes can ferment but grow better with oxygen
- 18 Microbe that prefers just a bit of oxygen
- 19 Medium that removes oxygen
- 21 Agar medium used to identify coliforms

DOWN

- 1 Toxin that destroys/damages RBCs
- 2 Cannot grow in presence of oxygen
- 3 Used to collect specimen for BA
- 5 These bacteria produce bad odors as they break down proteins.
- 8 Medium for hemolytic reactions
- 11 Complete breakdown of blood cells
- 13 Colonies appear varied (usually by color) with this type of medium
- 15 Agar that uses bile salts
- 16 Medium that inhibits growth of some microbes
- 20 Packet used to remove oxygen in anaerobic jar

Physical and Antimicrobial Agents 5

Name _____ Section _____



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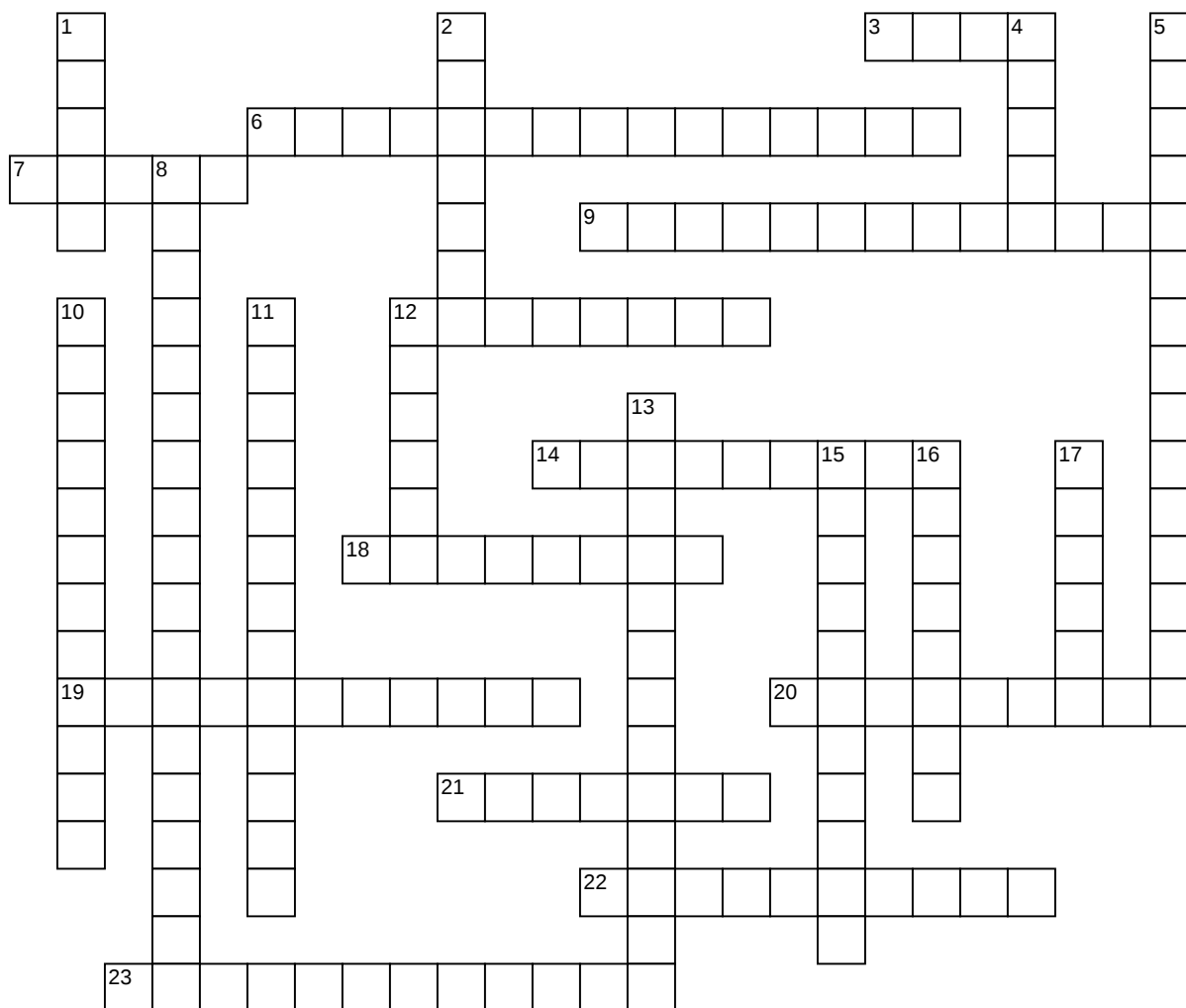
- 3 Used by Dr. Lister; standard for evaluating efficacy of antimicrobial agents
- 5 Iodine-based clinical antiseptic
- 10 Microbe not killed by antibiotic
- 13 Antibiotics are _____ toxic
- 15 Antibiotic from fungus
- 17 Medium for testing cold tolerance
- 18 Agar used for disinfectant/antiseptic efficacy testing
- 19 Procedure for testing antibiotics
- 20 Can be used on living tissue
- 21 _____ time required to kill a microorganism at a constant temperature
- 22 Mesophilic organisms that can grow at cooler temperatures

DOWN

- 1 How moist heat kills
- 2 Strong oxidizer; common household disinfecting agent
- 3 Heat and UV light are _____ agents
- 4 Chemical for inanimate objects
- 6 Agar for antibiotic testing
- 7 Clinical antiseptic
- 8 Method used to test disinfectants and antiseptics
- 9 Chemotherapeutics for infections
- 11 UV damage to DNA
- 12 Broad spectrum antibiotic
- 14 Zone of inhibition is measured in _____.
- 16 Non-ionizing radiation that can damage DNA

Food and Water Microbiology 5

Name _____ Date _____



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ACROSS

- 3 Substance produced by bacteria that is directly responsible for damaging tooth enamel
- 6 pH indicator in STA
- 7 Device to measure volumes
- 9 Baker's yeast
- 12 Curved liquid level in pipet
- 14 Pipet marked for various amounts
- 18 The "A" valve on the Propipette bulb
- 19 Bacterium that makes vinegar
- 20 Microbes that indicate fecal contamination
- 21 Bacteria create this sticky coating on teeth
- 22 Standard _____ for quantifying bacteria
- 23 Tooth enamel damage caused by bacterial acid production

DOWN

- 1 Highly fermented milk drink
- 2 Coliforms are able to ferment this sugar
- 4 Milk-related
- 5 Agar for Streptococcus
- 8 Medium to identify coliforms
- 10 _____ Number for water quality
- 11 Microbe that makes sour cream
- 12 Species (not genus) primarily responsible for dental caries
- 13 Microbes that make yogurt
- 15 Agar for Lactobacillus
- 16 Adding water to a sample
- 17 _____ Test for caries susceptibility