



LABORATORY 1

Prokaryotes

1

INTRODUCTION

EVER WONDER...

- how can bacteria thrive in the near boiling water of a hot spring?
- what was in that mouthful of lake water I just swallowed in a water skiing incident?
- how are yogurt and cheese made?

In the lab portion of this course we will study 25 **Representative Organisms (ROs)** to obtain an overview of life on our planet. We will use each Representative Organism to study the characteristics of the major group of organisms to which it belongs. We will see what they look like, where they live, how they reproduce, how they move (if they move), and how they obtain energy. To give you a broader view of diversity, for each Representative Organism we study, we will show you a few of their "friends" (close relatives). When you take more biology courses in this Department and study *Drosophila* in BIOL 226, or fairy rings and shelf fungi in BIOL 342, or study population dynamics in grizzly bears in BIOL 363, or dissect rose flowers in BIOL 222, or do a behavior study on House Finches for BIOL 472, you'll have an appreciation of where these organisms fit in our world.

Today's lab will start with a few representative organisms and, each week, we will look at more Representative Organisms until we have covered the major groups. Some of these organisms will be familiar to you and some will be new. We will look at bacteria, protists, fungi, plants, and animals. The emphasis will be on organisms commonly found in Saskatchewan, but we will also look at a few others found elsewhere. (Appendix 1 at the end of the lab manual has a complete list of the Representative Organisms.)

As the focus in this class will be the Representative Organisms, each week you will use a **Representative Organism Sheet** (included at the end of each lab) for each of the organisms you will study in that lab. Your job in the lab is to glean all relevant information about each Representative Organism and its friends from information

Biology 121 Lab Manual Test One

AW Chickering



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Biology 121 Lab Manual New Mexico U.of,1991-07-01 *Biology 121 Lab Manual* University of New Mexico Ligon,University of New Mexico Ligon Staff,1992-07-01 *Forensic DNA Biology* Kelly M. Elkins,2012-08-03 DNA typing has revolutionized criminal investigations and has become a powerful tool in the identification of individuals in criminal and paternity cases Forensic DNA Biology A Laboratory Manual is comprised of up to date and practical experiments and step by step instructions on how to perform DNA analysis including pipetting microscopy and hair analysis presumptive testing of body fluids and human DNA typing Modern DNA typing techniques are provided reflecting real life where not all institutions and crime labs can afford the same equipment and software Real case studies will be used throughout Provides practical step by step instruction on how to perform forensic DNA analysis Includes analysis of hair presumptive testing of body fluids human DNA typing and statistics Covers techniques such as pipetting microscopy and DNA extraction Pre and post lab exercises and questions assist the reader in learning the material Report writing templates assure the reader learns real world crime lab procedure **Forthcoming Books** Rose Arny,2003 *An Ethnographic Study of the Interrelationship of Community College Teachers and Students in a Laboratory Setting* Kay T. Dodge,1982 Henry's Clinical Diagnosis and Management by Laboratory Methods E-Book Richard A. McPherson,Matthew R. Pincus,2021-06-09 For more than 100 years Henry s Clinical Diagnosis and Management by Laboratory Methods has been recognized as the premier text in clinical laboratory medicine widely used by both clinical pathologists and laboratory technicians Leading experts in each testing discipline clearly explain procedures and how they are used both to formulate clinical diagnoses and to plan patient medical care and long term management Employing a multidisciplinary approach it provides cutting edge coverage of automation informatics molecular diagnostics proteomics laboratory management and quality control emphasizing new testing methodologies throughout Remains the most comprehensive and authoritative text on every aspect of the clinical laboratory and the scientific foundation and clinical application of today s complete range of laboratory tests Updates include current hot topics and advances in clinical laboratory practices including new and extended applications to diagnosis and management New content covers next generation mass spectroscopy MS coagulation testing next generation sequencing NGS transfusion medicine genetics and cell free DNA therapeutic antibodies targeted to tumors and new regulations such as ICD 10 coding for billing and reimbursement Emphasizes the clinical interpretation of laboratory data to assist the clinician in patient management Organizes chapters by organ system for quick access and highlights information with full color illustrations tables and diagrams Provides guidance on error detection correction and prevention as well as cost effective test selection Includes a chapter on Toxicology and Therapeutic Drug Monitoring that discusses the necessity of testing for therapeutic drugs that are more frequently being abused by users Enhanced eBook version included with purchase Your enhanced eBook allows you to access all of the text figures and references from the book on a variety of devices *Wild and*

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