

TANGLEWOOD MIDDLE SCHOOL
7th grade science midterm exam study guide

Name _____ Test Date _____ Period _____

This study guide will outline the topics that will be covered on the midterm exam. Completing this packet will help aid in your success on the midterm. However, it is the student's responsibility to cover each topic in its entirety. You will need your science textbook pages (assigned during the semester), composition notebook (ISN), and my website as a resource. ISNs should be taken home and used to study for this exam. ISNs will need to be returned to the classroom the day of the test.

Unit 1 – Nature of Science

Global interaction fosters our understanding of the natural world based on evidence discovered through scientific and technical innovation.

ISN pages:

Evidence –

Law –

Theory –

Microscope: Know the parts of the microscope (use your flipbook)

The eyepiece of our microscope has a magnification of 10x. Find the total magnification below with each objective lens:

4x -

10x -

40x -

Unit 2 – Chemistry

Global interaction fosters our understanding of the natural world based on evidence discovered through scientific and technical innovation.

ISN pages:

Draw an atomic model of a Carbon atom:

How many atoms of each element are present in each formula?

Ex. CO₂ - Carbon = 1, Oxygen = 2

Formula:

CaO
C ₂ H ₄ (OH) ₂
Ca(OH) ₂
CH ₄
NaCl
C ₃ H ₈

What element has to be present in a compound in order for it to be classified as organic?

Unit 3 – Cells

Cell Theory:

- 1.
- 2.
- 3.

What did the following scientist contribute to the discovery of cells and the Cell Theory?

Robert Hooke-

Matthias Schleiden-

Rudolf Virchow-

Theodor Schwann-

Define the following vocabulary words:

Prokaryote –

Eukaryote-

Homeostasis-

Photosynthesis-

Know the levels of organization in order from least to most complex and what each level means.

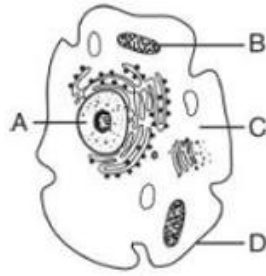
Organelle → Cell → Tissue → Organ → Organ System → Organism

Which organelles are found in plant cells that are not found in animal cells?

Why is the Endoplasmic Reticulum rough and smooth?

Organelle	Location (Plant, animal, both)	Function
Cell Wall		
Cell Membrane		
Nucleus		
Cytoplasm		
Mitochondria		
Endoplasmic Reticulum		
Golgi Bodies		
Ribosomes		
Vacuoles		
Lysosomes		
Chloroplasts		

Label each part of the cell and know their functions.



Unit 4 - Genetics

The system of identifying relationships between inherited traits and patterns in genetics instructions connects one generation to another.

ISN pages:

Know the following terms:

Trait –

Heredity –

Chromosomes –

Genes –

Gregor Mendel –

Genotype –

Phenotype –

What is the difference between a dominant and recessive gene?

What is the difference between a homozygous and heterozygous genotype?

In a certain species of plant, the color purple (P) is dominant to the color white (p). Complete the Punnett Square and show what the probability of an offspring being white would be?

Plant 1 genotype – PP (homozygous dominant)

Plant 2 genotype – pp (homozygous recessive)
