Harris County-Carver Middle School 2022-2023 8th Grade Physical Science Syllabus

Teacher: Mrs. Ashley Quirk – Team 8-1 Email: quirk-a@harris.k12.ga.us Office: (706) 628-4951 Fax: (706) 628-5737

Infinite Campus: All students with internet/smart phone access are encouraged to become registered users of Infinite Campus so that you may keep up with your grades in all classes. Download the app for easy access: District ID is HMYTHJ or DJXKPX. Parents may register then access this information by going to our schools website and clicking the quick link for Parent Portal. Students should check grades and missing assignments at least once a week. Click here:

https://campus.harris.k12.ga.us/campus/portal/harris.jsp

<u>Google Classroom</u>: Students will join my google classroom, using their student google account. Parents can also be invited. Lesson presentations and classroom documents will be uploaded daily. These are useful tools during an absence.

Remind 101: Students and parents can join my Remind 101 for important announcements and reminders.

<u>Conferences</u>: Mondays and Fridays 1:15-2:30 by appointment through the counselor's office (706) 628-4951.

Recommended Supplies:

- Earbuds/headphones compatible with Chrome book.
- Binder with 3 dividers (sections to include: Notes, Classwork/Labs, Graded Work)...binder can be combined with another subject
- Composition notebook **or** spiral notebook (for daily warm ups)
- Loose leaf paper
- Pencils
- Cap erasers
- Hand-held sharpener
- Colored Pencils or markers

Grades:

Classwork 50%
Tests & Quizzes 30%
Homework/Performance 20%

Units of Instruction:

1st 9 Weeks: Structure and Properties of Matter

2nd 9 Weeks: Electric, Magnetic & Gravitational Forces; Motion; Forces
 3rd 9 Weeks: Energy Forms & Transformations; Heat Transfer; Waves part 1

4th 9 Weeks: Waves part 2; Review/re-teach standards with activities to prepare for GMAS

Curriculum meets all National Science Standards and correlates to the Georgia Standards of Excellence. https://www.georgiastandards.org/Georgia-Standards/Pages/Science.aspx. A summary is on the back.

Georgia Standards of Excellence Summary

S8P1. Matter

- a. Pure substances (elements & compounds) and mixtures (homogeneous & heterogeneous).
- b. States of Matter (solid, liquid, gas, plasma), phase changes.
- c. Chemical & physical properties (including density).
- d. Chemical & physical changes and evidence a chemical change has occurred.
- e. Atoms & identifying patterns in the periodic table.
- f. Law of Conservation of Matter & balancing chemical equations.

S8P2. Energy

- a. Kinetic energy and potential energy.
- b. Kinetic and potential energy transformations.
- c. Forms of energy (MR HC GENES) and energy transformations.
- d. Heat transfer (conduction, convection, radiation).

S8P3. Motion

- a. Speed, velocity, acceleration, and motion graphs.
- b. Newton's Laws of Motion, balanced and unbalanced forces.
- c. The relationship between force, mass, and acceleration (F=ma, Newton's 2nd Law).

S8P4. Waves

- a. Similarities and differences between electromagnetic and mechanical waves and the wave parts.
- b. Relationship between the electromagnetic spectrum and energy.
- c. Practical uses (communication, medical, military) of the electromagnetic spectrum.
- d. Reflection, refraction, absorption, diffraction of light and sound waves through various materials, and how we see color.
- e. Wave speed through different mediums (light vs. sound).
- f. Wave properties (frequency, amplitude, wavelength) and energy.
- g. Lenses: concave & convex.

S8P5. Forces in Nature

- a. Magnetic, electric, and gravitational fields.
- b. Static charge/electricity: conduction, induction, friction, and distribution of charges in conductors and insulators.
- c. Factors that affect the strength of magnetic, electric, and gravitational forces (including electromagnets, generators and motors).