

# 8<sup>th</sup> Grade-Accelerated Physical Science Syllabus 2022-23

St Hugh Catholic School  
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## **Course Description:**

Welcome to Physical Science. The middle school physical science course is designed to give students the necessary skills for a smooth transition from elementary physical science standards to high school physical science standards. The purpose is to give all students an overview of common strands in physical science including, but not limited to, the nature of matter, laws of energy, matter, motion and forces, and energy transformations.

The students will also learn about environmental and global issues which affect our world. Emphasis will be placed on skill development to provide students with the basic tools they need to be successful in the course.

## **Outline of Units and Big Topics for the Year:**

Practice of Science: Scientific inquiry, Scientific laws and theories

Physics: Forces, Motion, Matter, Changes in Matter, Energy, Thermal Energy, Electromagnetic Spectrum, Waves

Chemistry: Atoms, Periodic Table, Chemical Bonding

STEM (Science, Technology, Engineering and Mathematics)

## **Future City:**

Future City uses the engineering design process as a framework to guide students through the creation of their cities. Within this framework, students apply specific project management methods to keep their projects on track. This structure gives students a real-world learning experience they can apply to future challenges in school, work and life.

Future City program and this year's theme: TBA

Participants complete five deliverables: a 1-500 word city essay; a scaled city model from recycled materials; a project plan; a 7 minute presentation; and a 10 min Q & A session with a panel of judges at Regional Competitions online in January. Regional winners represent their region at the Finals in February.

After completing Future City, student participants are not only prepared to be citizens of today's complex and technical world, but also poised to become the drivers of tomorrow. Future City is an engaging way to build students' 21<sup>st</sup> century skills. Students participating in Future City:

- Apply math and science concepts to real-world issues
- Develop writing, public speaking, problem solving, and time management skills
- Research and propose solutions to engineering challenges
- Discover different types of engineering and explore careers options

- Learn how their communities work and become better citizens
- Develop strong time management and project management skills

## **Policies:**

We at St Hugh provide a happy and safe Catholic environment that promotes learning. Students are required to abide by all school and classroom rules and procedures. This includes both written and oral directions and regulations. In addition to the rules stated in the Parent/Student handbook, students are expected to follow the rules listed below:

## **Classroom Rules and Expectations:**

1. Be seated with all materials, book and supplies when class begins.
2. Complete all assignments on time. No late work will be accepted
3. Respect each other's opinions, space and belongings.
4. Maintain orderly and neat classroom environment.
5. No cheating or Plagiarism: Please understand that cheating or plagiarism will result in a failing grade for the assignment.

Please note: If a student breaks a rule stated above, such actions will result in appropriate consequences.

Students in Accelerated Science are placed on a probationary period in which if the student fails to meet the criteria of an accelerated student, they will be placed back in the on-level class.

## **Materials:**

- One (1) Pack of College Ruled Lined Paper
- One (1) Pack of Grid Paper
- One (1) Pack of Hot Glue Gun Sticks
- One (1) 1 inch 3-Ring Binder (This will be for Science ONLY)
  - 6th Grade = Blue
  - 7th Grade = Green
  - 8th Grade = Purple
- 5-Tab Dividers (for the binder)
- One (1) National Laboratory Notebook (Green Marble Cover)
  - This can be used all three years of middle school
  - [https://www.amazon.com/National-53110-Notebook-Quadrille-Sheets/dp/B0016060LG/ref=sr\\_1\\_2?crd=18VGUYAIJ7XN&keywords=science+notebook+green+marble+cover&qid=1652701237&srefix=science+notebook+green+marble+cover%2Caps%2C70&sr=8-2](https://www.amazon.com/National-53110-Notebook-Quadrille-Sheets/dp/B0016060LG/ref=sr_1_2?crd=18VGUYAIJ7XN&keywords=science+notebook+green+marble+cover&qid=1652701237&srefix=science+notebook+green+marble+cover%2Caps%2C70&sr=8-2)
- Pencils
- Blue or Black pens
- Lab Safety Goggles/Glasses

# Evaluation and ASSESSment

## Grading Scale

A (100%-90%)  
B (89%-80%)  
C (79%-70%)  
D (69%-60%)  
F (59% or below)

## Weight of Grades

Homework/Classwork/Participation- 10%  
Project Based Assignments- 30%  
Quizzes- 20%  
Test- 40%

## Daily Work:

Homework assignments are designed to prepare the students for the next class lesson. You must be prepared for class to receive the full benefit of the lesson that day. For full credit, assignments must be neat, complete, and submitted on time. Once that lesson has passed, the potential benefit of the assignment has also passed.

## Late Work Policy:

If you should miss class due to an absence or illness, it is your responsibility to make up the work, get notes or hand in any assignments that were given. Please look at the school policy regarding excused and unexcused absences.

**Any unexcused absences will result in a zero on the missed assignments. This includes tests, quizzes, projects, and homework. The only assignments that will be accepted late are those of students who absences/tardies are excused.**

Keeping the lines of communication open between home and school is vital. To make an appointment, or for questions, please send me an email and I will answer you as soon as possible.

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Child's Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Students Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Parent's Signature

\_\_\_\_\_  
Date