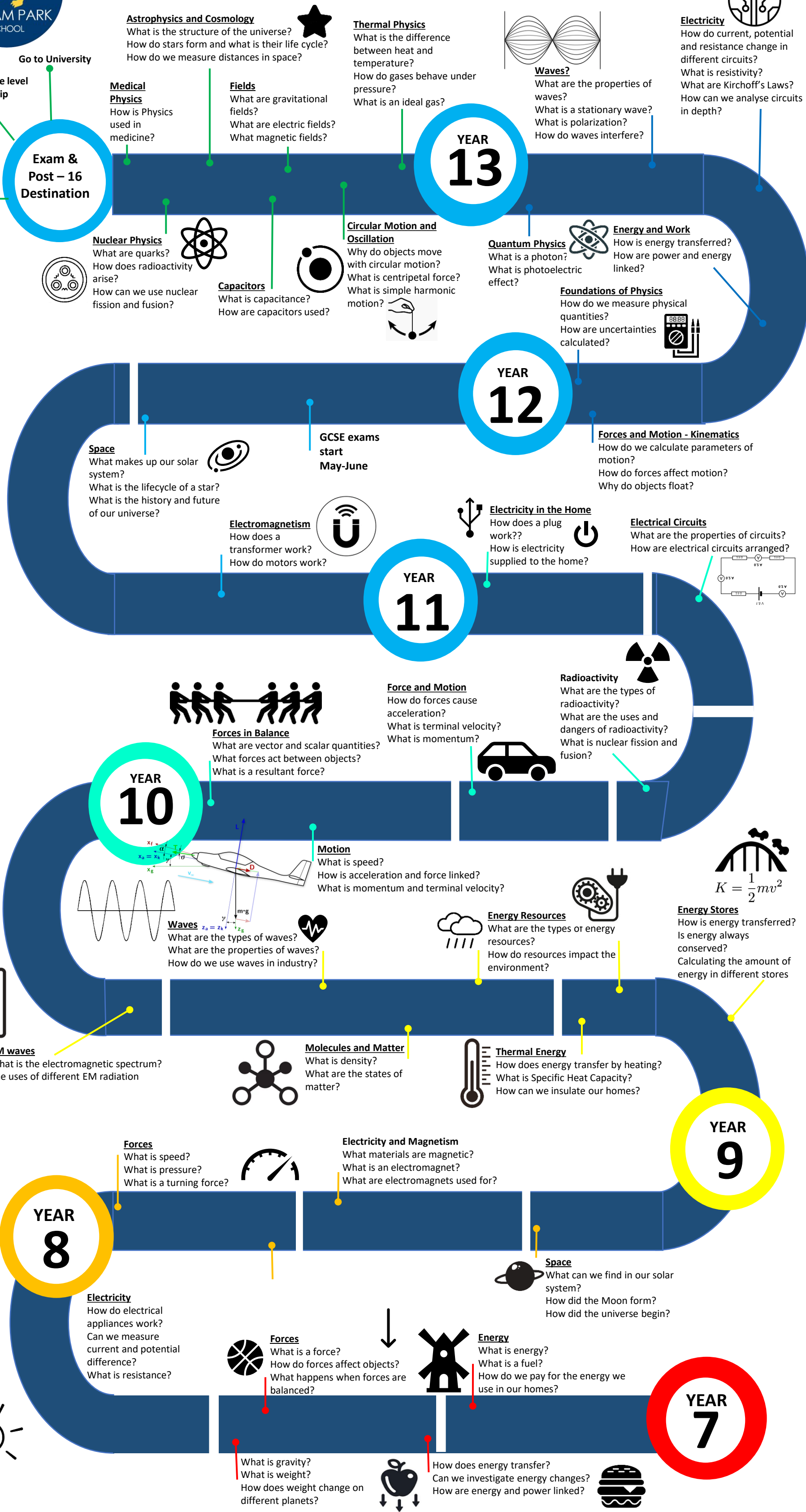




Physics Learning Journey



YEAR 8

Electricity
How do electrical appliances work?
Can we measure current and potential difference?
What is resistance?

Forces
What is a force?
How do forces affect objects?
What happens when forces are balanced?

Energy
What is energy?
What is a fuel?
How do we pay for the energy we use in our homes?

Space
What can we find in our solar system?
How did the Moon form?
How did the universe begin?

YEAR 9

EM waves
What is the electromagnetic spectrum?
The uses of different EM radiation

Molecules and Matter
What is density?
What are the states of matter?

Thermal Energy
How does energy transfer by heating?
What is Specific Heat Capacity?
How can we insulate our homes?

Energy Stores
How is energy transferred?
Is energy always conserved?
Calculating the amount of energy in different stores

$$K = \frac{1}{2}mv^2$$

YEAR 10

Waves
What are the types of waves?
What are the properties of waves?
How do we use waves in industry?

Motion
What is speed?
How is acceleration and force linked?
What is momentum and terminal velocity?

Energy Resources
What are the types of energy resources?
How do resources impact the environment?

Radioactivity
What are the types of radioactivity?
What are the uses and dangers of radioactivity?
What is nuclear fission and fusion?

Forces in Balance
What are vector and scalar quantities?
What forces act between objects?
What is a resultant force?

Force and Motion
How do forces cause acceleration?
What is terminal velocity?
What is momentum?

YEAR 11

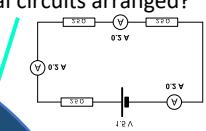
Space
What makes up our solar system?
What is the lifecycle of a star?
What is the history and future of our universe?

Electromagnetism
How does a transformer work?
How do motors work?

GCSE exams start May-June

Electricity in the Home
How does a plug work??
How is electricity supplied to the home?

Electrical Circuits
What are the properties of circuits?
How are electrical circuits arranged?



Forces and Motion - Kinematics
How do we calculate parameters of motion?
How do forces affect motion?
Why do objects float?

YEAR 12

Nuclear Physics
What are quarks?
How does radioactivity arise?
How can we use nuclear fission and fusion?

Capacitors
What is capacitance?
How are capacitors used?

Circular Motion and Oscillation
Why do objects move with circular motion?
What is centripetal force?
What is simple harmonic motion?

Quantum Physics
What is a photon?
What is photoelectric effect?

Energy and Work
How is energy transferred?
How are power and energy linked?

Foundations of Physics
How do we measure physical quantities?
How are uncertainties calculated?

YEAR 13

Medical Physics
How is Physics used in medicine?

Fields
What are gravitational fields?
What are electric fields?
What magnetic fields?

Thermal Physics
What is the difference between heat and temperature?
How do gases behave under pressure?
What is an ideal gas?

Waves?
What are the properties of waves?
What is a stationary wave?
What is polarization?
How do waves interfere?

Electricity
How do current, potential and resistance change in different circuits?
What is resistivity?
What are Kirchoff's Laws?
How can we analyse circuits in depth?

Exam & Post - 16 Destination

- Go to University
- Start a degree level apprenticeship
- Take a gap year

