Cornwall Islamic Foundation

Grade 7 Science, Math & English Curriculum Topics — November 2026

Grade 7 Science topics

A. Science practices

1. Identify steps of the scientific method
2. Identify laboratory tools
3. Laboratory safety equipment

B. Designing experiments

1. Identify control and experimental groups
2. Identify independent and dependent variables
3. Identify the experimental question
4. Identify questions that can be investigated with a set of materials
5. Understand an experimental protocol about plant growth
6. Understand an experimental protocol about diffusion
7. Understand an experimental protocol about evaporation

C. Engineering practices

1. Identify parts of the engineering-design process
2. Evaluate tests of engineering-design solutions
3. Use data from tests to compare engineering-design solutions
4. Explore the engineering-design process: going to the Moon!

D. Atoms and elements

1. What are atoms and chemical elements?

E. Modeling matter

1. How are substances represented by chemical formulas and models?
2. Identify chemical formulas for ball-and-stick models
3. Describe the atomic composition of molecules
4. Classify elements and compounds using chemical formulas
5. Classify elements and compounds using models

F. Chemical reactions

1. Identify reactants and products
2. Count atoms and molecules in chemical reactions
3. Calculate amounts of reactants or products in chemical reactions
4. Describe energy changes in chemical reactions
5. Compare physical and chemical changes
6. Explore chemical structure and properties: soapmaking
7. Explore chemical structure and properties: food flavours
8. Synthetic materials

G. Thermal energy

1. Predict heat flow and temperature changes
2. Compare thermal energy transfers

H. Particle motion and energy

1. How does particle motion affect temperature?
2. Particle motion and changes of state
3. How does particle motion affect gas pressure?
4. Identify how particle motion affects temperature and pressure

I. Solutions

1. Compare concentrations of solutions
2. Diffusion across membranes

J. Plants

1. Identify plant parts and their functions
2. Identify flower parts and their functions

K. Adaptations and natural selection

1. How can animal behaviours affect reproductive success? Identify evidence to support a claim
2. Introduction to natural selection
3. Calculate the percentages of traits in a population
4. Calculate the averages of traits in a population
5. Construct explanations of natural selection

L. Fossils

1. Compare fossils to modern organisms
2. Compare ages of fossils in a rock sequence

M. Plant reproduction

1. Angiosperm and conifer life cycles
2. Moss and fern life cycles

N. Photosynthesis

1. How do plants use and change energy?
2. Identify the photosynthetic organism

O. Ecosystems

1. Describe populations, communities and ecosystems

2. Identify ecosystems
3. Describe ecosystems

P. Ecological interactions

1. How does matter move in food chains?
2. Interpret food webs I
3. Interpret food webs II
4. Use food chains to predict changes in populations
5. Classify symbiotic relationships
6. Investigate primary succession on a volcanic island

Q. Conservation

1. Coral reef biodiversity and human uses: explore a problem
2. Coral reef biodiversity and human uses: evaluate solutions

R. Natural resources and human impacts

1. Evaluate claims about natural resource use: groundwater
2. Evaluate claims about natural resource use: fossil fuels

S. Rocks

1. Identify rocks and minerals
2. Introduction to the rock cycle
3. Classify rocks as igneous, sedimentary or metamorphic
4. How do rock layers form?
5. Label parts of rock cycle diagrams
6. Select parts of rock cycle diagrams

T. Plate tectonics

1. Label Earth layers

2. Evidence of continental drift and plate tectonics
3. Label Earth features at tectonic plate boundaries
4. Describe tectonic plate boundaries around the world

U. Earth's cycles

1. Label parts of water cycle diagrams
2. Select parts of water cycle diagrams
3. The carbon cycle

V. The atmosphere

1. The greenhouse effect

W. Units and measurement

1. Choose units of distance, mass and volume
2. Abbreviate time, length, speed and acceleration units
3. Abbreviate mass and volume units
4. Abbreviate force, energy and electricity units