



Grade 5 Learning Outcomes

Below are the learning outcomes of the course stating what students are expected to know/be able to do upon completion of the course.

Schoolwide Learner Outcomes

The 5 Steps Academy students develop the following global competencies (to the extent reasonable for their age group) to thrive in the unpredictable and fast-changing:

- Courage to try and make mistakes and the ability to learn from mistakes.
- Respect people regardless of their age, gender, nationality, religion, beliefs, or opinions.
- Discipline in self-development and achievement of dreams.

Mathematics

By the end of the course students should be able to:

- Find percent of a number
- Understand Symmetry
- Find lines of symmetry
- Understand rotational symmetry
- Understand parallel, perpendicular and intersecting lines
- identify angles of 90, 180, 270 and 360 degrees
- Understand types of angles
- Measure angles with a protractor
- Identify complementary, supplementary, vertical, adjacent and congruent angles
- Find measures of complementary, supplementary, vertical and adjacent angles
- Understand central angles of circles
- Classify triangles
- Classify quadrilaterals
- Understand parts of a circle
- Find perimeter
- Find area and perimeter of figures on grids
- Find the area of rectangles and squares
- Find the area or missing side length of a rectangle
- Find areas of triangles and trapeziums
- Solve balance equations and pictographs
- Understand and use modelling. Part-whole and comparison. Total and difference known. More than and times more than.
- Understand prime and composite numbers
- Perform prime factorization.



English

By the end of the course students should be able to:

Vocabulary:

Memorize and correctly apply the meanings of 1083 core words, including 100 phrasal verbs from the stipulated lists.

Grammar:

Review all the grammar skills learnt in previous grades.

Reading

- Able to read and analyse passages while taking into account the following factors. Reading a passage, be it prose, poetry, drama or formal writing, and understanding 1) theme, 2) tone, 3) subject matter, 4) purpose of text; while being able to draw relations within a) key words/word choice, b) topic sentences, c) sub-topic sentences and d) supporting sentences.

Reading – word reading

- apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in the tables in the syllabus both to read aloud and to understand the meaning of new words that they meet.

Reading – comprehension

- maintain positive attitudes to reading and understanding of what they read by:
 - continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks
 - reading books that are structured in different ways and reading for a range of purposes
 - increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions
 - recommending books that they have read to their peers, giving reasons for their choices
 - identifying and discussing themes and conventions in and across a wide range of writing
 - making comparisons within and across books
 - learning a wider range of poetry by heart
 - preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience



- understand what they read by:
 - checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context
 - asking questions to improve their understanding
 - drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence
 - predicting what might happen from details stated and implied
 - summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas
 - identifying how language, structure and presentation contribute to meaning
- discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
- distinguish between statements of fact and opinion
- retrieve, record and present information from non-fiction
- participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously
- explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary
- provide reasoned justifications for their views.

Writing

- able to write 300 words for compositions with vividness and structure.
- plan their writing by:
 - identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own
 - noting and developing initial ideas, drawing on reading and research where necessary
 - in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed
- draft and write by:
 - selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning
 - in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action
 - précising longer passages
 - using a wide range of devices to build cohesion within and across paragraphs
 - using further organisational and presentational devices to structure text and to guide the reader [for example, headings, bullet points, underlining]
- evaluate and edit by:
 - assessing the effectiveness of their own and others' writing
 - proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning



- ensuring the consistent and correct use of tense throughout a piece of writing
- ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register
- proof-read for spelling and punctuation errors
- perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear.

Spelling

- use further prefixes and suffixes and understand the guidance for adding them
- spell some words with 'silent' letters [for example, knight, psalm, solemn]
- continue to distinguish between homophones and other words which are often confused
- use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in the tables below
- use dictionaries to check the spelling and meaning of words
- use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary
- use a thesaurus.

Public Speaking

- Speak coherently and with ease in front of the school assembly.

Science

By the end of the course students should be able to:

1. Show an understanding that living things reproduce to ensure continuity of their kind and that many characteristics of an organism are passed on from parents to offspring.
2. Recognise the process of fertilisation in sexual reproduction of humans.
3. Recognise the similarity in terms of fertilisation in the sexual reproduction of flowering plants and humans.
4. Recognise and state the processes in the sexual reproduction of flowering plants, pollination, fertilisation (seed production), seed dispersal and germination.
5. State the process of fertilisation in sexual reproduction of humans.



6. Recognise that water can exist in three interchangeable states of matter.
7. Show an understanding of how water changes from one state to another.
 - a. Melting (solid to liquid)
 - b. Evaporation/Boiling (liquid to gas)
 - c. Condensation (gas to liquid)
 - d. Freezing (liquid to solid).
8. Show an understanding of the terms melting point of ice (or freezing point of water) and the boiling point of water.
9. Show an understanding of the roles of evaporation and condensation in the water cycle.
10. Recognise the importance of the water cycle.
11. Recognise the importance of water to life processes.
12. Describe the impact of water pollution on Earth's water resources.
13. Investigate, observe and compare the various ways in which plants reproduce and communicate findings. Eg, spores and seeds.
14. Compare water in 3 states.
15. Investigate the effect of heat gain or loss on the temperature and state of water and communicate findings. Eg, when ice is heated, it melts and changes to water at 0 °C. When water is cooled, it freezes and changes to ice at 0 °C. When water is heated, it boils and changes to steam at 100 °C. When steam is cooled, it condenses to water.
16. Investigate the factors which affect the rate of evaporation and communicate findings. Eg, wind, temperature and exposed surface area etc.
17. Recognise that air is a mixture of gases such as nitrogen, carbon dioxide, oxygen and water vapour.



18. Identify the organs of the human respiratory and circulatory systems and describe their functions.
19. Recognise the integration of the different systems (digestive, respiratory and circulatory) in carrying out life processes.
20. Identify the parts of the plant transport system and describe their functions, eg, leaf, stem and root.
21. Recognise how water is transported from the roots to other parts of the plant and how food is transported from the leaves to other parts of the plant.
22. Show an understanding that a cell is a basic unit of life. Identify the different parts of a typical plant cell and animal cell and relate the parts to the functions, eg, for a plant cell, cell wall, cell membrane, cytoplasm, nucleus and chloroplasts. For an animal cell, cell membrane, cytoplasm, nucleus.
23. Recognise that an electric circuit consisting of an energy source (battery) and other circuit components (wire, bulb, switch) forms an electrical system.
24. Show an understanding that a current can only flow in a closed circuit.
25. Identify electrical conductors and insulators.
26. Compare how plants, fish and humans take in oxygen and give out carbon dioxide.
27. Compare the ways in which substances are transported within plants and humans.
 - a. For plants: tubes that transport food and water.
 - b. For humans: blood vessels that transport digested food, oxygen and carbon dioxide.
28. Able to compare a typical plant and animal cells.
29. Able to construct simple circuits from circuit diagrams. Investigate the effect of some variables on the current in a circuit and communicate findings, eg, number of batteries (arranged in series) and number of bulbs (arranged in series and parallel).