

Blue Print for General Knowledge Grade-1, aligned with ALP

Content Strand	Sub-Content Strand	SLO Number	STUDENT LEARNING OUTCOMES (SLOs)	Wieghtage
1. Islamiat (24%)	1.Oneness of Allah (Ta awwuz, Tasmiyyah, Kalma Tayyibah)	1.1.1	Recognise that Almighty Allah has created us.	4%
		1.1.2	Recognise that everything in the world is created by Almighty Allah.	
		1.1.3	Name the creations of Almighty Allah (Human beings, animals, plants, trees, stars,sun etc.)	
		1.1.4	Recite Kalimah Tayyibah with its meanings.	
		1.1.5	Recite Ta awwuz and Tasmiyyah with their translation.	
	2. Prophets	1.2.1	Name Prophets (Hazrat Ibrahim (A.S), Hazrat Musa (A.S , and Hazrat Isa (A.S) and Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم	4%
		1.2.2	Recognize that Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم is the last prophet of Almighty Allah.	
		1.2.3	Narrate the biography/Seerat of Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم (birth, early upbringing and character).	
		1.2.4	Recognize that they should recite (SAW) whenever they read,say, and hear name of Hazrat Muhammad Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم .	
		1.2.5	Recite with translation the short form of Darood	
	3. Hazrat Muhammad Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم	1.3.1	Narrate events from the biography/Seerat of Hazrat Muhammad Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم	4%

4. Holy Books	1.4.1	Name the holy books revealed by Almighty Allah.	4%
	1.4.2	Identify the prophet to whom Almighty Allah revealed by each Holy Book.	
	1.4.3	Recognize that the Quran and other Holy Books tell us how to live a good life.	
	1.4.4	Recognize the importance of respecting all Holy Books.	
5. Prayer	1.5.1	Recognize that people pray to thank God for his blessings and bounties.	8%
	1.5.2	Recognize that people pray in different ways.	
	1.5.3	Name the five prayers that Muslims offer daily.	
	1.5.4	Recognize Azan as a call for Namaz.	
	1.5.5	Find out a Mosque/Masjid in their neighbourhood.	
	1.5.6	Inquire about other places of worship in their neighbourhood (church, temple etc.).	
	1.5.7	Recognize that they should respect all places of worship.	
1. Introduction to self	2.1.1	Describe themselves briefly.	4%
	2.1.2	Identify good qualities in themselves (telling the truth; respecting elders; getting up early in the morning)	
	2.1.3	Recognize the good qualities in others.	
	2.1.4	Identify the ways in which they are same and different from others with respect to physical characters and likes and dislikes.	
3. Keeping Onself Clean	2.3.1	Identify the ways and means by which they can keep themselves clean (washing hands, clipping/trimming nails, brushing teeth, taking bath etc.).	4%
	2.3.2	Recognize the importance of keeping themselves clean for their health.	
5 The food I Eat	2.5.1	List food items that they usually eat at home.	
	2.5.2	Name the food items they like to eat.	
	2.5.3	Recognize the importance of different food items they eat.	

2. Social Studies (36%)		2.5.4	Recognize the importance of washing hands before and after eating.	8%
		2.5.5	Demonstrate the etiquettes of eating.	
		2.5.6	Recite Dua both before and after taking a meal.	
	6. Games and Rules	2.6.1	Name the game they like to play.	4%
		2.6.2	Identify different games from the given picture.	
		2.6.3	Identify the general rules of playing a game.	
		2.6.4	Recognize the importance of following rules.	
		2.6.5	Observe the rules when playing a game.	
	7. School	2.7.1	Describe and draw a picture of their school.	8%
		2.7.2	Identify the people they interact with in school (teachers, students, principal, service providing staff etc.).	
		2.7.3	List the activities they engage in at school.	
		2.7.4	List the rules they follow in the classroom.	
		2.7.5	Follow class rules.	
		2.7.6	Recognize that they should respect everyone in their school (teachers, class fellows, service providing staff etc.).	
	8. Health Care	2.8.1	Recognize that in case of illness they require medical assistance/treatment.	8%
		2.8.2	List people who provide health care (doctors, nurses etc.).	
2.8.3		Name the nearest health care facility in their neighbourhood.		
2.8.4		Describe an incident where they or another family member had fallen sick and took medical treatment.		

	2.8.5	Identify the causes of illness.	
	2.8.6	Identify unhealthy habits that cause common illness (cough,diarrhea etc.).	
	2.8.7	List various ways of protecting oneself from diseases (keeping self and surrounding clean, drinking clean water and eating healthy food, getting vaccinated).	
1.Plants and Animals	3.1.1	Identify the plants they see around them.	12%
	3.1.2	Recognize the differences between the plants they see around them.	
	3.1.3	Recognize the importance of plants/trees as a source of food, shade and shelter.	
	3.1.4	Identify the things around them that are made up of plants/trees.	
	3.1.5	Identify the animals they see around them.	
	3.1.6	Identify the differences between the animals they see around them.	
	3.1.7	Identify the food which different animals eat.	
	3.1.8	Recognize the importance of animals as a source of food, and transport.	
	3.1.9	Identify the homes of animals(nest,burrow).	
	3.1.10	Differentiate between animals that can and cannot be kept at home.	
	3.1.11	Identify the measures for the better care of domestic animals.	
	3.1.12	Recognize that plants and animals need water, food, and air to live.	
	3.1.13	List ways in which they can take care of things around them.	
	3.2.1	Name different objects in their surroundings (home,school and neighbourhood).	
	3.2.2	Recognize that objects are different in shape,size,texture and weight.	

3. Science (40%)	2.Objects around us	3.2.3	Group objects based on shape (circle,triangle,square, and rectangle), size (big,little;large,small), texture (rough,smooth,hard, soft), and weight (heavy,light).	16%		
		3.2.4	Recognize that many objects make sounds.			
		3.2.5	Identify that sounds can be made in different ways (hitting,shaking,blowing and plucking).			
		3.2.6	Recognize that they hear sounds with ears.			
		3.2.7	Recognize that sounds heard are low when they are far away.			
		3.2.8	Recognize that light is needed to see objects in the dark.			
		3.2.9	Recognize that some lights are intense and some are dim.			
		3.2.10	Recognize that objects are made of different materials.			
		3.2.11	Group objects based on the materials they are made of (wood,paper,plastic etc).			
		3.2.12	Identify materials that can be hard or soft, smooth or rough.			
		3.2.13	Recognize that the same material can be used for making different objects.			
		3.2.14	Recognize that the same object can be made from different materials.			
		3.2.15	Recognize that some objects are made of more than one material.			
		3.Earth	3.3.1		Identify the shape of the earth.	4%
			3.3.2		Recognize that the Earth is covered with land and water.	
4.Sky	3.4.1	Identify objects in the sky during day and night.	4%			
	3.4.2	Recognize that the sun shines very brightly during the day and gives us heat and light.				
	3.4.3	Recognize that the moon and stars shine at night.				
	3.6.1	Name four seasons (spring,summer,autumn,and winter).				

	6.Seasons	3.6.2	Illustrate the key characteristics of the four seasons (summer: hot, winter: cold, autumn: leaves fall, spring: new flowers and leaves)	4%
		3.6.3	Relate seasonal weather conditions to appropriate choices for clothing, food and recreational activities.	

Blue Print of General Knowledge, Grade-2 aligned with Accelerated Programme (ALP)

Content Strand	Sub-Content Strand	SLO No.	STUDENT LEARNING OUTCOMES (SLOs)	Weightage	
1. ISLAMIC STUDY (Weightage 28 %)	1.1 Blessings/ Bounties of Almighty ALLAH	1.1.1	Recognize that Almighty Allah gives us innumerable blessings/ Bounties (home, family,food etc.).	4%	
		1.1.2	Recognize that every one should thank Almighty Allah for his blessings/ Bounties.		
		1.1.3	Recite brief connotations in Arabic that Muslims use in daily life with their meanings (Insha Allah, Ma Sha Allah, Al-Hamdu lillah, Yarhamu kallah).		
	DEVELOPING A GOOD CHARACTER				
	1.2 Seerat of Hazarat Muhammad Rasoolullah خاتم النبيين صلى الله عليه وعلى آله واصحابه وسلم	1.2.1	Narrate events from the biography /Seerat of Hazarat Muhammad Rasoolullah صلى الله عليه وعلى آله واصحابه وسلم	4%	
	1.3 Good character from the lives of Prophets	1.3.1	Narrate events from the life of hazarat Musa (A.S) and Hazrat Isa (A.S).	4%	
		1.3.2	Identify examples of good character from the life history of Hazarat Muhammad Rasoolullah صلى الله عليه وعلى آله واصحابه وسلم (truthfulness, love, forgiveness)		
	FASTING AND RELIGIOUS FESTIVELS				
	1.4 Fasting	1.4.1	Recognize the importance of fasting for people of all faiths	4%	
		1.4.2	Recognize that people of all faiths fast at different time of the year.		
		1.4.3	Recognize that Ramzan is the month of festing for Muslims.		
		1.4.4	Identify what Muslims do during the month of Ramzan.		
	1.5 Religious Festivals	1.5.1	Describe how peoples celebrate Eid-ul-Fitr and Eid-ul- Azha.	4%	
1.5.2		Identify other cultural and religious festivals celebrated in their village / city.			
DEVELOPING A GOOD CHARACTER					
1.7 Forgiveness and Forgiving Others (Text Book Chapter 19)	1.7.1	Recognize what they say and do,can hurt others , and what others do and say, can hurt them (telling lies, Pushing others ,using derogatory words).	4%		

		1.7.2	identify the ways in which we can redress the hurt caused to others (ask for forgiveness, say sorry, do something special for them etc.).	7%
1.8 All Humans are Equal (Text Book Chapter 20)		1.8.1	Identify ways in which people are similar and different.	4%
		1.8.2	Recognize the need to respect all people as they are born equal and with human dignity.	
		1.8.3	Identify ways in which they can show respect for others.	
		1.8.4	State the importance of taking turns.	
		1.8.5	Identify occasions when it is important to wait for one's turn	
	OUR COUNTRY			

2. SOCIAL STUDY (Wiehtage 32 %)	2.1 Our Country Pakistan	2.1.1	Recognize the map of Pakistan.	4%	
		2.1.2	Name the four provinces of Pakistan.		
		2.3.1	Recognize the significance of the national flag		
		2.3.2	Draw the flag of Pakistan		
		2.3.3	Identify What colours and symbols on the flag represent.		
		2.3.4	Recognize that all countries have a flag.		
	NEIGHBOURHOOD				
	2.5 Keeping the Environment Clean (Curriculum of Grade I)	2.5.1	Identify what makes theirneighbourhood dirty.	4%	
		2.5.2	List the ways by which they can keep their neighbourhood clean.		
		2.5.3	Recognize that a clean neighbourhood is important for living a healthy life.		
		2.5.4	State the ways they kept their neighbourhood clean.		
	VILLAGES AND CITIES				
	2.6 Villages and Cities	2.6.1	Recognize that the people of pakistan live in villages and cities	8%	
		2.6.2	Identify key characteristics of a village(buildings, facilities, noise, and the work people do).		
		2.6.3	Identify key characteristics of a city.		
		2.6.4	Compare village and city life.		
		2.6.5	Describe a day in the life of villagers(male and female).		
		2.6.6	List some of the common vocations/ professions of a village/city(cobbler,musician , tailor,butcher etc.).		

		2.6.7	List similarities and differences of their cities and village with that of other cities or villages in different parts of the country/world.	
		2.6.8	Indicate choice of place to live and give reasons.	
	2.7 Traffic Rules	2.7.1	Identify some traffic rules.	
		2.7.2	Identify the safety rules they should follow while walking on the road, crossing a road, travelling by a bus etc.	4%
	THE NATURAL ENVIRONMENT			
	2.14 Conservation of Earth's Resources	2.14.1	Identify the ways human being waste water.	
		2.14.2	Identify problems caused by wastage of water.	
		2.14.3	Suggest ways to save water.	
		2.14.4	Recognize the importance of forests for them.	8%
		2.14.5	Identify the ways in which the land is destroyed due to human activity(deforestation).	
		2.14.6	Suggest ways to reduce deforestation.	
Science (Weightage 40%)	THE NATURAL ENVIRONMENT			
	3.1 Plants	3.1.1	Name the plants that grow in their surroundings.	
		3.1.2	Identify major parts of a plants.	
		3.1.3	List the functions of the roots, stem,leaf and flower.	
		3.1.4	Identify the different kinds of leaves found around them.	
		3.1.5	Identify the roots that are eaten by the people.	
		3.1.6	Name the plants around them which have flowers and which don't have flowers.	12%
		3.1.7	Identify that all fruits have seeds in them.	
		3.1.8	Recognize that some plants grow from seeds.	
		3.1.9	Identify that soil and water is needed to grow a plant.	
		3.1.10	Identify the ways in which plants are used (food , clothing,sheltor etc).	
	3.2 Animals	3.2.1	List the animals they see in their surroundings (land,air and water).	
		3.2.2	Recognize that animals that live on land are different in features from those that live in air and water.	
		3.2.3	Recognize that all animals have young that grow into adults.	
		3.2.4	Name different animals and theirs young ones (Horse ane foal,swan and cygnets,frogs and tadpoles, butterflyes and caterpillars).	12%
		3.2.5	Identify that some young animals do not look like their parents(frogs and butterflyes).	

		3.2.6	List the animals that feed their youngs and look after them until they are grown.	
		3.2.7	Recognize that there is a need for shelter for living things .	
		3.2.8	Name different places where animals live.	
	3.3 Water	3.3.1	Recognize the importance of water for living things.	8%
		3.3.2	Identify the natural sources of water	
		3.3.3	Identify the main sources of water in their locality.	
		3.3.4	Recognize the importance of the resources of water.	
		3.3.5	Narrate how water gets from a natural source to the taps in their home.	
		3.3.6	list the daily activities in which they use water.	
		3.3.7	Recognize that clean water should be used for drinking purposes.	
		3.3.8	Recognize that there are some peoples who always face shortage of water.	
	3.5 Land	3.5.1	Recognize that the natural environment comprises living and non living thing.	8%
		3.5.2	Name some natural resources	
		3.5.3	Recognize the importance of natural resources	
		3.5.4	Recognize the importance of the resources of land.	
		3.5.5	List the ways in which people use the land.	

Blue Print of General Knowledge, Grade- 3 aligned with Accelerated Learning Programme (ALP)

Content Strand	Sub-Content Strand	SLO Number	STUDENT LEARNING OUTCOMES (SLO)
1. SCIENCE (70%)	1.The Earth as a Living Planet	1.1	Recognize that heat and light of the sun help to sustain life on Earth.
		1.2	Define the term Habitat.
		1.3	Describe the different habitats for living things (polar regions, desert, forest, sea and rivers)
		1.4	Identify the environmental factors (temperature, light, water) that supports life in a habitat.
		1.5	Name plants and animals that live in each of the different habitats.
		1.6	Identify the ways plants and animals adopt to their habitat (camel, fish, polar bear, cacti,lotus, pine trees etc)
		1.7	Identify the ways human activities affect the natural habitats.
		1.8	Describe the effects of human activity on the habitats.
	2.Changes in living things	2.1	Compare young plants and animals with their parents
		2.2	Identify the changes that animals and plants undergo during their life (Hen,frog, butterfly,cat,sunflower and rose)
		2.3	Interpret diagrams of the life cycles of animal and plants to identify the different stages.
		2.4	Sequence the stages of the life cycle of a plant/animal.
		2.5	Illustrate the life cycle of an animal and a plant.
	4. Natural resources	4.1	Define the terms natural resources, human resources, and capital resources.
		4.2	Identify natural resources (plants,animals,water,air,land,forest and soil) Human resources (Farmers,builders, painters etc), Capital resources (trucks, computer, factory buildings etc).
		4.3	Define the terms: Goods, services, Buyers, Sellers.
		4.4	Identify how a good or service is made available.
		4.5	Identify the main goods and services of their local area.
4.6		Recognize the concept of specialization (being an expert in one job or service or product).	

	4.7	Recognize the need for interdependence as not or goods and services are available in their area.
	4.8	Define Scarcity.
	4.9	Recognize that equal people make economic choices because goods and services are limited.
5. Conservation of natural resources	5.1	Describe ways in which humans have change the natural environment.
	5.2	Predict that what would happen if natural resources were used up.
	5.3	Suggest ways to save natural resources.
	5.4	Design a poster to communicate ways to conserve natural resources.
	5.5	Identify the endangered animals of Pakistan
	5.6	Suggest ways to protect the endangered animals.
	5.7	Identify animals,which are extinct.
6. Food and Feeding	6.1	Recognize that different animals have different diets.
	6.2	Identify the shape of teeth helps animals to eat their particular foods.
	6.3	Recognize that healthy living requires eating a balanced diet,keeping clean, getting a good night sleep and excesising regularly.
	6.4	Classify foods into the basic food groups.
	6.5	Define a balanced diet.
	6.6	Identify foods for the three meals of a day to prepare a balanced diet.
	6.7	Prepare a flyer to educate others of the importance of cleanliness of healthy living.
	6.8	Recognize the importance of appropriate rest and a good night sleep.
	6.9	Identify the ways to get sufficient exercise to stay healthy.
		9.1
	9.2	Identify the qualities/attributes of an Inventor.
	9.3	Identify major objects Invented and their Inventors over the last century.

	9. Inventors and Inventions	9.4	Imagine how life would be without any major invention.
		9.5	Classify Inventions that improved farming, household chores, space exploration and communication.
		9.6	Compose a paragraph about their favourite invention.
		9.7	Predict how an invention could change life in the future.
		9.8	Identify recent inventions (personal computers, fax machines, microwaves, CDs etc) and how they have changed the way people work and play.
		9.9	Gather and organize information and right a report about a recent invention.
	10. Tools and machines	10.1	Recognize that people in the past used tools to make their work easier.
		10.2	Name the tools from the past given in the pictures and describe their functions.
		10.3	Recognize that people today use different tools and machines to make their work easier.
		10.4	Name some simple machine they see/use at home(scissors, hammer, pliers).
		10.5	Explain how simple machines make work easier.
		10.6	Recognize that deposition and shape of an object can be changed by a force (push or pull).
		10.7	Recognize that push and pulls move things fast or slow.
		10.8	Recognize from pictures of the past that force applied by humans and animals moved vehicles while today vehicles are moved by machines(Tonga, Bullock-cart, cycle, pushcart, bus, motorcycle, and car).
		10.9	Observe and describe how motion of vehicle can be changed by applying force (speedup, slow down, change direction etc).
		10.1	Recognize that greater the force, greater the change in motion of object.
			3.1
	3.2		Name the four cardinal directions.

2. SOCIAL STUDY (30%)

3. Sun	3.3	Name places towards North, South, East and West of the school/home.	
	3.4	Describe the size of the shadow with the position of the sun.	
	3.5	Recognize that the size of the shadow created by the position of the sun was used to tell the estimated time.	
	8. Past and present things	8.1	Recognize that present time is different from the past.
		8.2	Identify how schools, communities, transportation have changed over time (from the given picture).
		8.3	Sequence events in a narrated in chronological order.
	11.The role of the Government and Citizens	11.1	Describe the activities that individuals perform for the welfare of the local communities.
		11.2	Identify the public issues in local area,(drinking water, school, sewage system etc).
		11.3	Inquire into one issue, identify its causes, suggest solutions and take a responsible action to solve the issue.
	12.Responsibilities of Government and rights of Citizens	12.1	Recognize that people organize themselves to meet their needs,
		12.2	Describe what Government does to meet the needs of people.
		12.3	Suggest ways the Government and people work together to meet people's needs in the area.
	13. Respect for others	13.1	Identify ways they can demonstrate good Citizenship (Playing fairly, helping others, following rules, taking responsibility or one's actions).
		13.2	Identify the personal traits of good Citizens(trustworthiness, respect for law, responsibility, honesty and respect for the rights of others).
	14. Working out disagreement	14.1	Identify the disagreement/conflicts that occur at home,in school and in local communities (from stories and role play).
		14.2	Identify the feeling of people in different conflicting situations.
		14.3	Identify causes of conflict.
		14.4	Describe the impact of conflict on the people involved and larger community.
14.5		Identify the ways in which people resolved conflicts at home, in school and in the local community.	
14.6		Suggest strategies for preventing conflicts.	

		14.7	Use discussion and problem solving methods to workout disagreement.
	7.What I will become	7	not adressed in ALP and National curriculum

Blue Print of Science Grade 4, in accordance with Accelerated Learning Program (ALP)			
Content Strand	Sub-Content Strand	SLO No.	SLO
1. LIFE SCIENCE (36%)	1.1 Understanding Ourselves (12%)	1.1.1	Identify major parts of human body.
		1.1.2	State functions of major parts of the body.
		1.1.3	Describe how bones and muscles work together to produce movement.
		1.1.4	Identify common disorders of various parts of body and their causes.
		1.1.5	Suggest ways to keep parts of their body healthy.
	1.2 Characteristics and Needs of Living Things (8%)	1.2.1	Identify factors necessary for both animals and plants to survive.
		1.2.2	Compare physical characteristics of animals and plants.
		1.2.3	Perform an experiment to show that living things can grow while non-living things cannot grow.
	1.3 Food and Health (8%)	1.3.1	Identify the sources of common food.
		1.3.2	Explain the properties of major food groups.
		1.3.3	Classify different food into their basic groups
		1.3.8	Explain hygiene and its basic principles.
	1.4 Living Things and Their Environment (8%)	1.4.1	Define environment
		1.4.2	Explain components of environment with examples.
		1.4.3	Differentiate between different types of environment.
		1.4.5	Classify animals on the basis of food they eat.
1.4.6		Differentiate between carnivores, herbivores, and omnivores with the help of examples.	
	2.1 Matter and its States (8%)	2.1.1	Define matter and give examples
		2.1.2	Identify three states of matter with examples.
		2.1.3	Compare solids, liquids and gases on the basis of shape and volume
		2.1.4	Demonstrate and explain how matter changes its state on heating.
	2.2 Heat and its Measurement (8%)	2.2.2	Draw and label the device for measuring temperature.
		2.2.3	Measure and record the body temperature using a laboratory thermometer and a clinical thermometer
		2.2.4	Suggest the safety measures required in using thermometer

2. PHYSICAL SCIENCE (56%)	2.3 Force and Machines (12%)	2.3.1	Define force by giving examples.
		2.3.2	Investigate the ways in which motion of an object can be changed.
		2.3.3	Demonstrate how force can change the position and the shape of an object.
		2.3.4	Explore that greater the force, greater the change in the distance covered by the object.
		2.3.5	Design experiment to demonstrate that some objects can return to their original shape after the release of force.
		2.3.6	Define speed and give its relation with distance.
	2.4 Introduction to Sound (12%)	2.4.1	Investigate that sound is produced by vibrating objects.
		2.4.2	Differentiate between low and high sounds.
		2.4.3	Demonstrate that sound can travel through solids, liquids and gases but cannot travel through a vacuum.
		2.4.4	Interpret that the explosions in the core of the sun are not heard, as sound cannot travel through vacuum.
		2.4.5	Differentiate between noise and other sounds.
		2.4.6	Explore the effects of noise on human health.
		2.4.7	Suggest ways to reduce noise pollution and plan an awareness campaign on any one.
	2.5 Investigating Electricity and Magnetism (16%)	2.5.1	Distinguish between insulators and conductors.
		2.5.2	Identify examples of conductors and insulators in their environment
		2.5.5	Investigate using a magnet that some materials are magnetic and some are non magnetic
		2.5.6	Recognize that a magnet has poles
		2.5.7	Demonstrate that like poles repel each other and unlike poles attract each other.
		2.5.8	Investigate that a freely suspended magnet always points in the N - S direction.
2.5.9		Identify the various uses of magnets and magnetic materials in daily life.	
3. EARTH AND SPACE SCIENCE (8%)	3.1 Movements of the Earth (8%)	3.1.1	Describe the shape of Earth.
		3.1.2	Relate the Earth's spin with the occurrence of day and night.
		3.1.3	Define the term revolution.
		3.1.4	Identify that the distance between the Earth and the sun effects the time Earth takes to revolve around the sun.

Blue Print of Science Grade 5, in accordance with Accelerated Learning Program (ALP)

Content Strand	Sub Content Strand	SLOs (Student Learning Outcomes)
1 LIFE SCIENCE 36%	1.1 Classification of Living Things (18%)	1.1.1 Define classification 1.1.2 Explain the need and importance of Classification 1.1.3 Differentiate between vertebrates and invertebrates according the key characteristics 1.1.4 Identify vertebrates and invertebrates from their surroundings. 1.1.5 Classify vertebrates into mammals, reptiles, fish, birds and amphibians on the basis of their characteristics 1.1.6 Identify key characteristics of worms and insects 1.1.7 Compare flowering and non-flowering plants 1.1.8 Classify the flowering plants into two major groups and give examples of each group. 1.1.9 Compare the structure of a monocot and a dicot seed. 1.1.10 Compare the structure of a monocot and dicot leaf in terms of its shape and venation 1.1.11 Differentiate between the structure of monocot and dicot flower in terms of number of floral leaves.
	1.2 Microorganisms 10%	1.2.1 Define microorganisms 1.2.2 Identify the main groups of microorganisms and give examples for each 1.2.3 Describe the advantages and disadvantages of microorganisms in daily life 1.2.5 Identify ways by which microorganisms can enter the human body
	1.3 Environmental pollution 8%	1.3.1 Define pollution 1.3.2 Describe different kinds of pollution 1.3.4 Explain the effects of water, air and land pollution on environment and suggest ways to reduce them.

PHYSICAL SCIENCE

52%

<p>2.1</p> <p>Matter and Changes in its States</p> <p>14%</p>	<p>2.1.1 Describe the properties of the three states of matter on the basis of arrangement of particles.</p> <p>2.1.2 Demonstrate the arrangement of particles in the three states of matter through models.</p> <p>2.1.3 Investigate the effect of heat on particle motion during a change in states.</p> <p>2.1.4 Demonstrate and explain the process that are involved in the change of states.</p> <p>2.1.5 Describe the role of evaporation and condensation in the water cycle.</p>
<p>2.2</p> <p>Force and Machines</p> <p>16%</p>	<p>2.2.1 Describe friction and its causes.</p> <p>2.2.2 Explain the advantages and disadvantages of friction.</p> <p>2.2.3 Suggest methods to reduce friction.</p> <p>2.2.4 Identify what cyclists; swimmers and parachutists to reduce friction.</p> <p>2.2.5 Explain the gravitational force using different examples.</p> <p>2.2.11 Compare the three kinds of levers using examples.</p> <p>2.2.12 Describe how levers make work is near by giving examples of its uses from daily life.</p>
<p>2.3</p> <p>Properties and Behaviour of Light</p> <p>12%</p>	<p>2.3.1 Differentiate between Luminous and non-luminous objects.</p> <p>2.3.2 Identify and differentiate between transparent Opaque and translucent objects in their surroundings.</p> <p>2.3.3 Investigate that light travels in a straight line.</p> <p>2.3.4 Explain the formation of Shadows and eclipses.</p>
<p>2.4</p> <p>Electricity and Magnetism</p> <p>10%</p>	<p>2.4.1 Describe flow of electric current in an electrical circuit.</p> <p>2.4.2 Describe fuse and its importance in an electric circuit.</p> <p>2.4.3 Explain the phenomena of lightening.</p> <p>2.4.4 Explain the production of static electrical charges in some common materials.</p> <p>2.4.6 Make an electromagnet with the help of a cell, iron nail wire and show its working.</p> <p>2.4.7 Explore different electromagnetic devices used in their daily life.</p> <p>2.4.8 Describe the relationship between electricity and magnetism in an electromagnetic device.</p>

<p>3</p> <p>EARTH AND SPACE SCIENCE</p> <p>12%</p>	<p>3.1</p> <p>Solar System</p> <p>12%</p>	<p>3.1.1 Differentiate between a star and a planet.</p> <p>3.1.2 Explain that the Sun is a star.</p> <p>3.1.3 Describe the solar system and its planetary arrangement showing position of Earth in our solar system.</p> <p>3.1.4 Explain the relative size of the planets and their distance from the sun using a model.</p>
		<p>3.1.5 Compare the sizes of Earth, Sun and Moon.</p>

Blue Print of Science Grade 6, in accordance with Accelerated Learning Program (ALP)

Content Strand	Sub-Content Strand	SLO No.	Student Learning Outcomes (SLOs)	
LIFE SCIENCE (32%)	1. Cellular Organization of Plants and Animals (10%)	1.1.1	Define a Cell.	
		1.1.4	Draw, label and describe the basic structure of an animal cell and a plant cell.	
		1.1.5	Compare and contrast an animal cell with a plant cell.	
		1.1.8	Distinguish between tissues and organs.	
		1.1.9	Recognize root and shoot systems in plants.	
		1.1.10	State the functions of the major systems of the human body.	
	2. Sense Organs (5%)	1.2.1	Explain the structure and function of eye.	
		1.2.2	Explain the structure and function of ear.	
		1.2.3	Explain the structure and function of nose.	
	3. Photosynthesis and Respiration in Plants (7%)	1.3.2	Define photosynthesis.	
		1.3.3	Explain the importance of photosynthesis in plants.	
		1.3.4	Describe the effects of different factors on the process of photosynthesis.	
		1.3.7	Explain the importance and process of respiration in plants.	
	4. Environment and Interactions (8%)	1.4.1	Identify the components of environment	
		1.4.3	Describe the relationship between biotic and abiotic components of the environment.	
		1.4.4	Explain how abiotic factors affect the ability of plants to create their own food.	
		1.4.5	Describe that living things depend on one another for food, shelter and protection.	
	PHYSICAL SCIENCE (60%)	5. Atoms, Molecules, Mixtures and Compounds (15%)	2.1.1	Differentiate between an atom and a molecule.
			2.1.2	Recognize the symbols of some common elements.
2.1.3			Classify elements into metals and non-metals.	
2.1.4			Relate the physical properties of elements to their uses.	
2.1.5			Differentiate between elements and compounds and compounds and mixtures.	
2.1.6			Identify examples of compounds and mixtures from their surroundings.	
2.1.7			Explain uses of common mixtures in daily life.	

	2.1.8	Explain why air is considered as a mixture of gases.
	2.1.9	Identify the sources of carbon dioxide and how its level can be maintained in nature.
6. Air (5%)	2.2.1	Recognize the importance of air.
	2.2.2	Identify the composition of air.
	2.2.3	Relate the properties and uses of gases in air with the composition of air.
7. Solutions and Suspensions (10%)	2.3.1	Differentiate between solute, solvent and solution.
	2.3.2	Identify solute and solvent in a solution.
	2.3.4	Distinguish between aqueous, dilute and concentrated solutions.
	2.3.5	Demonstrate the use of water as a universal solvent.
	2.3.6	Prepare saturated and unsaturated solutions.
	2.3.10	Identify uses of solutions and suspensions in daily life.
8. Energy and its Forms (8%)	2.4.1	Explain that energy provides the ability to do work and can exist in different forms.
	2.4.2	Identify different forms of energy with examples.
	2.4.3	Differentiate between kinetic and potential energy.
	2.4.10	Explain the term renewable
	2.4.11	Describe the advantages of using renewable energy sources.
9. Forces and Machines (7%)	2.5.1	Recognize wheel and axle and identify their uses.
	2.5.2	Describe pulleys and their kinds.
	2.5.3	Identify the uses of pulleys in daily life.
	2.5.4	Describe the functions of pulley systems and gear systems.
10. Properties of Light (12%)	2.6.1	Differentiate between transmission, absorption and reflection of light.
	2.6.2	Demonstrate the law of reflection.
	2.6.3	Demonstrate the difference between smooth, shiny, and rough surfaces.
	2.6.4	Compare the regular and diffused reflection.
	2.6.7	Describe image formation by a plane mirror.
	2.6.13	Explain types of mirror and their uses in our daily life.
	2.6.14	Investigate the image formation by convex and concave mirrors.
11. Investigating Sound (5%)	2.7.1	Describe sound as a form of energy.
	2.7.2	Compare the speed of sound in solids, liquids and gaseous mediums.
	2.7.4	Explain that how does a human ear receive sound waves.

EARTH AND SPACE SCIENCE (8 %)	12. Space and Sattelites (8%)	3.1.1	Define the term satellite.
		3.1.2	Compare the physical characteristics of comets, asteroids and meteors.
		3.1.3	Describe the different kinds of meteors.
		3.1.5	Define the terms artificial satellites and geostationary.
		3.1.7	Describe the uses of various satellites in space.

Blue Print of Science, Grade-7 Aligned with Accelerated Learning Program (ALP)

Content Strand	Sub-Content Strand	SLO No.	SLOs
1. LIFE SCIENCE (36%)	1.1 Human Organ System (8%)	1.1.1	Describe various components of human digestive system.
		1.1.2	Describe digestion and its importance.
		1.1.3	Describe how digestive system helps in the digestion of various kinds of foods.
		1.1.6	Describe the mechanism of respiration in humans.
		1.1.7	Differentiate between breathing and burning processes.
		1.1.8	Identify the common diseases of respiratory system and discuss their causes and preventive measures.
	1.2 Transport in Human and Plants (8%)	1.2.1	Explain the transport system in humans.
		1.2.2	Describe the structure and function of heart and blood vessels.
		1.2.3	Explain the working of the circulatory system.
		1.2.5	Find out that some disorders in human transport system can be affected by diet.
		1.2.6	Describe absorption of water in plants through roots.
		1.2.7	Explain how the structure of the roots, stem, and leaves of a plant permit the movement of food, water, and gases.
	1.3 Reproduction in Plants (10%)	1.3.1	Define pollination.
		1.3.2	Compare self and cross-pollinations in plants.
		1.3.3	List various factors involved in cross-pollination.
		1.3.4	Investigate plants, which are cross-pollinated.
		1.3.5	Differentiate sexual and asexual reproduction.
		1.3.6	Describe fertilization.
		1.3.7	Describe seed and fruit formation.
	1.4 Environment and Feeding Relationships (10%)	1.4.1	Explain the ecosystem.
		1.4.2	Define the term habitat
		1.4.7	Explain the ways in which living things respond to changes in daily environmental conditions such as light intensity, temperature and rainfall.
1.4.8		Explain why food chains always begin with a producer.	
1.4.9		Illustrate the relationship between producers and consumers.	
1.4.10		Describe two food chains in the environment around them.	

	1.4.11 Explain a food web.
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2. PHYSICAL SCIENCE (52%)	2.1 Water (4%)	2.1.4	Suggest different ways to clean the impure water.
		2.1.5	Describe the various uses of water in our country.
		2.1.6	Investigate the consumption of water in our daily life and suggest ways to reduce wastage of water.
	2.2 Structure of an Atom (10%)	2.2.1	Describe the structure of an atom.
		2.2.2	Differentiate between atomic number and mass number.
		2.2.3	Draw diagrams of the atomic structure of the first eighteen elements in the periodic table.
		2.2.4	Define valency.
		2.2.5	Explain formation of ions.
		2.2.6	Differentiate between cations and anions.
		2.2.8	Identify the types and number of elements present in simple molecules and compounds.
		2.2.9	Make chemical formulae from list of anions and cations.
		2.3 Physical and Chemical Changes and Processes (8%)	2.3.1
	2.3.2		Identify the physical and chemical changes taking place in environment.
	2.3.3		Explain the use of hydrocarbons as fuels.
	2.3.4		Explain the use of physical and chemical properties of fertilizers, which make them useful in agriculture.
	2.3.5		Discuss harmful effects of improper use of fertilizers.
	2.3.6		Describe the chemical process in which vegetable oil changes into fat.
	2.4 Transmission of Heat (8%)	2.4.1	Explain the flow of heat from hot body to cold body.
		2.4.2	Explain conduction, convection and radiation through experimentation.
		2.4.3	Recognize the three modes of transfer of heat from environment.
2.4.4		Suggest how birds can glide in the air for hours.	
2.4.5		Identify examples of appliances that make use of different modes of transfer of heat.	
2.4.6		List heat-conducting materials in their surroundings.	
2.5 Dispersion of Light (4%)	2.5.1	Explain refraction of light and its causes	
	2.5.2	Discuss the effects of refraction with examples.	
	2.5.3	List the colors of light using a prism.	
	2.5.4	Describe the dispersion of light by a prism.	

	2.6 Sound Waves (2%)	2.6.1	Explain the wavelength, frequency and amplitude of sound and give their units.
		2.6.6	Identify the applications of different sounds in daily life.
	2.7 Circuits and Electric Current (16%)	2.7.1	Define current.
		2.7.2	Make parallel and series circuits.
		2.7.3	Investigate about types of circuits used for different purposes.
		2.7.4	Identify a disadvantage of a series circuit.
		2.7.5	Differentiate between current and energy.
		2.7.6	Explain the effects of electric current in daily use appliances.
		2.7.7	Describe voltage.
		2.7.8	Explain the resistance as an opposition to the flow of current.
		2.7.9	Describe the relationship between voltage and resistance.
		2.7.10	Measure current by using different devices.
		2.7.11	List the major uses of electricity in homes.
		2.7.12	List electrical hazards and precautionary measures to ensure the safe use of electricity at home.
2.7.13	Describe why electricity is dangerous to humans		
3. EARTH AND SPACE SCIENCE (12%)	3.1 Investigating the Space (12%)	3.1.1	Explain the Big Bang Theory of the origin of the Universe.
		3.1.3	Describe a star using properties such as brightness and colour.
		3.1.5	Suggest safety methods to use when observing the sun.
		3.1.6	Define the terms star, galaxy, Milky Way and the black holes.
		3.1.7	Explain the types of galaxies.
		3.1.8	Explain the birth and death of our sun.
		3.1.9	Identify major constellations visible at night in the sky.
		3.1.11	Explain the working of a telescope.

Blue Print of Science, Grade-8 Aligned with Accelerated Learning Program (ALP)

Content Strand	Sub-Content Strand	SLOs
1. LIFE SCIENCE (35%)	1.1. HUMAN ORGAN SYSTEM (Weightage 10%)	1.1 Describe the structure and functions of the nervous system.
		1.2 Describe the working of the nervous system through a model.
		1.3 Explain reflex action with an example
		1.4 Differentiate between voluntary and involuntary actions they have experienced.
		1.5 Define excretion
		1.6 Draw and label human excretory system.
		1.7 Describe the role of kidney in excretion of waste.
	1.2. HEREDITY IN ORGANISMS (Weightage 5%)	2.1 Differentiate between mitoses and meiosis.
		2.2 Identify DNA and chromosomes in the cell diagram
		2.3 Define heredity and recognize its importance in transferring of characteristics from parents to off springs
	1.3. BIOTECHNOLOGY (Weightage 10%)	3.3 Describe the relationship between DNA, genes and chromosomes.
		3.5 Explain how genes are introduced into a bacterium
		3.6 List some biotechnological products used in daily in life
		3.7 Explain that genetic modification in different foods can increase the amounts of essential nutrients.
		3.8 List general applications of biotechnology in various fields.
		3.9 Explain how biotechnology allows meeting the nutritional needs of growing populations
	4.1 Explain the sources, properties and harmful effects of air pollution.	
	4.4 Explain the Greenhouse effect.	

	1.4. POLLUTANTS AND THEIR EFFECTS ON ENVIRONMENT (Weightage 10%)	4.5 Describe the causes and effects of ozone depletion	
		4.6 Carry out a research to explain global warming and its likely effects on earth.	
		4.7 Design a model to explain the Greenhouse effect.	
		4.8 Explain the formation of acid rain and identify its consequences on living and nonliving things.	
		4.9 Define deforestation.	
		4.10 State the effects of deforestation on the environment.	
		4.11 Identify human activities that have long-term adverse consequences on the environment.	
		4.13 Suggest ways in which individuals, organizations and government can help to make earth a better place to live	
		2.1. CHEMICAL REACTIONS (Weightage 9%)	5.1 Define chemical reactions and give examples.
			5.2 Explain the rearrangement of atoms in a chemical reaction
5.3 Explain the balancing of a chemical reaction			
2.2. ACIDS, ALKALIS AND SALTS (Weightage 9%)	6.1 Define the terms acid, alkali and salt.		
	6.2 Describe the properties of acids, alkalis and salts		
	6.3 Explain the uses of acid, alkali and salt in daily life		
2.3. FORCE AND PRESSURE (Weightage 10%)	7.1 Define the term Pressure.		
	7.4 Explain how gases behave under pressure.		
	7.5 Describe the causes of gas pressure in a container.		
	7.6 Explain the working of aerosols		
	7.7 Identify the application of gas pressure.		
2.4. MEASUREMENTS OF PHYSICAL QUANTITIES (Weightage 5%)	7.8 Describe the term atmospheric pressure.		
	8.1 Define a physical quantity with examples		
	8.4 Select and use measuring instruments		
	8.7 Measure the volume of liquid by reading correct meniscus		

2. PHYSICAL SCIENCE (58%)	2.5. SOURCES AND EFFECTS OF HEAT ENERGY (Weightage 9%)	9.1 Describe the sources and effects of heat
		9.2 Explain thermal expansion of solids, liquids and gases
		9.3 Explore the effects and applications of expansion and contraction of solids.
		9.6 Investigate the processes making use of thermal expansion of substance
		9.7 Identify the damages caused by expansion and contraction in their surroundings and suggest ways to reduce these damages
		9.8 Investigate the means used by scientist and engineers to overcome the problems of expansion and contraction in everyday life
		9.7 Identify the damages caused by expansion and contraction in their surroundings and suggest ways to reduce these damages
		9.8 Investigate the means used by scientist and engineers to overcome the problems of expansion and contraction in everyday life
	2.6. LENSES (Weightage 9%)	10.1 Define lens
		10.2 Differentiate between the different types of lens
		10.3 Describe the image formation using a lens by ray diagram
		10.8 Identify the types of lenses used for various purposes in daily life
	2.7. ELECTRICITY IN ACTION (Weightage 7%)	11.1 Design an experiment to generate electricity
		11.2 Explain the working of the model generator.
11.3 Identify the simple devices that generate electricity in daily life.		
11.4 Design and demonstrate the working of a power station		

3. EARTH AND SPACE SCIENCE (7%)	3.1. EXPLORING SPACE (Weightage 7%)	12.1 Describe development of tools and technologies used in space exploration
		12.3 Explain that how do astronauts survive and research in space.
		12.4 Suggest the ways to solve the problems that have resulted from space exploration.
		12.6 Identify new technologies used on earth that have developed as a result of the development of space technology.