 Millennium World School, Patna

 Summer Holiday Homework

 Class: IX

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sec: \_\_\_\_\_\_\_\_\_

ENGLISH:

**Fight on behalf of the sea:**

Our ocean and the array of species that call it home are succumbing to the poison of plastic. Examples abound, from the gray whale that died after stranding near Seattle in 2010 with more than 20 plastic bags, a golf ball, and other rubbish in its stomach to the harbor seal pup found dead on the Scottish island of Skye, its intestines fouled by a small piece of plastic wrapper.

According to the United Nations, at least 800 species worldwide are affected by marine debris, and as much as 80 percent of that litter is plastic. It is estimated that up to 13 million metric tons of plastic ends up in the ocean each year—the equivalent of a rubbish or garbage truck load’s worth every minute. Fish, seabirds, sea turtles, and marine mammals can become entangled in or ingest plastic debris, causing suffocation, starvation, and drowning. Humans are not immune to this threat: While plastics are estimated to take up to hundreds of years to fully decompose, some of them break down much quicker into tiny particles, which in turn end up in the seafood we eat.

Research indicates that half of sea turtles worldwide have devour plastic. Some starve after doing so, mistakenly believing they have eaten enough because their stomachs are chock-full. On many beaches, plastic pollution is so pervasive that it’s affecting turtles’ reproduction rates by altering the temperatures of the sand where incubation occurs.

A recent study found that sea turtles that ingest just 14 pieces of plastic have an increased risk of death. The young are especially at risk because they are not as selective as their elders about what they eat and tend to drift with currents, just as plastic does.

Plastic waste kills up to a million seabirds a year. As with sea turtles, when seabirds ingest plastic, it takes up room in their stomachs, sometimes causing starvation. Many seabirds are found dead with their stomachs full of this waste. Scientists estimate that 60 percent of all seabird species have eaten pieces of plastic, a figure they predict will rise to 99 percent by 2050.

While dolphins are highly intelligent and thus unlikely to eat plastic, they are susceptible to contamination through prey that have ingested synthetic compounds.

Plastic in our oceans affects creatures large and small. From seabirds, whales, and dolphins, to tiny seahorses that live in coral reefs and schools of fish that reside on those same reefs and nearby mangroves.

Plastic waste can encourage the growth of pathogens in the ocean. According to a recent study, scientists concluded that corals that come into contact with plastic have an 89 percent chance of contracting disease, compared with a 4 percent likelihood for corals that do not.

Unless action is taken soon to address this urgent problem, scientists predict that the weight of ocean plastics will exceed the combined weight of all of the fish in the seas by 2050.

After reading the above extract, students are required to make a mini dictionary of their own, developing on the theme of, “Life Under Water”. Write down all the new terms that you have come across while reading, in your self- prepared dictionary with their meanings.

**Note: The dictionary can be made using a chart paper in the form of a booklet.**

**Important key points to make your dictionary:**

* The dictionary has to be pocket friendly.
* The cover page of the dictionary can depict, Ocean Life.
* Ocean Life can be shown using stickers, drawings and other creatives.
* The inside pages can be made attractive by using images of sea animals and plants.

 Write a letter to your future self in 2050, discussing about the climate crisis. In what ways has climate change already changed your lived experience? Or has it? Reflect on what climate change means to you, and what you would like your future self to know about you in 2024.

**Note:** **Letter to be written on A4 sheets and attached in a stick file.**

HINDI:

* “हमारा जल – हमारा जीवन“ अथवा “जल-संरक्षण“ विषय पर दो मित्रों के मध्य हुए वार्तालाप को 80-100 शब्दों में संवाद लिखे।
* A4 size Paper पर जल संरक्षण के विभिन्न तरीकों को चित्र के माध्यम से प्रदर्शित करे तथा इससे होने वाले लाभ पर अपना विचार 80-100 शब्दों में लिखे।
* ग्रीष्मावकाश गृह कार्य A4 Size Paper में करना है।

**MATHEMATICS:**

Q1. If an average adult blue whale weighs about 200,000 kilograms and a school of 15 dolphins each weighs approximately 150 kilograms, estimate the total weight of the dolphins compared to that of the blue whale.

Q2. The population of a certain species of fish estimated to be 5,000 individuals. If the population increases by 8% annually, what will be the population in 5 years?

Q3. The temperature of water decreases by 2 degrees Celsius for every 100 meters of depth. If the surface temperature is 25 degrees Celsius, what is the temperature at a depth of 300 meters?

Q4. A scuba diver descends to a depth of 20 meters and spends 45 minutes underwater. If the diver ascends at a rate of 9 meters per minute, how long will it take to return to the surface?

Q5. A marine biologist is studying the growth rate of coral reefs. If a reef grows at a rate of 5 centimeters per year, how much will it grow in 10 years?

SCIENCE:

**Guidelines:**

* Answer the question on an A4 sheet.
* Use diagrams, drawings, sketches, or collages to visually represent your ideas.
* Write a clear and concise explanation alongside your artwork.
* Include a short bibliography listing any resources you used.
* Label your work neatly with your name, class, and section.
* Submit your completed project in a stick file.

**Chemistry:** (Matter in our Surroundings)

Responsible Consumption and Production: Plastic pollution is a major environmental concern. Create a comic strip that educates people about the problems of single-use plastics and encourages the use of reusable alternatives. You can use your comic to showcase chemical reactions involved in plastic degradation, its impact on the environment, and the benefits of sustainable materials.

**Biology:** (Fundamental Unit of Life)

Life on Land: Deforestation threatens biodiversity and disrupts the balance of ecosystems. Design a mobile representing a healthy forest ecosystem. Include different types of plants and animals on the mobile and explain how each plays a crucial role in maintaining the ecosystem’s health. You can use different colors and shapes to represent different types of cells and their functions within these organisms.

**Physics:**

Q1. Research recent news articles or scientific publications related to break throughs or advancements in the Field of Physics. Choose a topic of interest, such as quantum mechanics, space exploration, or particle physics, and summarize the key findings, Significance, and potential implications of the research.

Q2. Take a field trip or go on a physics Scavenger hunt to observe real-world Examples of physics principles in Action. Visit places like amusement Parks, sports stadiums, or construction Sites to identify instances of motion, Forces, energy transfer, and mechanical Systems. Document Your observations and reflections in a Journal or multimedia presentation.

**Note:** **You are required to make the Holiday Homework in a single stick file.**

Remember:

Be creative!

Use your artwork to enhance your explanation.

Focus on the connection between science and sustainability goals.

SOCIAL SCIENCE:

**Topic:** Disaster Management

SDG Goal: Life Under Water

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| **Sr. No** | **Content** |
| 1 | Acknowledgement  |
| 2 | Contents |
| 3 | Introduction  |
| 4 | What is disaster management?  |
| 5 | Government organisations that help in recovering from a disaster  |
| 6 | Types of Disasters  |
| 7 | Causes behind Disasters  |
| 8 | Consequences of Disasters  |
| 9 | Mitigation Measures  |
| 10 | **Case Study:*** Prepare a case study on any one disaster that took place in India since 2023.
* Insert a map of the affected place.
* Give a brief of the incident.
* Compensatory measures by the Government
 |
| 11 | Conclusion  |
| 12 | Bibliography  |

**Instructions:**

* Holiday Homework must be done in A4 sheets and to be arranged in a clear folder.
* Insert pictures wherever necessary.
* Page Limit: 20 pages.
* All work to be compiled in stick file & to be done using A4 sheets.
* Kindly submit homework on the first working day, after the vacation, for correction.