LIMNOLOGY

LIMNOLOGY – the study of inland waters. In this course, students will:

- Visit the turtle room in our Ethology lab and study learned behaviors and inherited traits.
- Hold an actual Red Eared Slider from our turtle touch tank.
- Take an incredible journey as water molecules and learn about the water cycle.
- Become Limnologists and conduct a water quality analysis in our wet lab using actual scientific equipment.
- Discover whether the claims on the label of a fish food product are accurate by testing them at our test pond.
- Visit Adventure Pond to collect and identify macroinvertebrates.

Limnology
TEKS Blueprint

WC Water Cycle
TB Turtle Barn
pH pH Lab
DP Dry Pond
SP Sky Pond

TEKS	Student Expectation	WC	TB	pH	DP	SP	Readiness Supporting	Verb(s)	Level of Complexity
3.9 A	Observe and describe the physical characteristics of environments and how they support populations and communities of plants and animals within an ecosystem.		✓	✓		✓	Supporting	Observe, Describe	Low (remember)
3.10 B	Investigate and compare how animals and plants undergo a series of orderly changes in their diverse life cycles such as tomato plants, frogs, and lady beetles.					✓	Supporting	Investigate, Compare	High (evaluate)
4.8 B	Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process.	✓					Supporting	Describe, Illustrate	Low (understand)
5.1 A	Demonstrate safe practices and the use of safety equipment as described in the Texas Safety Standards during classroom and outdoor investigations.			✓	✓	✓	S. I. and R.	Demonstrate	Low (understand)
5.2 A	Describe, plan, and implement simple experimental investigations testing one variable.			✓	✓	✓	S. I. and R.	Describe, Implement	High (create)
5.2 B	Ask well defined questions, formulate testable hypotheses, and select and use appropriate equipment and technology			✓	✓	✓	S. I. and R.	Ask, Use, Select, Formulate	High (create)
5.2 C	Collect and record information using detailed observations and accurate measuring.			✓	✓	✓	S. I. and R.	Collect, Observe	High (analyze)
5.2 D	Analyze and interpret information to construct reasonable explanations from direct (observable) and indirect (inferred) evidence.	✓	✓	✓	✓	✓	S. I. and R.	Analyze, Interpret, Construct	High (create)
5.2 E	Demonstrate that repeated investigations may increase the reliability of results.			✓	✓		S. I. and R.	Demonstrate	Low (understand)
5.2 F	Communicate valid conclusions in (both) written (and verbal) form(s).			✓	✓	✓	S. I. and R.	Communicate	High (create)
5.3 A	Analyze, evaluate, and critique scientific explanations by using evidence, logical reasoning, and experimental and observational testing.			✓	✓	✓	S. I. and R.	Analyze, Evaluate, Critique	High (evaluate)
5.3 B	Evaluate the accuracy of the information related to promotional materials for products and services such as nutritional labels.				✓		S. I. and R.	Evaluate	High (evaluate)
5.3 C	Connect grade level appropriate science concepts with the history of science, science careers, and contributions of scientists.	✓		✓	✓	✓	S. I. and R.	Connect	Medium (apply)
5.4	Collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, prisms, mirrors, balances, spring scales, graduated cylinders, beakers, hot plates, meter sticks, magnets, collecting nets, and notebooks; timing devices; and materials to support observations of habitats or organisms such as terrariums and aquariums			✓	✓	✓	S. I. and R.	Collect, Record, Analyze	High (analyze)
5.5 B	Demonstrate that some mixtures maintain physical properties of their ingredients such as iron filings and sand and sand and water.			✓			Supporting	Demonstrate	Low (understand)
5.5 C	Identify changes that can occur in the physical properties of the ingredients of solutions such as dissolving salt in water or adding lemon juice to water.			✓			Supporting	Identify	High (analyze)
5.8 B	Explain how the sun and the ocean interact in the water cycle.	✓					Supporting		Low (understand)
5.9 A	Observe the way organisms live and survive in their ecosystem by interacting with the living and nonliving components.		✓			✓	Readiness	Observe	High (analyze)
5.9 B	Describe the flow of energy within a food web, including the roles of the Sun, producers, consumers, and decomposers.		✓				Readiness	Describe	Medium (apply)
5.10 A	Compare the structures and functions of different species that help them live and survive in a specific environment such as hooves on prairie animals or webbed feet in aquatic animals.		✓				Readiness	Compare	High (analyze)
5.10 B	Differentiate between inherited traits of plants and animals such as spines on a cactus or shape of a beak and learned behaviors such as an animal learning tricks or a child riding a bicycle.		✓				Readiness	Differentiate	High (analyze)

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4.8 B	Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process.	●					Supporting	Describe, Illustrate	Low (understand)
5.1 A	Demonstrate safe practices and the use of safety equipment as outlined in Texas Education Agency-approved safety standards during classroom and outdoor investigations using safety equipment, including safety goggles or chemical splash goggles, as appropriate, and gloves, as appropriate.			●	●	●	S. I. and R.	Demonstrate	Low (understand)
5.2 A	Describe, plan, and implement simple experimental investigations testing one variable.			●	●	●	S. I. and R.	Describe, Implement	High (create)
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