 **New Life Christian Academy**

**SCIENCE - Grade 8th - Teacher Capellán**

**Weekly Lesson Plan (*Plan de Lección- Semana 16 - 18 Marzo, 2020*)**

**Contents (Contenidos) - Chapter 21 - The Ecosystem / Chapter 22 - Organism Relationships**

**Read:**

**\* Pg. 358 - 364 / Section 21A & 21B / Ecosystems / The Abiotic Environment of Ecosystems.**

**Objectives - Students should be able to:**

1. Define ecology and tell the three main types of interactions studied by ecologists.
2. Explain what an ecosystem is and describe the two main components of an ecosystem.
3. Define habitat.
4. Define abiotic environment and list several environmental factors.
5. Trace the water cycle.
6. Describe succession in an ecosystem.
7. Define climax community and pioneer species.

**\* Pg. 364 - 372 / Section 21C & 21D / The Biotic Community / Rhythms in the Ecosystem.**

**Objectives - Students should be able to:**

1. Define biotic community.
2. Explain the roles of producer organisms and consumer organisms and give examples of each.
3. Define limiting factors and give examples.
4. List several types of rhythms found in an ecosystem and explain their importance.
5. Identify several ways in which plants and animals survive seasonal rhythms.

**\* Pg. 375 - 380 / Section 22A / Energy Exchange Between Organisms Objectives - Students should be able to:**

1. Identify examples of relationships between species.
2. Define food chain, food webs, decomposer organisms, and ecological pyramids.
3. Discuss and give examples of the parasite-host relationship.
4. Categorize animals as herbivores, carnivores, or omnivores.
5. Give examples of the predator-prey relationship.

**Answer the Questions:**

* Section Review 21A - Ecosystems - Pg. 359
* Section Review 21B - The Abiotic Environment of Ecosystems - Pg.364
* Section Review 21C - The Biotic Community - Pg. 368
* Section Review 21D - Rhythms in the Ecosystem - Pg. 372
* Section Review 22A - Energy Exchange Between Organisms - Pg. 380

**YouTube Suggested Videos:**

* <https://www.youtube.com/watch?v=sKJoXdrOT70> / Ecosystems – The Dr. Binocs Show / Best Learning Videos for Kids.
* <https://www.youtube.com/watch?v=SNF8b7KKJ2I> / Ecosystems for Kids.
* <https://www.youtube.com/watch?v=GWlPYupCT48> / Ecosystems and Biomes.
* <https://www.youtube.com/watch?v=FhaldPmkoNE&list=PLPMxHexiq9xQrvZOUQuIYoThSUXOEO2JP> / 8th Grade Ecosystems and Environmentalism
* <https://www.youtube.com/watch?v=NHetWkxhpAg> / Ecosystems - Abiotic and Biotic Environment.
* <https://www.youtube.com/watch?v=inVZoI1AkC8> / Feedback loops - Now nature gets its rhythm?
* <https://www.youtube.com/watch?v=uDwxPkn9e7M> / Ecological Feedback Loops.
* <https://www.youtube.com/watch?v=TitrRpMUt0I> / Flow of Energy and Matter through Ecosystem / Ecology / Khan Academy.
* <https://www.youtube.com/watch?v=CZhE2p46vJk> / Food Chains Compilation.

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**Weekly Lesson Plan (*Plan de Lección- Semana 23 - 27 Marzo, 2020*)**

**Contents (Contenidos) - Chapter 22 - Organism Relationships / Chapter 23 - Natural Resources**

**Read:**

**\* Pg. 380 - 388 / Section 22B & 22C / Relationships Between Organisms of the Same Species / Relationships Between Different Species.**

**Objectives - Students should be able to:**

1. Describe and give examples of the following relationships between organisms of the same species: independent relationships, couple relationships, social relationships, animal societies, and competitive relationships within a population.
2. Discuss the social relationships within an ant colony.
3. Describe and give examples of the following relationships between different populations within an ecosystem: competition, commensalism, and mutualism.
4. Identify and give examples of the following survival strategies: camouflage, warning coloration, and mimicry.

**\* Pg. 391 - 399 / Section 23A / Living Things as Natural Resources.**

**Objectives - Students should be able to:**

1. Define natural resource and list several examples.
2. Differentiate between renewable and nonrenewable resources.
3. Explain how humans depend on producer, consumer, and decomposer organisms.
4. Discuss problems associated with man´s use of wildlife.
5. Explain the relationship between hunting, game laws, and game management.
6. Define farming and domesticated organism.
7. List several animals that have become extinct in recent times and explain the events that led to their extinction.
8. Define endangered species and identify several currently endangered species.

**\* Pg. 399 - 458 / Section 23B & 23C / Man´s Role in the Ecosystem / Pollution.**

**Objectives - Students should be able to:**

1. Describe the growth of the human population since the time of Christ.
2. Suggest methods that man can use to conserve fossil fuels.
3. Explain what factors may affect the growth of a population.
4. Discuss doomsday ecology in light of human population growth and the Word of God.
5. Define conservation.
6. List some resources that may need to be conserved.
7. Recognize that fossil fuels are nonrenewable resources.
8. List and describe several energy sources that man is just beginning to develop for modern use.
9. Define pollution.
10. Differentiate between a substance pollutant and an energy pollutant.
11. Differentiate between a biodegradable pollutant and a nonbiodegradable pollutant.
12. Recognize problems associated with the disposal of hazardous substances.
13. Describe water pollution and sewage treatment.
14. List several common components of air pollution.
15. Define smog.
16. Discuss the problems associated with trash disposal and recycling.

**Answer the Questions:**

* Section Review 22B - Relationships Between Organisms of the Same Species. - Pg. 385
* Section Review 22C - Relationships Between Different Species. - Pg. 388
* Section Review 23A – Living Things as Natural Resources - Pg. 399
* Section Review 23B – Man´s Role in the Ecosystem - Pg. 403
* Section Review 23C – Pollution - Pg. 409

**YouTube Suggested Videos:**

* <https://www.youtube.com/watch?v=dKGNsye4HV8> / Relationships Between organisms with Examples.
* <https://www.youtube.com/watch?v=q2zdiLn3gSE> / Interactions between population / Ecology / Khan Academy.
* <https://www.youtube.com/watch?v=GXTLvCrFl2o> / Symbiotic Relationships - Definition and Examples - Mutualism, Commensalism, Parasitism.
* <https://www.youtube.com/watch?v=VECARZ-zhKM> / Ecological Relationships – Competition – Predator and Prey – Symbiosis.
* <https://www.youtube.com/watch?v=KvNsElZt-rE> / Biology: Species, Populations and Communities.
* <https://www.youtube.com/watch?v=ZkKme-b21IE> / Human Influence on Ecosystems.
* <https://www.youtube.com/watch?v=5eTCZ9L834s> / 5 Humans Impacts on the Environment / Khan Academy.
* <https://www.youtube.com/watch?v=fephtrPt6wk> / Air Pollution / What causes Air Pollution? / The Dr. Binocs Show.
* <https://www.youtube.com/watch?v=MEb7nnMLcaA> / Water Pollution / What causes Water Pollution? / The Dr. Binocs Show.
* <https://www.youtube.com/watch?v=RS7IzU2VJIQ> / Plastic Pollution / How humans are turning the World into Plastic?
* <https://www.youtube.com/watch?v=ODni_Bey154> / What is Plastic Pollution? / What causes Plastic Pollution? / The Dr. Binocs Show.
* <https://www.youtube.com/watch?v=V_A78zDBwYE> / Light Pollution / National Geographic.

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**Weekly Lesson Plan (*Plan de Lección- Semana 30 Marzo - 3 Abril, 2020*)**

**Contents (Contenidos) - Chapter 24 - Support and Movement / Chapter 25 - Internal Balance**

**Read:**

**\* Pg. 415 - 421 / Section 24A / Human Skin**

**Objectives - Students should be able to:**

1. Describe the layers of human skin.
2. Explain how the skin protects the body and helps regulate body temperature.
3. Describe the three kinds of burns.

**\* Pg. 422 - 428 / Section 24B & 24C / The Skeletal System / The Muscular System.**

**Objectives - Students should be able to:**

1. Identify major functions of the skeletal system.
2. Describe the typical structure of bone.
3. Compare five different kinds of joints in the skeleton and give examples of each.
4. Distinguish the types of broken bones and discuss how bones heal.
5. Differentiate between voluntary and involuntary muscles.
6. Differentiate between striated and nonstriated muscles.
7. List three functions of the muscular system.

**\* Pg. 431 - 436 / Section 25A / The Heart and Blood Vessels**

**Objectives - Students should be able to:**

1. Define homeostasis.
2. Compare the structure and functions of arteries, veins, and capillaries.
3. Identify the anatomic structures of the heart.
4. Trace the flow of oxygenated and deoxygenated blood through the heart.

**Answer the Questions:**

* Section Review 24A – Human Skin. Pg.421
* Section Review 24B - The Skeletal System. Pg. 426
* Section Review 24C - The Muscular System. Pg. 428
* Section Review 25A - The Heart and Blood Vessels. Pg. 437

**YouTube Suggested Videos:**

* <https://www.youtube.com/watch?v=EGoakiTAW5A> / Skin Model anatomy.
* <https://www.youtube.com/watch?v=OxPlCkTKhzY> / The Science of Skin.
* <https://www.youtube.com/watch?v=Orumw-PyNjw> / The Integumentary System.
* <https://www.youtube.com/watch?v=wKiciIRsgi0> / Anatomy and Physiology of the Integumentary System.
* <https://www.youtube.com/watch?v=ywDOiNEdJVc> / Bones / The Dr. Binocs Show
* <https://www.youtube.com/watch?v=lUP-D4dKp14> / The Skeletal System.
* <https://www.youtube.com/watch?v=TWKZqqU3IZE> / Anatomy and Physiology of the Skeletal System.
* <https://www.youtube.com/watch?v=Vnj9Ay6xmOk> / How your muscles grow? / The Dr. Binocs Show.
* <https://www.youtube.com/watch?v=ynVRDsDC-84> / The Musculoskeletal System / Educational Videos for Kids.
* <https://www.youtube.com/watch?v=Qb9E3jH_PXQ> / Anatomy and Physiology of the Muscular System.

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***Semana Santa - Abril 6 – 10, 2020***