🌟 MY ECOSYSTEM SUPER STUDY GUIDE 🌟

3rd Grade Natural Science • Easy & Visual Exam Summary

1. 💡 What is an Ecosystem?

🤝 Think of it like a giant team! An **ECOSYSTEM** is a place where **LIVING THINGS** and **NON-LIVING THINGS** live together and interact with each other (for example: **the savannah**).

The Team Members: Living vs. Non-Living

🟢 LIVING THINGS (They are alive!)	🔴 NON-LIVING THINGS (NOT alive!)
• Animals 🐘 🦓 🦁 🦒	• Water 💧 🌊
• Plants & Trees 🌳 🌿 🌸 🌻	• Air 💨 ☁️
• Tiny Organisms 🦠 🔬 *(too small to see!)*	• Soil & Rocks ⛰️ 🪨
	• Sunlight ☀️

How They Work Together (Relationships) 🔄

Everything in an ecosystem is connected like a big puzzle 🧩. Both living and non-living things work together:

- 🦓 **Animals** need **water** 💧 to drink and **air** 💨 to breathe.
- 🌿 **Plants** need **sunlight** ☀️, **water** 💧, and **soil** ⛰️ to grow.
- 🐝 **Living things interact with each other:** bees get nectar from flowers 🌸 and birds build nests in trees 🌳.

2. 🍔 Feeding Relationships & Food Chains

In an ecosystem, living things need energy. **Feeding relationships** connect plants and animals:

- 🟢 **PRODUCERS (Plants 🌳🌻):** They **make their own food** using sunlight, water, air, and soil.
- 🔴 **CONSUMERS (Animals 🦓🦁):** They **eat other living things** because they cannot make their own food.

🔗 **THE FOOD CHAIN:** Shows how each living thing gets its food in an ecosystem.

🌿 Grass *(Producer)* ➡️ 🦓 Zebra *(Consumer)* ➡️ 🦁 Lion *(Consumer)*

The zebra eats the grass 🌿😋 • The lion eats the zebra 🦓😋

3. 🗺️ Types of Ecosystems

Group A: BY ENVIRONMENT (Where is it?)

🌊 AQUATIC Ecosystems (In WATER!)	🏜️ LAND Ecosystems (On DRY LAND!)
Living things live **in water**: • **Salt water:** Oceans 🌊 and seas. • **Fresh water:** Rivers 🏞️ and lakes 💧.	Living things live **on land** (need soil, air & plants): • **Deserts** 🐪 *(hot, dry, sandy)* • **Forests** 🐻🌲 *(lots of trees)* • **Polar regions** 🦊❄️ *(very cold, ice & snow)*

Group B: BY HUMAN INFLUENCE (Who changed it?)

🌴 NATURAL Ecosystems	🏙️ ARTIFICIAL Ecosystems
Humans **haven't changed** the environment. Plants and animals live without human contact. *Example:* **Jungles** 🦍🌿.	Humans **have changed** the environment by building roads, houses, and parks. *Example:* **Cities** 🏢🚗.

4. 🎒 Use of Ecosystems (Natural Resources)

We use ecosystems to get **natural resources** that cover our daily needs:

Resource	What do ecosystems give us?
🍎 **Food**	**Plants** give us fruits 🍎 and vegetables 🥕. **Animals** give us meat 🍗, fish 🐟, eggs 🥚, and dairy products 🥛.
🧱 **Raw Materials**	We use **rocks** 🪨, **wood** 🪵, **wool** 🐑, and **cotton** 🌿 to make objects, clothes 👕, medicines 💊, and energy sources ☀️.
💧 **Fresh Water**	We need **fresh water** to drink 🥤, and we also use water for irrigation 🚜, swimming 🏊, sailing ⛵, washing 🧼, and obtaining energy 💡.

5. ⚠️ How Humans Hurt Ecosystems

When we alter ecosystems too much, it causes big problems for plants, animals, and people:

Problem	What happens?
🪓 **Over-exploiting Resources**	• **Overfishing** 🎣🐟: Catching too many fish makes the fish population disappear very quickly. • **Deforestation** 🌲🪓: Cutting down too many trees means the forest takes years to grow again.
🏙️ **Occupying Too Much Space**	Cities, roads, industries, and crops occupy lots of **space** 🏘️🏭, leaving very little space for other living things.
☣️ **Causing Pollution**	• **Light pollution** 💡🌃: Cities have too many bright lights at night. • **Plastic pollution** 🛍️🌊: Throwing away plastic pollutes the sea. • **Harmful emissions** 🚗💨: Cars and factories put dirty smoke into the air.

Consequences of Bad Uses of Ecosystems 🌡️🐻‍❄️

🌡️ Global Warming	🐻‍❄️ Extinction of Living Things
Burning fuels adds **carbon dioxide** to the air and makes the atmosphere and oceans warmer 🔥. Temperatures get higher ☀️ and ice at the North Pole is melting 🧊💧.	Some animals, like **polar bears** 🐻‍❄️, are **endangered**. If they become **extinct**, they will be gone forever.

6. 🌍 How Can We Protect Ecosystems?

> 🌱 **Sustainability** means looking after nature to protect it for everyone in the future. We can make good choices every day!

♻️ The 3 Rs (With a Bottle 🧴)	🌟 More Earth-Friendly Habits
• **Reduce** 🛑: Think before you buy! Get a new bottle only when you need it. • **Reuse** 🎨: Don't throw the old bottle away; use it for something different (like a pencil holder!). • **Recycle** ♻️: Take the bottle to the recycling bin so it can have a "new life" again.	• **Save water & energy** 💡🚰: Turn off taps and lights when you are not using them. • **Respect nature** 🐾🌳: Respect animals and plants, don't drop rubbish 🗑️, and never light a fire 🔥! • **Don't pollute** 🚲🚶 : Walk or cycle to school instead of going by car.