

NATURAL SCIENCE 1



Content

<p>Meet our scientists Page 4</p>	<ul style="list-style-type: none"> • Introduction to the course characters 	
<p>1 Move your body! Parts of the body Page 6</p>	<ul style="list-style-type: none"> • Bones, joints and muscles • Parts of the body • Sections of the body 	<ul style="list-style-type: none"> • Parts of the face • Senses
<p>2 Stay strong, live long! Healthy habits Page 18</p>	<ul style="list-style-type: none"> • Food groups • Five a day 	<ul style="list-style-type: none"> • Sport • Healthy habits
<p>3 Animal planet Animals Page 30</p>	<ul style="list-style-type: none"> • Vertebrates and invertebrates • How animals move • Animal groups 	<ul style="list-style-type: none"> • Wild and domestic animals • Habitats
<p>4 Flower power! Plants Page 42</p>	<ul style="list-style-type: none"> • Parts of a plant • Trees, bushes and grasses 	<ul style="list-style-type: none"> • Wild and cultivated plants • What plants make
<p>5 I'm alive! Living and non-living things Page 54</p>	<ul style="list-style-type: none"> • The circle of life: plants, animals and people are living things 	<ul style="list-style-type: none"> • What living things need • Non-living things
<p>6 Feelings lab Identity, feelings and working together Page 66</p>	<ul style="list-style-type: none"> • Good and bad choices • Behaviour at school and at home 	<ul style="list-style-type: none"> • Helping at home

Let's review ...   Page 78



Projects and experiments

Mindful time

Documentary

<ul style="list-style-type: none">• Build a skeleton.• Make a Body mini book.• Make a potion.	<ul style="list-style-type: none">• Belly breathing	<ul style="list-style-type: none">• Incredible bodies
<ul style="list-style-type: none">• Keep a food diary.• Find out why we need to brush our teeth.	<ul style="list-style-type: none">• Contract and relax your body parts	<ul style="list-style-type: none">• In the supermarket
<ul style="list-style-type: none">• Make an animal habitat.• Find out what birds eat.	<ul style="list-style-type: none">• Sounds of nature	<ul style="list-style-type: none">• Animal trip
<ul style="list-style-type: none">• Find out what plants need to live.	<ul style="list-style-type: none">• Breathe like a tree	<ul style="list-style-type: none">• All about plants
<ul style="list-style-type: none">• Make a crazy garden.• Make an animal poster.• The time of my life!	<ul style="list-style-type: none">• Sensations	<ul style="list-style-type: none">• Living and non-living things
<ul style="list-style-type: none">• Make a postbox for positive messages.• Do a survey to find out what chores your classmates do.	<ul style="list-style-type: none">• Mirrors	<ul style="list-style-type: none">• Good choices

Story 1



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Story 2



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Story 3



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NATURAL SCIENCE 2



Contents

Here we go again! Page 4		
1 Do the locomotion! Page 6	<ul style="list-style-type: none"> • Parts of the body • Bones 	<ul style="list-style-type: none"> • Muscles • Joints
2 An amazing machine Page 18	<ul style="list-style-type: none"> • Senses • Digestive system 	<ul style="list-style-type: none"> • Respiratory system • The stages of life
3 All about animals Page 30	<ul style="list-style-type: none"> • Mammals • Birds • Fish 	<ul style="list-style-type: none"> • Reptiles and amphibians • Molluscs
4 All about plants Page 42	<ul style="list-style-type: none"> • Classifying plants • Deciduous and evergreen trees 	<ul style="list-style-type: none"> • Flowering and non-flowering plants
5 Building blocks Page 54	<ul style="list-style-type: none"> • Natural and non-natural materials • Properties of materials 	<ul style="list-style-type: none"> • Uses of materials • Reversible and irreversible changes
6 Helping me and you Page 66	<ul style="list-style-type: none"> • Tools • Simple machines • Complex machines 	<ul style="list-style-type: none"> • Machines and energy • Inventions

Let's review ...   Page 78



Projects and experiments

Mindful time

Documentary

- Make an x-ray
- Make a muscle
- Make a hand model

- Remember the beginning

- Train your muscles

- Make a stomach
- Find out how much air you can breathe
- Make a *Funny Family* book

- Listen to the gong

- Being strong

- Make a hanging mobile
- Let's make animals!

- Be a butterfly

- Amazing animals!

- Make a plant mural
- Make a deciduous tree
- Investigate and make a class fern

- We are sunflowers

- Forever green

- Make a materials display
- Build a house
- Learn about reversible and irreversible changes

- Different forms

- What is it made of?

- Make a tool mini book
- Let's invent!
- Let's have a race!

- Robot massage

- Round and round

Story 1



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Story 2



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Story 3



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NATURAL SCIENCE 3



Contents

Welcome Page 4		
1 Why do babies have more bones than adults? Page 6	<ul style="list-style-type: none"> • Nervous system • Locomotor system • Sense of hearing 	<ul style="list-style-type: none"> • Sense of sight • Senses of smell and taste • Sense of touch
2 What happens to food inside your body? Page 18	<ul style="list-style-type: none"> • Food groups and nutrients • Digestive system • Circulatory system 	<ul style="list-style-type: none"> • Respiratory system • Excretory system • Reproductive system
3 Which vertebrate has two lives? Page 30	<ul style="list-style-type: none"> • Mammals • Birds • Reptiles 	<ul style="list-style-type: none"> • Amphibians • Fish • Invertebrates
4 How do plants get their food? Page 42	<ul style="list-style-type: none"> • Parts of a plant • Plant classification by stem 	<ul style="list-style-type: none"> • Plant reproduction: flowering plants and non-flowering plants • Plant nutrition
5 Can you help save the planet? Page 54	<ul style="list-style-type: none"> • Matter: changes of state • Types of energy: light, thermal, sound, kinetic and electrical 	<ul style="list-style-type: none"> • Materials: conductors and insulators • Mixtures
6 What is a simple machine? Page 66	<ul style="list-style-type: none"> • Simple machines: inclined plane, screw, pulley, wheel and axle, lever and wedge 	<ul style="list-style-type: none"> • Inventions: steam engine and telegraph

Questions and Study aids



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Projects and experiments

Documentaries

<ul style="list-style-type: none">• Make a mural about a season and the five senses• Build a pinhole camera	<ul style="list-style-type: none">• Helping the senses
<ul style="list-style-type: none">• Write a rap about nutrition• Build a model of the respiratory system	<ul style="list-style-type: none">• Say no to fast food
<ul style="list-style-type: none">• Give a presentation about animals• Find out why animals use camouflage	<ul style="list-style-type: none">• The animal kingdom
<ul style="list-style-type: none">• Make a field journal about plants• Germinate a seed	<ul style="list-style-type: none">• The plant kingdom
<ul style="list-style-type: none">• Create signs to remind people to save water and energy• Observe the effect of thermal energy on liquids	<ul style="list-style-type: none">• Energy and matter
<ul style="list-style-type: none">• Design a complex machine• Communicate using Morse code	<ul style="list-style-type: none">• Incredible inventions

More hands on



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NATURAL SCIENCE 4



Contents

Welcome	Page 4		
1 How are we made?	Page 6	<ul style="list-style-type: none"> • Respiratory system • Circulatory system 	<ul style="list-style-type: none"> • Reproductive systems • Development of a baby
2 How are you feeling?	Page 20	<ul style="list-style-type: none"> • Common illnesses • Medicine • First aid 	<ul style="list-style-type: none"> • Healthy habits • Unhealthy habits
3 Is a sponge an animal?	Page 30	<ul style="list-style-type: none"> • Vertebrate nutrition • Vertebrate respiration 	<ul style="list-style-type: none"> • Vertebrate reproduction • Classification of invertebrates
4 Why are plants so important?	Page 44	<ul style="list-style-type: none"> • Review of the parts of a flower • Plant reproduction 	<ul style="list-style-type: none"> • Plant nutrition • Photosynthesis
5 Which forces are invisible?	Page 54	<ul style="list-style-type: none"> • Mass and volume • Properties of materials 	<ul style="list-style-type: none"> • Contact and non-contact forces • Density and buoyancy
6 How have machines changed the world?	Page 68	<ul style="list-style-type: none"> • Inclined plane • Pulley • Levers 	<ul style="list-style-type: none"> • Archimedes • Isaac Newton • Inventions

Questions and Study aids



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Projects and experiments

Documentaries

<ul style="list-style-type: none">• Create a 3D body systems mural• Check vital signs	<ul style="list-style-type: none">• Respiration and circulation
<ul style="list-style-type: none">• Create a healthy habits awareness campaign• Learn about the negative effects of alcohol	<ul style="list-style-type: none">• Healthy and unhealthy habits
<ul style="list-style-type: none">• Make wildlife park signs about vertebrates and invertebrates• Observe the effect of carbon dioxide on litmus paper	<ul style="list-style-type: none">• Marine invertebrates
<ul style="list-style-type: none">• Create a quiz about plant reproduction and nutrition• Observe plant respiration	<ul style="list-style-type: none">• Plant reproduction
<ul style="list-style-type: none">• Make a materials classroom display• Predict if objects will sink or float	<ul style="list-style-type: none">• Forces
<ul style="list-style-type: none">• Create a slide presentation on simple and complex machines• Make a lever	<ul style="list-style-type: none">• Inventions that changed the world

More hands on ...



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NATURAL SCIENCE 5



Contents

Welcome Page 4		
1 Living things Page 6	<ul style="list-style-type: none"> • Animal and plant cells • Cells, tissues, organs, organ systems • The five kingdoms 	<ul style="list-style-type: none"> • Dichotomous keys • Weird and wonderful organisms
2 Ecosystems Page 18	<ul style="list-style-type: none"> • Elements of an ecosystem • Grassland ecosystems • Forest ecosystems 	<ul style="list-style-type: none"> • Desert ecosystems • Aquatic ecosystems • Urban ecosystems
3 The biosphere Page 30	<ul style="list-style-type: none"> • Food chains • Food webs • Threats to biodiversity 	<ul style="list-style-type: none"> • Protecting species
4 Energy Page 42	<ul style="list-style-type: none"> • Different forms of energy • Energy transformations • Renewable energy sources 	<ul style="list-style-type: none"> • Non-renewable energy sources
5 Sound, light and heat Page 54	<ul style="list-style-type: none"> • Properties of sound • Light sources and properties of light 	<ul style="list-style-type: none"> • Reflection • Refraction • Properties of heat
6 Electricity Page 66	<ul style="list-style-type: none"> • Electrical charges • Static electricity • Current electricity 	<ul style="list-style-type: none"> • Edison and the lightbulb • Famous inventors and inventions

Questions and Study aids



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Projects and experiments

Documentaries

- Make a *Book of life*
- Discover why plants have a cell wall

- Living or non-living?

- Do a presentation on an ecosystem
- Investigate how animals survive the cold of the Arctic tundra

- Amazing adaptations

- Create and promote your own nature reserve
- Find out the best way to clean up an oil spill

- Cooperation is key

- Create a plan to save energy at home
- Discover how important light is for plants

- Shine on sunny sun

- Design a campaign warning about the risks of too much energy
- Investigate how sound travels and why telephones used to have cords

- Hear energy, see energy, feel energy

- Design and build a light-up board game
- Find out what happens when you change components in an electrical circuit

- Electricity everywhere

**Extra
activities**

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NATURAL SCIENCE 6



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1 Interaction	Page 6
2 Nutrition	Page 18
3 Reproduction	Page 32
4 Mixtures	Page 44
5 Chemical reactions	Page 56
6 Magnetism	Page 66

<ul style="list-style-type: none"> • Sense organs • Nervous system 	<ul style="list-style-type: none"> • Musculoskeletal system • Reflexes
<ul style="list-style-type: none"> • Stages of nutrition • Food groups and nutrients • Digestive system 	<ul style="list-style-type: none"> • Circulatory system • Respiratory and excretory systems • First aid techniques
<ul style="list-style-type: none"> • Human life cycle • Male reproductive system 	<ul style="list-style-type: none"> • Female reproductive system • Stages of reproduction
<ul style="list-style-type: none"> • Mixtures and states of matter • Homogeneous and heterogeneous mixtures 	<ul style="list-style-type: none"> • Magnetic separation • Filtration • Evaporation and distillation
<ul style="list-style-type: none"> • Characteristics of chemical reactions • Combustion 	<ul style="list-style-type: none"> • Oxidation • Fermentation
<ul style="list-style-type: none"> • Magnets and magnetism • Magnetic fields 	<ul style="list-style-type: none"> • Attraction and repulsion • The Earth's magnetic field • Electromagnets

Questions and Study aids  **Page 78**

Projects and experiments

Documentaries

- Create a comic book about the nervous system
- Investigate how the brain can affect our reflexes

- Sensing our world

- Record a podcast about advances in science
- Find out how bacteria are spread

- Working together: look what your body can do

- Create a *My Life* scrapbook
- Discover how to extract genetic material from cells

- Changes over time

- Experiment with mixtures and create a poster
- Investigate how chromatography works

- Messy and not so messy mixtures

- Write a report about chemical reactions and create a class magazine
- Discover how important oxygen is for combustion

- Different reactions

- Design and demonstrate a magnetism experiment for a science fair
- Investigate the relationship between electricity and magnetism

- It's all about the field

Extra activities

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