

1. Record Nr.	UNINA9910810144603321
Titolo	Hands-on science and technology : an inquiry approach . Grade 4 Ontario // series editor, Jennifer Lawson
Pubbl/distr/stampa	Winnipeg, Manitoba : , : Portage & Main Press, , [2018] ©2018
ISBN	1-55379-939-9
Descrizione fisica	1 online resource (349 pages)
Collana	Hands-On Science and Technology for Ontario
Disciplina	372.35044
Soggetti	Science - Study and teaching (Elementary) - Activity programs
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Intro -- Introduction to Hands-On Science and Technology for Ontario, Grade 4 -- Introduction to Hands-On Science and Technology -- Program Introduction -- The Inquiry Approach to Science and Technology -- 21st Century Teaching and Learning -- The Goals of the Science and Technology Program -- Hands-On Science and Technology Strands and Expectations -- Hands-On Science and Technology Fundamental Concepts and Big Ideas -- Hands-On Science and Technology Program Principles -- Infusing Indigenous Perspectives -- Cultural Connections -- Land-Based Learning -- Technology -- Sustainability -- Program Implementation -- Program Resources -- Classroom Environment -- Planning Units-Timelines -- Classroom Management -- Classroom Safety -- Scientific Inquiry Skills: Guidelines for Teachers -- Observing -- Questioning -- Exploring -- Classifying -- Measuring -- Communicating, Analyzing, and Interpreting -- Predicting -- Inferring -- Inquiry Through Investigation and Experiments -- Inquiry Through Research -- Online Considerations -- Addressing Students' Literacy Needs -- Technological Problem Solving -- Makerspace -- The Hands-On Science and Technology Assessment Plan -- Assessment for Learning -- Assessment as Learning -- Assessment of Learning -- Performance Assessment -- Portfolios -- Evidence of Student Achievement Levels for Evaluation -- Important Note to Teachers -- References -- Assessment Reproducibles -- Achievement Chart for Science and Technology -- Unit 1 Habitats and

Communities -- Introduction -- Unit Overview -- Curriculum Correlation -- Resources for Students -- What Do We Know About Habitats and Communities? -- Why Do Plants and Animals Live in Certain Habitats? -- Which Organisms Are Found in Our Local Habitats? -- How Can We Measure Populations in a Habitat?. How Do Plants and Animals Adapt to Survive in Their Environment? -- What Relationships Occur Between Populations Within a Community? -- What Are the Characteristics of Herbivores, Carnivores, and Omnivores? -- What Are the Relationships Between Predators, Prey, and Scavengers? -- What Are the Characteristics of Producers, Consumers, and Decomposers? -- What Is a Food Chain? -- What Is a Food Web? -- How Are Plants and Animals Important to Humans and to the Environment? -- How Can We Create Living Habitats? -- What Are Some Natural and Human Impacts on Organisms in the Environment? -- Inquiry Project: What Can I Do to Protect Habitats and Communities? --

Unit 2 Pulleys and Gears -- Introduction -- Unit Overview -- Curriculum Correlation -- Resources for Students -- What Do We Know About Forces and Machines? -- How Do Wheels and Axles Work? -- How Do Gears Help Make Work Easier? -- What Can We Learn About Gears and Direction of Movement? -- How Can We Design and Construct Devices With Working Gears? -- How Does a Single-Fixed Pulley Make Work Easier? -- How Do Movable and Compound Pulleys Make Work Easier? -- How Can We Design and Construct a Working Pulley System? -- What Are the Advantages and Disadvantages of Using Machines With Pulleys and Gears? -- Inquiry Project: How Can We Design and Build a System of Pulleys and Gears for a Specific Purpose? --

Unit 3 Light and Sound -- Introduction -- Unit Overview -- Curriculum Correlation -- Resources for Students -- What Do We Know About Light? -- How Does Light Travel? -- How Does Light Reflect? -- How Well Does Light Pass Through Different Materials? -- How Can We See Light's Many Colours? -- How Has Light Technology Changed Over Time? -- Inquiry Project: How Can I Design and Construct an Optical Device to Transmit and Reflect Light? -- What Do We Want to Learn About Sound?.

How Is Sound Created? -- What Is Pitch? -- How Do Sound Waves Travel? -- Which Materials Are Insulators or Conductors of Sound? -- How Can We Amplify Sound? -- How Do We Hear Sound, and How Can We Protect Our Sense of Hearing -- How Do Musical Instruments Use Sound Energy? -- How Can We Design and Construct Musical Instruments Using Various Materials? -- Inquiry Project: What Can We Learn About Sound Technology? --

Unit 4 Rocks and Minerals -- Introduction -- Unit Overview -- Curriculum Correlation -- Resources for Students -- What Do We Know About Rocks and Minerals? -- How Can We Compare and Classify Rocks and Minerals? -- How Can Minerals Be Classified? -- What Are Some Uses for Rocks and Minerals? -- How Are Fossils Formed? -- Inquiry Project: How Are Rocks and Minerals Mined From the Earth? -- How Does Mining Impact Habitats and Communities? -- References -- Appendix: Image Banks -- About the Contributors.
