

Science Curriculum Links

CONSERVATION IN ACTION: An Educator's Guide to Species at Risk in BC for Grades 8 - 12

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Overview of Module One: An Introduction to Species at Risk

ACTIVITY 1: What Do You Know About SAR? Intro to Species at Risk

An interactive activity that begins with a series of true/false statements to introduce the concepts associated with species at risk of potential extinction, followed by a group analysis of a case example.

ACTIVITY 2: What Species are at Risk in Your Community?

After a classroom-based introduction to the rationale and methods of field investigation of species at risk, a field trip to a local ecosystem introduces students to species at risk, their habitat and the historical geography of the area.

ACTIVITY 3: Species at Risk in the News

Working in small groups, students complete a project-based learning activity to research and produce a student magazine or other media to inform and take action on local species at risk.

KEY:

✓ = general link

✓ = direct link

* = see Elaborations on BC Ed new curriculum websites

Subject: Life Sciences 11

Big Ideas	Learning Standard: Content	Activity			Learning Standard: Curricular Competencies	Activity		
		1	2	3		1	2	3
Characteristics of Living Things: All living things have common characteristics.	cells are the basic unit of life	✓	✓	✓	Questioning and predicting			
					Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest	✓	✓	✓
Process of Evolution: Living things evolve over time.	evolutionary change: five agents of evolutionary change	✓	✓	✓	Make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world	✓	✓	✓
	speciation: divergent evolution, convergent evolution, co-evolution	✓	✓	✓	Formulate multiples hypotheses and predict multiple outcomes		✓	✓
					Planning and conducting			
Taxonomy: Organisms are grouped on the basis of identifiable similarities.	taxonomy principles for classifying organisms	✓	✓	✓	Collaboratively and individually plan, select, and use appropriate investigation methods, including field work and lab experiments, to collect reliable data (qualitative and quantitative)		✓	✓
					Assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods		✓	
					Use appropriate SI units and appropriate equipment, including digital technologies, to systematically and accurately collect and record data		✓	
					Apply the concepts of accuracy and precision to experimental procedures and data: significant figures, uncertainty, scientific notation		✓	
					Processing and analyzing data and information			
					Experience and interpret the local environment		✓	✓
					Apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information		✓	✓
					Seek and analyze patterns, trends, and connections in data, including describing relationships between variables (dependent and independent) and identifying inconsistencies		✓	✓
					Construct, analyze and interpret graphs (including interpolation and extrapolation), models and/or diagrams		✓	✓
					Use knowledge of scientific concepts to draw conclusions that are consistent with evidence	✓	✓	✓
					Analyze cause-and-effect relationships	✓	✓	✓



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Big Ideas	Learning Standard: Content	Activity			Learning Standard: Curricular Competencies	Activity		
		1	2	3		1	2	3
					Evaluating			
					Evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions		✓	
					Describe specific ways to improve their investigation methods and the quality of the data		✓	
					Evaluate the validity of and limitations of a model or analogy in relation to the phenomenon modelled			
					Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and secondary sources	✓	✓	✓
					Consider the changes in knowledge over time as tools and technologies have developed			
					Connect scientific explorations to careers in science			
					Exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations and to evaluate claims in secondary sources		✓	✓
					Consider social, ethical, and environmental implications of the findings from their own and others' investigations	✓	✓	✓
					Critically analyze the validity of information in secondary sources and evaluate the approaches used to solve problems	✓	✓	✓
					Assess risks in the context of personal safety and social responsibility		✓	
					Applying and innovating			
					Contribute to care for self, others, community, and world through personal or collaborative approaches		✓	✓
					Co-operatively design projects with local and/or global connections and applications			✓
					Contribute to finding solutions to problems at a local and/or global level through inquiry		✓	✓
					Implement multiple strategies to solve problems in real-life, applied, and conceptual situations		✓	✓
					Consider the role of scientists in innovation			
					Communicating			
					Formulate physical or mental theoretical models to describe a phenomenon			
					Communicate scientific ideas, claims, information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations		✓	✓
					Express and reflect on a variety of experiences, perspectives, and worldviews through place		✓	✓

