

Human Activity and the Environment – Teacher's Kit

Slide set #1: What is an ecosystem?



Release date: September 2014



Statistics
Canada

Statistique
Canada

Canada

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada, visit our website, www.statcan.gc.ca.

You can also contact us by

email at infostats@statcan.gc.ca,

telephone, from Monday to Friday, 8:30 a.m. to 4:30 p.m., at the following toll-free numbers:

- | | |
|---|----------------|
| • Statistical Information Service | 1-800-263-1136 |
| • National telecommunications device for the hearing impaired | 1-800-363-7629 |
| • Fax line | 1-877-287-4369 |

Depository Services Program

- | | |
|------------------|----------------|
| • Inquiries line | 1-800-635-7943 |
| • Fax line | 1-800-565-7757 |

To access this product

This product, Catalogue no. 16-507-X, is available free in electronic format. To obtain a single issue, visit our website, www.statcan.gc.ca, and browse by “Key resource” > “Publications.”

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, Statistics Canada has developed standards of service that its employees observe. To obtain a copy of these service standards, please contact Statistics Canada toll-free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under “About us” > “The agency” > “Providing services to Canadians.”

Published by authority of the Minister responsible for
Statistics Canada

© Minister of Industry, 2014

All rights reserved. Use of this publication is governed by the
Statistics Canada Open Licence Agreement (www.statcan.gc.ca/reference/copyright-droit-auteur-eng.htm).

Cette publication est aussi disponible en français.

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and goodwill.

Standard symbols

The following symbols are used in Statistics Canada publications:

- | | |
|----------------|--|
| . | not available for any reference period |
| .. | not available for a specific reference period |
| ... | not applicable |
| 0 | true zero or a value rounded to zero |
| 0 ^s | value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded |
| P | preliminary |
| r | revised |
| X | suppressed to meet the confidentiality requirements of the <i>Statistics Act</i> |
| E | use with caution |
| F | too unreliable to be published |
| * | significantly different from reference category ($p < 0.05$) |

Set #1: What is an ecosystem?

Set #1 of a three-part series, this presentation and related learning materials include the following activities:

- Learners discuss possible understandings of 'ecosystem' and ecosystem attributes.
- Learners identify images that reflect the three attributes of an ecosystem.
- Learners identify the differences between ecosystems and habitats.
- Learners use the attributes to judge whether the various environments are ecosystems.

Key learning outcomes:

- understand the attributes of ecosystems
- understand the importance of studying ecosystems

Intended audience: grades 7 to 12 social studies, geography, science, biology, and environmental education classes; introductory post-secondary

These PowerPoint presentations and corresponding teacher notes and activities accompany and support the learning activities for "What is an ecosystem?" and the Statistics Canada publication, *Human Activity and the Environment 2013: Measuring ecosystem goods and services in Canada*.

Title slide

© kjay / Fotolia.com

References

kjay, 2014, Douglas Fir Tree Silhouette, <http://us.fotolia.com/id/5470456> (accessed May 28, 2014).

Think about the task

Today's task

Is this an ecosystem?



© Linejka / Fotolia.com

What will I learn?

- why it might be important to study ecosystems
- how to identify the key attributes of ecosystems
- how ecosystems and habitats differ

Slide 1

References

Linejka, 2014, Polar Bear, <http://us.fotolia.com/id/64341859> (accessed May 28, 2014).

Decode the word

What is an **ecosystem**?
What **attributes** of an ecosystem can be identified in the picture?



© sababa66 / Fotolia.com

Slide 2

THINK about the word and the picture

TALK to a partner

SHARE with the class

References

sababa66, 2014, fisherman on the boat, <http://us.fotolia.com/id/57707069> (accessed May 28, 2014).

Identify the attributes

Ecosystems are
communities of living species...



© chbaum / Fotolia.com



© sommai / Fotolia.com

LOOK at the images carefully
DESCRIBE what you see to your partner
IDENTIFY which image best exhibits this
attribute

Slide 3

References

chbaum, 2014, Bunch of seals, <http://us.fotolia.com/id/47942502> (accessed July 3, 2014).

sommai, 2014, fish in drinking glass, <http://us.fotolia.com/id/64887085> (accessed May 28, 2014).

Identify the attributes

Ecosystems are communities of living species,
together with their environment...



© simonjohnsen / Fotolia.com



© sithikorn / Fotolia.com

LOOK at the images carefully
DESCRIBE what you see to your partner
IDENTIFY which image best exhibits this
attribute

Slide 4

References

simonjohnsen, 2014, ducks and geese round a frozen pond, <http://us.fotolia.com/id/50843084> (accessed July 3, 2014).

sithikorn, 2014, Empty Space in a Parking Lot, <http://us.fotolia.com/id/66262262> (accessed July 9, 2014).

Identify the attributes

Ecosystems are communities of living species, together with their environment, ***that function and interact as a unit.***



© JGade / Fotolia.com



© Not Rich Ritchie / Fotolia.com

LOOK at the images carefully
DESCRIBE what you see to your partner
IDENTIFY which image best exhibits this attribute

Slide 5

References

JGade, 2014, Common Gull, <http://us.fotolia.com/id/24281289> (accessed July 3, 2014).

Not Rich Ritchie, 2014, grizzly cub with fish near mother, <http://us.fotolia.com/id/16051947> (accessed July 3, 2014).

Is this an ecosystem?



R. Whitman / U.S. Geological Survey

LOOK at the image carefully

DECIDE which attributes are present

DECIDE which attributes are not present

Slide 6

References

Whitman, Richard, 2013, Great Lakes Beach Health, U.S. Geological Survey, http://gallery.usgs.gov/photos/05_24_2013_gkb4Erq11X_05_24_2013_3 (accessed April 24, 2014).

What's the difference?

An *ecosystem* and *habitat* are different but closely related.

What is the difference between an ecosystem and a habitat?



T. Martin / U.S. Geological Survey



© staras / Fotolia.com

Slide 7

References

- Martin, Tom, 2012, A Hermit Thrush on the Nest in Arizona, U.S. Geological Survey, http://gallery.usgs.gov/photos/01_06_2012_mri7LXw33E_01_06_2012_1 (accessed April 24, 2014).
staras, 2014, Empty bird's nest closeup, <http://us.fotolia.com/id/62405797> (accessed May 28, 2014).

Is this an ecosystem?



© Linejka / Fotolia.com

LOOK at the image carefully

DECIDE if this is an ecosystem

RECORD your reasons

SHARE your top reasons

Slide 8

References

Linejka, 2014, Polar Bear, <http://us.fotolia.com/id/64341859> (accessed May 28, 2014).