Teacher Resource

Episode 2
19th February 2019

Insect Extinction

Focus Questions

1. In pairs, discuss the *Insect Extinction* story and record the main points of the discussion.
2. How many different insect species are there in the world?
3. A study has found that over the past decade the world's insect populations have reduced by
    a. 1.4%
    b. 14%
    c. 41%
4. Why are our insect populations declining? Give one reason.
5. What do you call someone who studies insects?
6. Why are insects so important to our ecosystem? Give an example of one of their important roles.
7. What would happen if insects were removed from the food web?
8. How can people help care for insects?
9. What do you understand more clearly since watching the BTN story?
10. Illustrate an aspect of the *Insect Extinction* story.

Activity

What do you see, think and wonder?

After watching the BTN *Insect Extinction* story, students will respond to the following questions:

- What did you SEE in this video?
- What do you THINK about what you saw in this video?
- What did you LEARN from this story?
- What was SURPRISING about this story?
- Why are insects important?

Students will then think of a question they would like to ask the entomologist featured in the story. Students can leave a message in the comments section on the BTN *Insect Extinction* story page.

Activity

KWLH

Discuss the BTN *Insect Extinction* story as a class. What questions were raised in the discussion and what are the gaps in their knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

Key Learning

Students will investigate the importance of insects to the ecosystem.

Curriculum

Science – Year 5
Living things have structural features and adaptations that help them to survive in their environment.

Science – Year 6
The growth and survival of living things are affected by physical conditions of their environment.

Science – Year 7
Classification helps organise the diverse group of organisms.

Interactions between organisms, including the effects of human activities can be represented by food chains and food webs.

What do I know?	*What do I want to know?*	*What have I learnt?*	*How will I find out?*

Activity

Topics of inquiry

Students will start to think like scientists and develop their own question/s for inquiry, collecting and recording information from a wide variety of sources. Students may develop their own question for inquiry or select one or more of the questions below.

- What makes an insect an insect? Find a definition for insect and then compare your definition with that of your classmates.
- What are some of the main threats to the survival of insects? Choose one insect and research the threats to its survival.
- Why should we protect insects? Write a persuasive piece of writing explaining your reasons.
- What happens when an insect becomes extinct? If one species in the food chain becomes extinct how would it affect the rest of the chain? Choose an insect species and explore its role in the food chain.
- Why are insects important? Think of creative ways to raise awareness about the issues raised in the BTN *Insect Extinction* story.
- What might happen if we don't look after our insects? What would the populations of insect species look like in 30 years' time? Make some predictions.

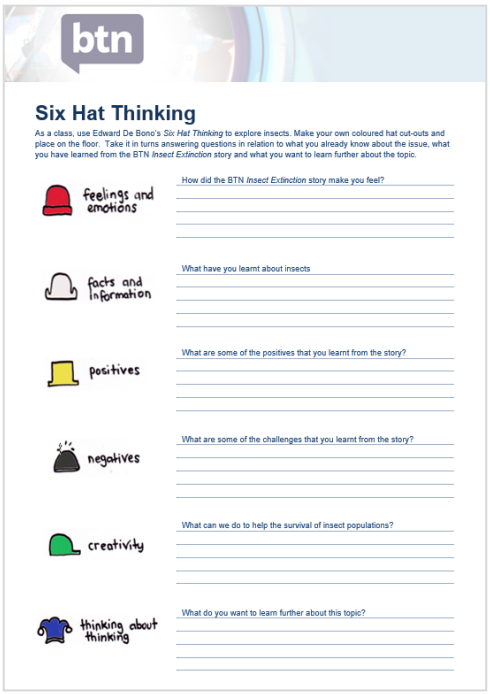
Are your students curious about insects? Choose one question about insects that you would like answered as a class. Send your question into The Conversation: Curious Kids for an expert answer. For example, Do butterflies remember being caterpillars? Or How do moths eat our clothes?.

Activity

Six Hat Thinking

As a class, use Edward De Bono's Six Hat Thinking to explore insects. Make your own coloured hat cut-outs and place on the floor. Students will take it in turns answering questions in relation to what they already know about the issue, what they have learned from the BTN *Insect Extinction* story and what they want to learn further about the topic.

Print this worksheet (featured at the end of this activity) for students to respond to a range of questions about insects.



Reflection

After this activity, ask students to reflect on what they have learnt. Students can include details about how their thinking on this issue has changed and why they think we should act.

Activity

Investigation

Provide students with the opportunity to think and behave like scientists. In this activity students will be given the mission to explore a natural habitat in their local area, identify insects in their habitat and document what they find. Use the following as a guide. Students may work individually or in small groups.

Plan

Students will plan a visit to a local nature reserve or their own school yard to explore and identify insects. Students will need to write a list of tools they may need for the investigation, for example: pen and paper for taking notes, camera and magnifying glass. Students will predict insects they might see and find. Students will think about what an entomologist would need on an investigation.

Explore

Students will visit the habitat and carry out an exploration of the area. Students will choose a spot in the environment to investigate. Consider exploring the habitat from different angles, closeup or far away. Look and listen for evidence that insects live in the area.

Collect

Students will choose their favourite insect to explore in detail. Students will collect as much data as they can about that insect and record what they find. Students may write notes and sketch what they see to help in their investigation. Students may want to record what they see with a stills or video camera.

Share

Students will return to the classroom and share/compare their findings.

Analyse

Students will analyse their findings and write a short summary of their investigation. Students will respond to the following questions:

- Did you find any insects during your investigation? If yes, identify and describe what you found. If you didn't see any insects did you find any evidence that insects live in the area?
- How could you help protect this habitat?

Research

Students will research an insect, and respond to the following:

- What does the insect look like? Describe its physical characteristics.
- What is its classification?
- What is the life cycle of the insect?
- What role does the insect play in the ecosystem?
- Why is this insect important?

Reflect

Students will reflect on the investigation by responding to one or more of the following questions:

- What did you enjoy about this investigation?
- What did you find surprising?
- What would you do differently next time?

Activity

Create a new insect species

Students will use their imagination and create new insect species. Students will imagine they have discovered a new species of insect which has never been seen before. Use the following as a guide for this activity:

- Illustrate the new insect using only a black felt-tip pen on a piece of A4 art paper – include as much detail as you can.
- Give the insect a common and scientific name.
- Describe what the insect looks like – what are some of its physical characteristics?
- Describe its habitat and how it behaves in its habitat.
- Does it have any interesting or unique features? For example. any adaptations.

Useful Websites

Australian Museum – Insects
https://australianmuseum.net.au/learn/animals/insects/

ABC Education – Mini Beasts
http://education.abc.net.au/home#!/topic/495556/minibeasts

ABC News – Insect population and species decline a `wake-up call', scientists say
https://www.abc.net.au/news/science/2019-02-12/insect-species-in-decline-and-facing-extinction/10804094

Royal Entomological Society - Why are insects important?
https://www.youtube.com/watch?v=KgZ_YdKPMdM

ABC Education - Minibeast games
http://education.abc.net.au/home#!/media/2806409/minibeast-games

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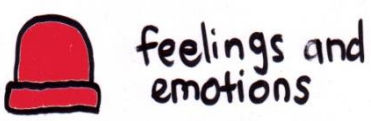
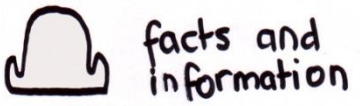
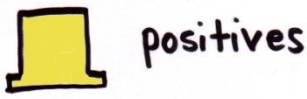


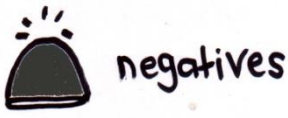
How did the BTN *Insect Extinction* story make you feel?



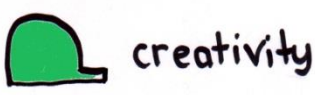
What have you learnt about insects?



What are some of the positives that you learnt from the story?



What are some of the challenges that you learnt from the story?



What can we do to help the survival of insect populations?

What do you want to learn further about this topic?