

1b) Summative assessment task(s):

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

Students will research an insect. They will create a 'wanted alive' poster to display the importance of their insect for the planet.

Students will gather information about one species of insect (different classes choose different orders of insects to focus on – to be shared between classes later) and then write a report and create an artistic product to share with the grade level.

Included in the report about an insect, students will write a paragraph explaining the importance of their insect for the survival of the planet.

2. What do we want to learn?

What are the key concepts (form, function, causation, change, connection, perspective, responsibility, reflection) to be emphasized within this inquiry?

Key Concepts: connection and change

Related Concepts: resources, adaptation, habitat

What lines of inquiry will define the scope of the inquiry into the central idea?

Various ways that living organisms meet their needs.

Why living things are interdependent.

Responsibilities for protecting our environment.

How changes in a habitat affects animals, particularly insects.

What teacher questions/provocations will drive these inquiries?

•What would happen to the grasshopper if there was a drought and crops died?

•How does building homes in new areas effect the insects that live there?

•Why do you think some insects lived for millions of years?

•What are some good insects in our school gardens?

•How can we protect those insects?

3. How might we know what we have learned?

This column should be used in conjunction with “How best might we learn?”

What are the possible ways of assessing students’ prior knowledge and skills? W
This column should be used in conjunction with “How best might we learn?”

We can give the students a pretest before the unit to assess what their understanding is about the body parts and life cycle of common insects like lady bugs and butterflies.

Whole classes can create a KWL chart to assess prior knowledge, misconceptions, and list questions to foster future discussions.

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

Living organisms meet their needs in various ways.

Students can explain what they understand of the food chain (this can be apart of the KWL)

All living things are interdependent.

When students discuss the food chain that will assess their understanding of insect interdependence.

We are responsible for protecting our environment.

This again can be discussed in the KWL whole group discussion.

The evidence looked for will be an understanding that all living things needs food, water, and shelter to live. Students will need to explain how a simple food chain works with the sun and producers at the bottom of the chain.

4. How best might we learn?

What are the learning experiences suggested by the teacher and/or students to encourage the students to engage with the inquiries and address the driving questions?

Inquiry/ Discovery:

Students will sort and categorize different insects into groups.

Students will help create an insect habitat for observation.

Students will design experiments on insect behavior.

Students will go around the school and look for insect habitats. The whole class will make a list of places that insects were found. Students will compare and contrast the environments insects preferred.

Reflecting:

Students will reflect on all the things insects do to help the environment and understand human responsibility for helping insects survive. They will also understand that all living things are dependent on each other for survival.

What opportunities will occur for ALTs development and for the development of the attributes of the learner profile?.

ALTs:

Research- researching, observing, recording

Students will research insects and create a poster that will inform others of the importance of their insect on the environment.

Thinking – acquisition of knowledge about insects and interdependence between species

Evaluation- making a judgement based on knowledge gained

Learner Profile Attributes:

Students will be **inquirers** as they acquire new knowledge through discussion, observation and research. They will be, or become, **caring and principled** as they learn to appreciate the interconnectedness of all living organisms. They will become **knowledgeable** on the topic.

5. What resources need to be gathered?

What people, places, audio-visual materials, related literature, music, art, computer software, etc, will be available?

We will collect various insects for student observation. (ladybugs, hissing cockroaches, walking sticks, ants, praying mantis)

For the student insect research projects the teacher will collect books and print out online resources, including MyOn book bundles, to aid students in their research.

The teacher will provide materials for students to build their insects habitat out of boxes, paper, and clay.

How will the classroom environment, local environment, and/or the community be used to facilitate the inquiry?

We will use the pollinator garden for observing and collecting insects. We will set up habitats in the classroom to observe complete and incomplete metamorphosis. We will visit the Houston Museum of Natural History to learn more about insects. We can use connections at Rice University biology department to invite speakers.

6. To what extent did we achieve our purpose?

Assess the outcome of the inquiry by providing evidence of students' understanding of the central idea. The reflections of all teachers involved in the planning and teaching of the inquiry should be included.

Students seemed to understand the concept that insects are critical for the survival of our planet. Students wrote a paragraph about their insect's importance. Even if that importance is to be a part of a larger food chain, like the mayfly.

We think the connections could have been solidified if the entire class focused on one species and discussed how that species is important for the survival of the planet. With so many different types of insects being researched some students had a harder time than others in making connections to the central idea.

How you could improve on the assessment task(s) so that you would have a more accurate picture of each student's understanding of the central idea.

There were a lot of pieces to the final assessment; a research paper, a wanted poster, a book, and an art project. We think if we scale it down and let students pick two or three of the assignments the work produced will be of better quality and show more understanding by the students.

2017-2018 and 2018-2019 each class did focus on one order of insect. That went well.

2019-2020 – We completed this during Covid quarantine. We definitely simplified. Students chose any insect to research.

What was the evidence that connections were made between the central idea and the transdisciplinary theme?

Students made the connection between the central idea and the transdisciplinary theme by learning about their insect's role in the food chain and their insect's interaction within it's ecosystem.

7. To what extent did we include the elements of the PYP?

What were the learning experiences that enabled students to:

- develop an understanding of the concepts identified in "What do we want to learn?"
- demonstrate the learning and application of particular transdisciplinary skills?
- develop particular attributes of the learner profile and/or attitudes?

In each case, explain your selection.

2020 Reflection

- students did learn why insects are important to the survival of the planet
- They became more knowledgeable through information gathered from read-alouds, videos, and research.
- We were really lacking the hands-on insect study we would have had in the classroom and from our HMNH field trip.
- It was impossible to determine whether they learned to care or act in a principled manner toward insects or other living organisms since we were not together.

Reflecting on the inquiry

8. What student-initiated inquiries arose from the learning?

Record a range of student-initiated inquiries and student questions and highlight any that were incorporated into the teaching and learning.

Line of inquiry: Living organisms meet their needs in various ways.

Student inquiries: If all insects don't lay eggs how do they get new babies?

Why do ladybugs eat gnats?

Line of inquiry: Why living things are interdependent

Student inquiries: Does every insect have prey?

Line of inquiry: Responsibilities for protecting our environment

Student inquiry: Why do we love some insects?

Do all insects do something good for the planet?

At this point teachers should go back to box 2 "What do we want to learn?" and highlight the teacher questions/provocations that were most effective in driving the inquiries.

What student-initiated actions arose from the learning?

Record student-initiated actions taken by individuals or groups showing their ability to reflect, to choose and to act.

After doing a whole group insect introduction unit, the class generated questions about insects they had. From there, students chose an insect to research to better understand their insect's role in the survival of the planet. They then identified the insect's habitat and one way their habitat could be endangered. The students brainstormed ways to help the habitat and insect from being harmed. They identified the effect it would have on the planet if that insect was no longer apart of the ecosystem.

9. Teacher notes

We think it would offer students a better opportunity to dive deeper into the planner for each class to do an intensive study on a different species of insects. One class will study bees, one class beetles, one class ants, ect. The class will divide up and study different insects that are in that species (example, wood ants, fire ants, army ants). The classes will visit the others classrooms to learn about various insects and how they help the survival of our planet.

This year the kids needed a lot of guidance conducting their research for their insect. If a whole class is working on on species it will provide the teacher a chance to find more information for the students that pertain to their classroom.



