**Bugs Alive!**
**Learning Story 2010 (draft)**

**A Museum Victoria Strategic Partnership Program**

**Summary**
‘Bugs, bugs, bugs’ is offered as a staff led program to Early Childhood and Middle Years primary school students visiting Melbourne Museum. This intensive hands-on program aims to enable students to fully engage with the Bugs Alive! exhibition and the related concepts. The program has been extensively evaluated by both teachers and students, who report high levels of satisfaction.

**Purpose**
It was intended that the “Bugs, bugs, bugs” program and online resources would support the teaching of the science curriculum in schools, and link to Levels 1 & 2 in the Victorian Essential Learning Standards and to the Victorian Early Years Learning and Development Framework. The program aims to foster an interest and curiosity in the science and the natural world. This is a Primary Science program aims to support the teaching of science units in primary schools, by providing online teaching resources, and ensuring that the program is linked to the curriculum and supports and enhances a unit of work on the topic. The following intended learning outcomes for the program were developed:

- **Knowledge and understanding**: sort bugs into two groups: insects and non-insects – and know what the difference is between the two groups.
- **Skills**: work in teams to sort insects according to their type.
- **Attitudes and values**: have an appreciation and respect for how bugs/insects are important to our lives.
- **Active behaviour and progression**: be able to tell the difference between an insect and a spider.
- **Enjoyment and creativity**: to have fun.

**Challenges**
The challenge in designing a bugs program is to ensure that the program met the needs of different learning styles, language abilities and student prior knowledge – as well as meeting teachers’ needs of a visit to the museum.

**Outcomes**
For the adult evaluation, more than 90 teachers, school staff members and parents were asked to fill in an evaluation form during the session. They were asked 10 questions relating to their profile and their perception of the program.

The results were extremely positive:
- 98% rated the session good to very good in terms of its relevance to curriculum,
- 99% rated the session good to very good in meeting the needs of the students,
- 100% rated the program good to very good in providing a unique learning experience, and
- 100% rated the program as good to very good in providing an engaging experience for students.

![Sunshine Primary School students exploring insects. Source: Museum Victoria](image-url)
Four elements of the program were considered as ‘best practice’:

- the educational aspect,
- engagement of the students,
- fun,
- hands-on and interactive.

Some of the comments from teachers about why they rated the program highly:

“It’s a hands on experience for the children and consolidates their knowledge of insects”

“Great information for beginning or ending a unit of work”.

Students were asked open-ended questions, linked to the intended learning outcomes. Questions were written as sentence stems to ensure that the format was a familiar one to that which is already used in schools. Teachers then posted back the students responses. Sentence stems examples were:

- One thing I learned in the lesson was… “that a centipede is not an insect”
- One thing I liked in the lesson was… “everything!”
- Since visiting the museum, one question I now have is… “what is the biggest insect?” “how do insects fly?”

As well as open ended questions, using images students were asked to identify the difference between insects and non insects. This is a common misconception among primary aged children. 100% of the students were able to correctly identify the animals.

**Need to add something about statistics…**

Additionally, in May Museum Victoria ran an online Elluminate session as professional development for teachers wishing to keep insects in the classroom. During the session, four Museum Victoria Live Exhibits staff talked through the process of keeping insects.

**Conclusion**

To date, the program is proving to be very successful in meeting the needs of students, as indicated by the views of teachers, staff and parents and students.

**Attachments**

- Sample student, teacher and parent evaluations (available from Museum Victoria).