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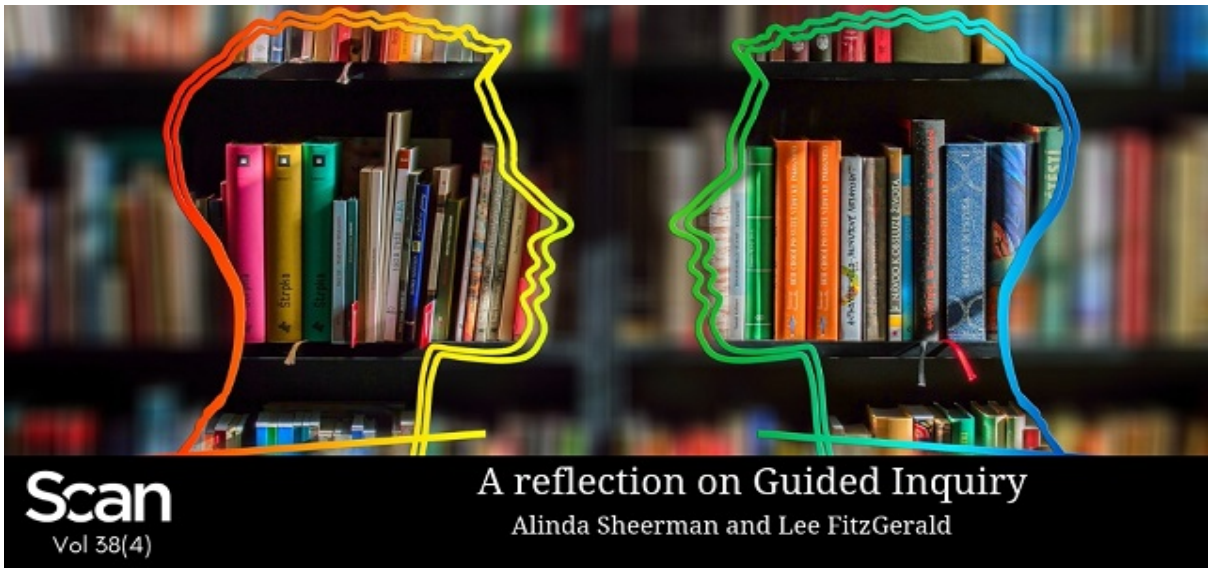
A reflection on Guided Inquiry

Alinda Sheerman and Lee FitzGerald



Background

Between them, Alinda and Lee have more than 20 years' experience in implementing inquiry learning in the form of Guided Inquiry (GI). They met to talk about and reflect on Guided Inquiry. Teachers from Broughton Anglican College, Catherine and Jodie, express their thoughts in the videos.

Guided Inquiry (GI) theory and practice has developed extensively over the last few years, driven by books written by the GI team of Kuhlthau, Maniotes & Caspari (2012; 2015) and by the world wide work of Dr Leslie Maniotes, which can be illustrated by the **52 weeks of GI** blog (2016). An essential development is the Guided Inquiry Design process (GID) that has emerged from the Information Search Process, which was observed in many research studies by Professor Carol Kuhlthau. These are summarised in Kuhlthau (1985).

This article summarises the conversation held between Alinda and Lee about the following:

- The best things about GI
- Challenges
- Enablers
- The ways forward for GI.

The best things about GI

Catherine, a teacher from Broughton Anglican College, shares her thoughts on Guided Inquiry in **The best aspects of Guided Inquiry** (1 min 55 secs).

Jodie, a teacher from Broughton Anglican College, shares the best things about Guided Inquiry in **The best aspects of Guided Inquiry** (28 secs).

In their conversation, Alinda and Lee found the following to be the best things about GI.

It just makes sense

As a Broughton student, Amy, said, 'It's just what your brain does'. Amy was referring to the 'shape' of the Guided Inquiry Design process (GID), which follows the pattern any researcher uses when engaging in research – that is, gaining an overview first, in order to isolate a particular aspect with which to engage. (Lee's peer reviewed article, '**Research: Guided Inquiry in practice**', explores the context and concepts underlying inquiry learning and how to ensure authentic learning.)

Emotions are explicit and expected in GI

Emotions are recognised in GI theory, for example, the predicted dip in confidence at Explore. Students like to be shown how they'll feel throughout and to know when to expect to feel a dip in confidence. There is the predicted one at Explore, when the size of the topic tends to overwhelm; and there are likely further dips around creating the inquiry question, and at Gather, where students are synthesising more difficult information into the final product.

Reflection is encouraged

Students are expected to reflect during their process and to comment on their growing understandings and difficulties, and to get feedback from the teacher librarian and/or teachers. It is essential that students are not overloaded with reflection occasions and questions, and that they do get feedback on their reflections.

Challenges

Catherine shares some of the challenges she experiences when it comes to implementing Guided Inquiry in **The greatest challenge of Guided Inquiry** (33 secs).

She then explores the concept that 'collaboration is key' in **Guided Inquiry collaboration** (1 min 10 secs).

Jodie shares aspects about who can be involved in the collaboration process in **Guided Inquiry collaboration** (29 secs).

Alinda and Lee isolated the following further challenges to GI implementation and integration.

Time (to collaborate, create, deliver and reflect on inquiry units)

Time is a major challenge to implementing inquiry learning. Alinda recalled the luxury of time being allocated to her and three other teachers to plan a GI unit, which allowed for a

little coffee and the creation of a sense of being a team. Too often, planning is done after school, when everyone is tired and no one is creative. They agreed that principals need to allow and enable time for planning for the creation of inquiry units and that it's lack of time that cripples collaboration. Lee is fortunate that her principal allows some time for planning. Lee's new school operates the Middle Years' Program of the International Baccalaureate.

Embarrassment – Förlägenheten

Lee noted that another factor might be at work in establishing collaborative relationships. In the research she did for her book, 'Guided Inquiry goes global: Evidence-based practice in action'(FitzGerald, 2019), a Swedish teacher librarian, Lena Fogelberg Carlsson, highlighted a kind of embarrassment (which sounds better in Swedish - Förlägenheten!) which emerges in relationships between teachers and teacher librarians, and students and teacher librarians. Lena believes that teachers suspect that they don't know very much about information literacy or inquiry skills, and they don't want anyone to know that, and so don't ask the teacher librarian for help. Students are affected by Förlägenheten too. They know they're the children of the digital age and that, therefore, they know what they're doing with information, and they really don't. But they are too 'embarrassed' to say so, though they might whisper it to a sympathetic teacher librarian. So, a challenge in the way of inquiry learning is a lack of acknowledgment that information literacy is an area that both teachers and students need to understand. As a result of this, they are held back by not wanting to appear less than expert in this area.

Pressure on students

Lee and Alinda noted the level of pressure under which students struggle with an overloaded curriculum. They observe that students have a really loaded timetable and sometimes large amounts of work to get through, and quite a lot of them just want to get to the end of any task, so are not as motivated as they might be by sheer interest in a topic. This was expressed repeatedly by students in the CSU research, 'Just tell me what to do, and I'll do it, and it will be over'.

Enablers

Catherine identifies enablers that have worked for her when implementing Guided Inquiry (55 secs).

Jodies shares her perspective on enablers when implementing Guided Inquiry (46 secs).

In conversation, Alinda and Lee discussed the following as enablers to a GI culture. It's about:

- students and teachers enjoying the experience and want to do it again
- the teacher librarian having good relationships with students and teachers
- keeping the GI unit as open-ended as possible
- teachers, students and teacher librarians having a common understanding of the language of GI, especially the GID process

- feedback on student reflection, so that the difficulties they articulate are addressed.

The ways forward for GI

Compromise

Alinda and Lee discussed compromise as being one of the ways forward. They noted that the pressure of time in secondary schools is increasing, with some of that pressure caused by an overloading of content into syllabuses. It is only realistic to expect to achieve a base level of GI that can provide enough coverage for students of essential information literacy skills in, say, one subject per Years 7-11. Alinda noted that there needs to be a wider collaboration right across faculties and stages to determine which years are doing which units and when, so students aren't 'overdoing' GI, and only the units which really lend themselves to GI research will be used. She also reminds staff regularly that GI is not the only way of doing inquiry based learning, concentrating recently on **Ralph Pirozzo**'s visit to the school, and to bear in mind the Pirozzo Matrix when designing inquiry learning tasks.

They concurred that you don't have to do GI all the time and that it probably suits some subjects better than others, especially history. And it may be that approaches like project based learning (PBL) really work well in the sciences/STEM areas. Alinda pointed out the need for looking across the curriculum to identify the best places where inquiry fits, and which 'brand' fits particular areas, in order to widen the experience of inquiry for students.

Teacher librarians in training learning how to design inquiry units

Lee noted that students over the past few years at CSU, doing the subject, Introduction to Teacher Librarianship, have been creating an inquiry unit in the context of particular syllabuses, primary and secondary. They have to choose an Information Literacy model, and then identify a real need in their school, choose a topic, learning outcomes and elements of the **general capabilities** and create an inquiry unit. Many choose GID, possibly because it is well supported. Challenges in this task are:

- getting familiar with Australian Curriculum to locate topic and learning outcomes etc
- finding state versions of the Australian Curriculum are often different
- understanding an information process as a scaffold to create units of work, as well as underpin inquiry learning
- understanding the teacher librarian's role as responsible for the information literacy skills in the unit
- underestimating the complexity of information skills
- understanding the importance of specific resourcing of the inquiry
- lack of confidence in their schools allowing the teacher librarian a full role in inquiry learning.

Alinda feels that many teachers are not used to programming. They are used to being provided with the program by the Head of Faculty. She noted that writing programs is becoming much easier with **Program builder**.

Lee noted that students find the experience of creating an inquiry unit really useful. The elaborations in the general capabilities provide a rich ground for teacher librarians to choose learning outcomes for inquiry units, particularly in the **critical and creative thinking** general capability, bearing in mind that content descriptions in the syllabuses also contain many rich information literacy skills.

The conversation concluded with a recommendation that anyone interested in GI theory and practice in Australia should regularly visit their blog, **Guided Inquiry in Australia** (FitzGerald & Sheerman, 2016) and Dr Maniotes' blog, **52 weeks of GI** (2016).

In **My best Guided Inquiry experience ever** (3 mins 5 secs), Catherine shares insights into the unit of work that was her best experience in using Guided Inquiry.

In **Guided Inquiry – student perspective** (2 mins 57 secs), Broughton student, Abby reflects on her learning experience with Guided Inquiry.

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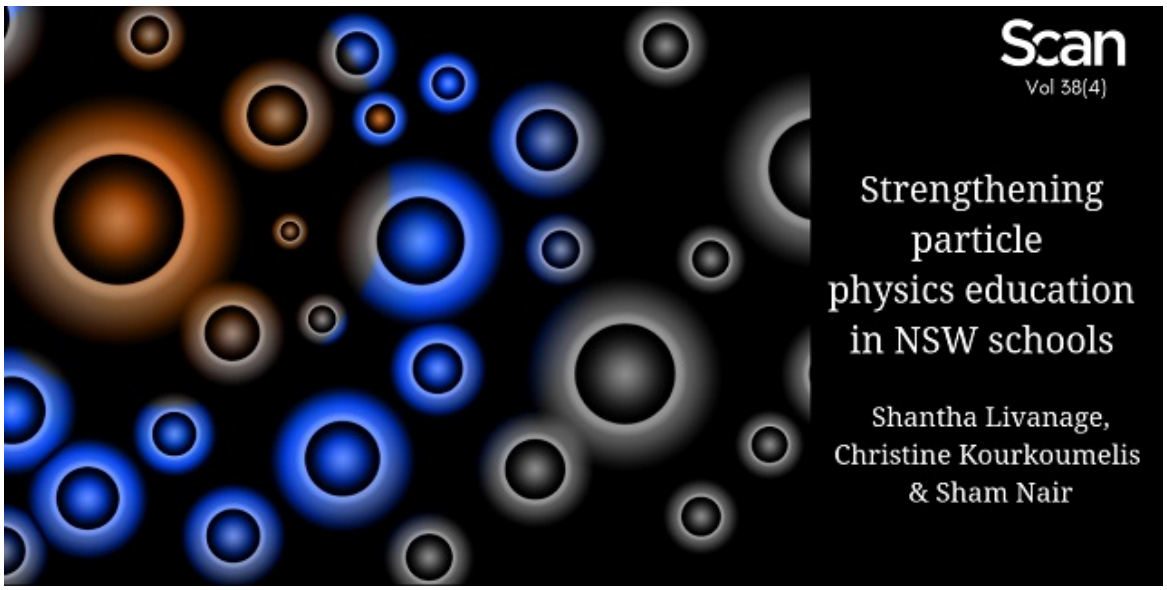
Strengthening particle physics education in NSW schools

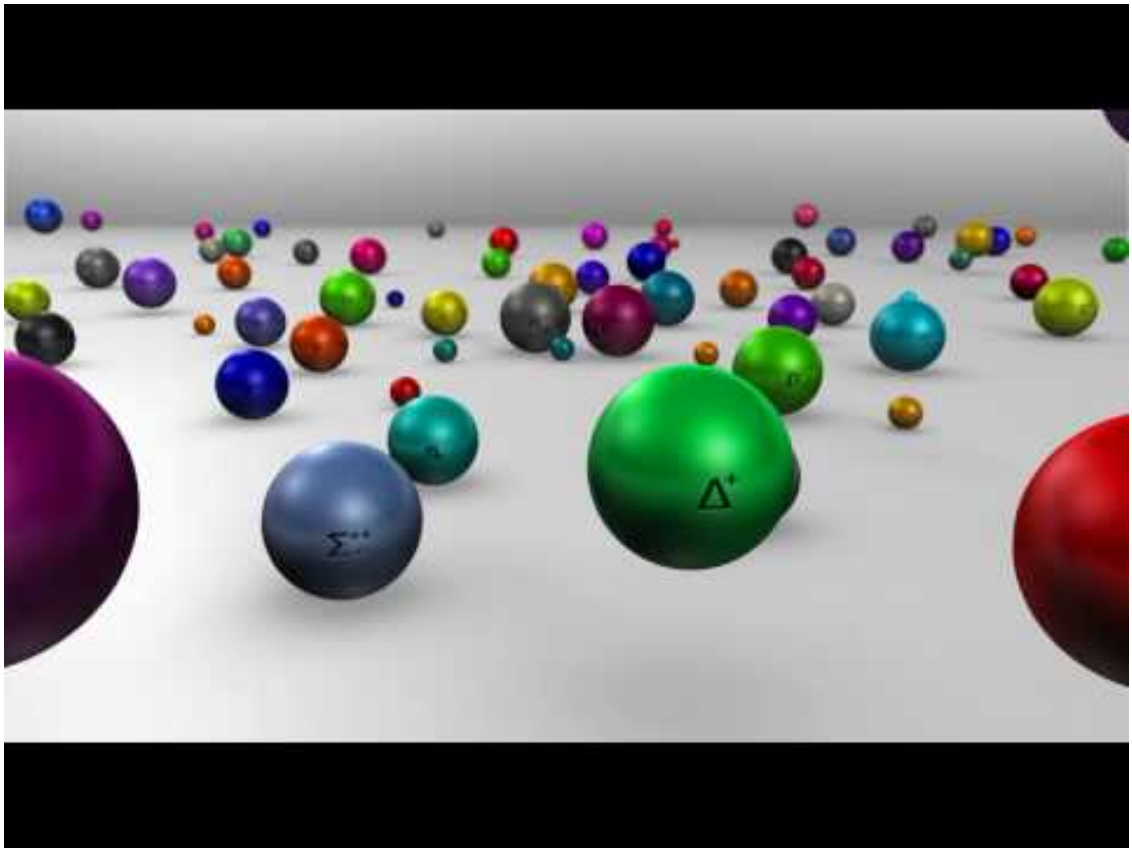
Shantha Liyanage, Christine Kourkoumelis and Sham Nair



Physics is a branch of science that explores the nature of energy and matter. Scientists who work in physics (physicists) seek answers to questions about the fundamental properties of our universe. They investigate phenomena such as forces, energy, motion, heat, light electricity and magnetism. The study of physics unravels many mysteries of our universe and enables us to answer fundamental questions about the complex physical world around, allowing us to generate exciting innovations.

CERN (the European Council for Nuclear Research) conducts particle physics research, and some of the largest experiments are ATLAS, Alice, CMS and LHCb. The World Wide Web (www) was invented at **CERN** and produced several Nobel laureates. The **ATLAS** detector, which records the results of particle collisions in the **Large Hadron Collider** (LHC), weighs about 7,000 tonnes, almost the weight of the Eiffel Tower of 7,300 tonnes but about 13 times less than Sydney Harbour Bridge. ATLAS alone has over 3,000 researchers from over 180 universities across the world.

The Large Hadron Collider (LHC), started in 2008, is an underground structure (a circular tunnel) located between Switzerland and France. It has a circumference of 26.7 kilometres at a depth of 137.5 metres. This collider has about 6,500 large magnets and several accelerators that allow two high energy beams of particles to move in a circular path through the tunnel. These beams travel in opposite directions in separate beam pipes. Within these beams, the protons which eventually collide with each other are accelerated to almost the speed of light.



CERN: The standard model of particle physics (5 mins 2 secs) was produced as part of the CERN/ATLAS multimedia contest internship.

The four LHC experiments generate large amounts of data. When an experiment is underway, each of the two largest detectors at the LHC (ATLAS and CMS) generates more than 100 terabytes of data per second. Scientists use these large data to test new theories and verify scientific findings. CERN scientists are also engaged in sharing their findings and educating the public. One of the outreach programs offered by CERN is the physics masterclasses. Masterclasses format, which can also be used to teach several other subjects, is developed to help students and teachers to understand the research being conducted at CERN.

What are CERN masterclasses?

Physics masterclasses were originated in the UK in 1997 at the centenary of J.J. Thomson's discovery of the electron (Johansson et al., 2007). CERN developed the International Masterclasses in 2005 as an initiative of the European Particle Physics Outreach Group (EPPOG) (Barlow, 2014, p23). CERN's particle physics masterclasses have grown in stature and are utilised by many countries and organisations.

A combination of activities, including lectures, interactions with scientists, practicals and virtual visits, assist students and teachers in getting a deeper understanding of some aspects of research conducted at CERN and to become a scientist for the day. Students can ask questions, explore what is happening at CERN and perform data analysis under the

guidance of CERN scientists. One of the salient features of a masterclass is to access data from the detector and analyse them to explore particles. These classes enhance students' engagement in science and allow them to think deeply about the subject of physics. The interaction with CERN scientists brings a whole new dimension to learning physics from an authentic source.

What are CERN International Masterclasses (IMCs)?

CERN's International Masterclass are special types of events organised by TU Dresden and Quarknet. The international masterclasses (IMCs) began in 2005 as an initiative of the European Particle Physics Outreach Group (EPPOG). Since then, EPPOG has become the International Particle Physics Outreach Group (IPPOG), and these international masterclasses have grown steadily beyond the initial group of IPPOG member countries.

In 2018, these masterclasses attracted more than 13,000 students from 52 countries, with 177 universities taking part each year. Through video conferencing, students from different countries get together at the end of the day to discuss the results of their interactive analysis using events from ATLAS, CMS, or ALICE experiments. Two physicists moderated the video conference at CERN, or Fermilab (a large high energy physics laboratory in the USA).

The educational goals for students participating in these international masterclasses are to:

- facilitate them to become scientists for a day and simulate the work done by researchers working at the LHC experiments
- visualise the collision of ultra-energy protons and study the collision products
- describe and demonstrate the conservation laws, the behaviour of particles in a magnetic field and how the energy-mass conversion applies to particle physics
- explain what a general-purpose collider detector is and understand the various subsystems in a detector and what they are designed to measure
- introduce the Standard Model of particle physics and how it classifies elementary particles and forces
- identify specific particles and particle decays by the signatures they leave in the detector
- give examples of how short-lived particles can decay into different types of particles, such as bosons, mesons, leptons and photons
- give examples of the conservation of lepton number and charge in particle decays
- provide a learning environment to appreciate the study of physics and relevance to real life situations.

If students and teachers are interested in IMC, they can **register their interest with CERN**.

The process of conducting masterclasses

Some prior knowledge or understanding of particle physics is desirable. Masterclasses can be adapted to learners of different ages to provide an appreciation of these experiments, as long as these classes are conducted in collaboration with CERN scientists. Some basic knowledge of Rutherford's experiment in discovering the nucleus of the atom or other key

experiments, ways of discovering particles by identifying peaks in a histogram and being able to explain what it means, describing how quarks combine to form mesons and bosons and applying conservation rules to measurements to provide evidence for unobserved particles is useful.

Figure 1 shows a massive number of particles are generated in each collision and students can study some of these particles in order to detect electrons, muons and photons.

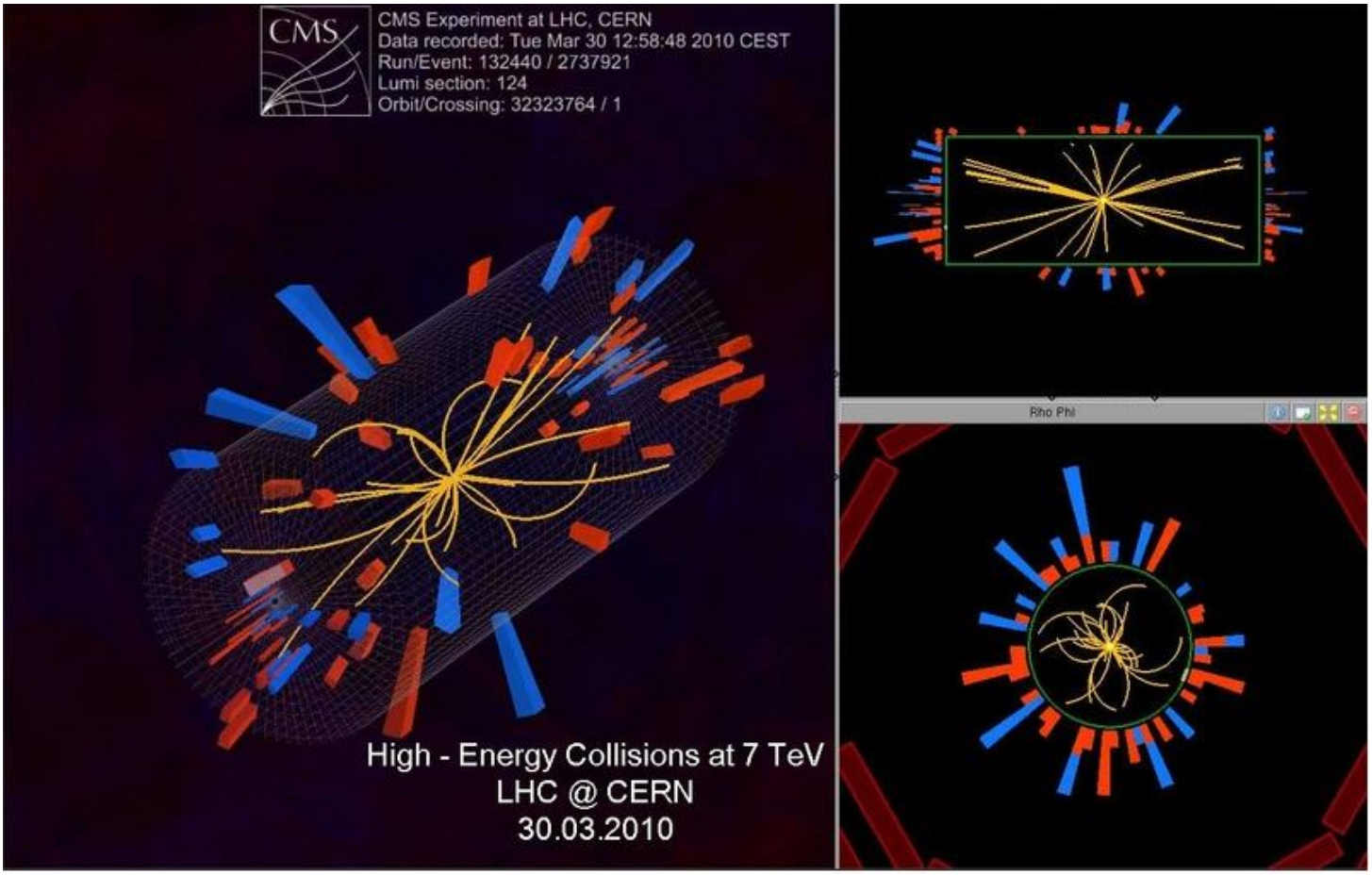


Figure 1. CMS: High-energy collision at 7 TeV. CMS Masterclasses, 2016

During these masterclasses, lectures from scientists provide insight into the research that investigates the fundamentals of matter and forces.

The ATLAS experiment has two different educational scenarios used for the IMC — the Z-path and the W-path.

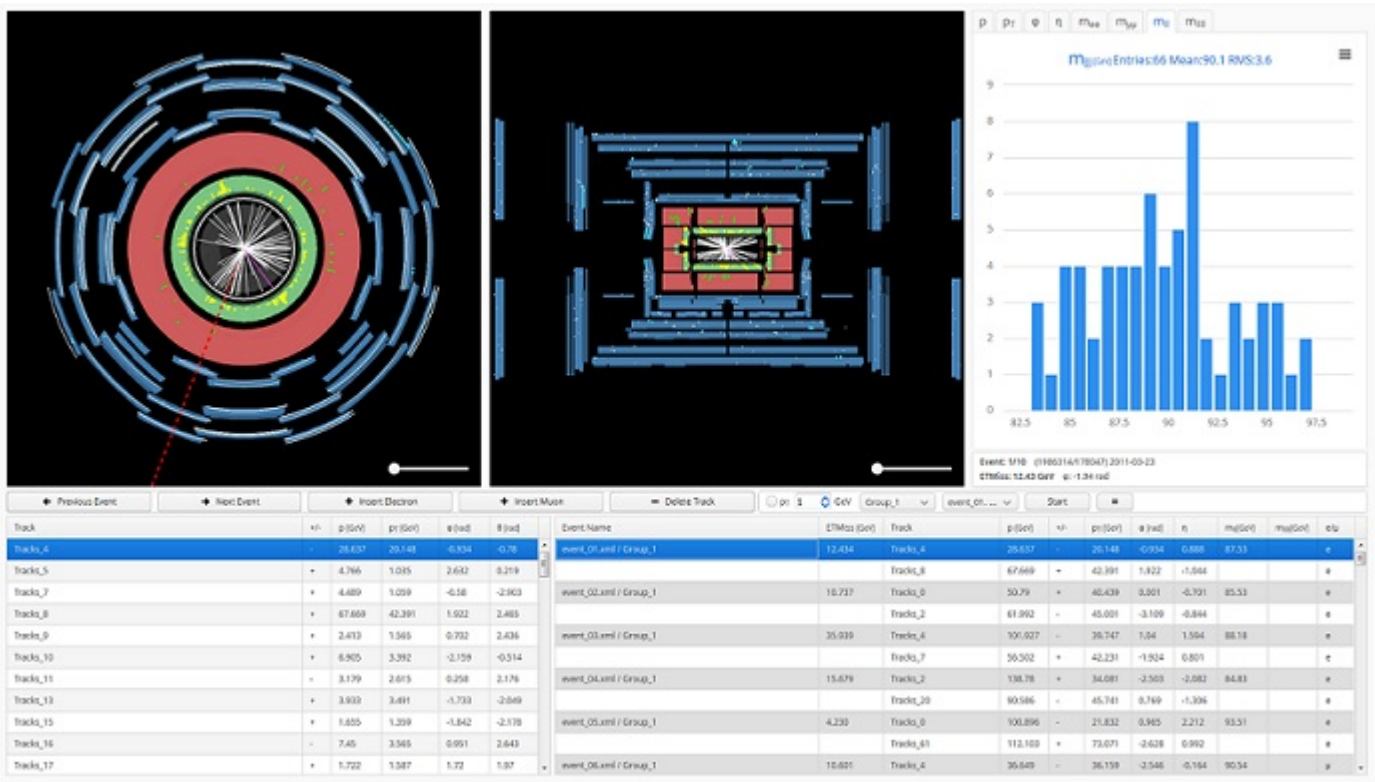
In the Z-path, the students use the **HYPATIA visualisation program** to reconstruct invariant masses of the parent particles, which they identify using the signatures of their decay products in the sub-detectors. The aim is to reconstruct leptonic decays of the Z boson and other known lighter particles and 'discover' the Higgs boson, through its four lepton decays or the two-photon decays.

In the W-path, the students study the structure of protons by taking ratios of positively charged to negatively charged W boson decays to leptons plus a neutrino. Subsequently, they also try to 'discover' the Higgs boson through its decay to a pair of W bosons when both Ws decay to a lepton and a neutrino.

The HYPATIA team has developed a 'lighter' version of the ATLAS visualisation tool. It retains all the necessary functionality for the masterclasses but displays event samples in a simpler format which does not require the download or installation of any software. The data can be analysed using any device, including mobile phones and tablets. This is the **online version of HYPATIA** and is the version that the Australian masterclasses have been using.

The on-line HYPATIA has been developed in the framework of several EU outreach programs and has been awarded the 2016 prize for the best visualisation lab (Figure 2 shows a screenshot of the tool).

Figure 2. Screenshot of the use of Hypatia tool in masterclasses



It takes only about half a day to conduct a masterclass that consists of an introductory lecture, detailed instructions about the project, an online data analysis session and a virtual visit (see below) to one of the LHC experiments. In the last eight years, masterclasses have been successfully conducted in a large (~100) number of Greek schools (urban, suburban and rural schools). Several e-masterclasses were conducted virtually, through video connections to researchers at universities or research centres. Under the guidance of these researchers, teachers analysed the real ATLAS events at their schools.

Australia's experience in running physics masterclasses

Since 2012, CERN masterclasses were conducted in Australia by the ARC Centre for Excellence for Particle Physics at the Terascale (CoEPP) at Melbourne University. These programs were tailored to high school students who visited the University for classes.

The particle physics masterclasses provided students with the opportunity to:

- interact with working scientists at the forefront of their field
- improve students' knowledge and understanding of physics
- experience real scientific work by analyzing actual ATLAS data
- improve students' skills in scientific data analysis
- understand the principles that allow scientists to draw conclusions and new insights from data
- meet syllabus outcomes in a meaningful way through participating in a cutting-edge real-world context.

With the involvement of Research, Business Systems and Distant Learning program in the NSW Department of Education, a modified version of CERN masterclass was launched for the first time in 2014 at the Parkes High School in NSW. This masterclass was organised as part of the **'**xsel' - Virtual Selective High School Provision of the department. Initially, ten schools from the Parkes and Dubbo region participated in this program. Students were connected to CERN's control room in Geneva. The students were given a firsthand experience of the operations of control rooms and were able to interact with the researchers. The researchers explained to students the process of operations in the control room, data collection, purification, and analysis of data to verify scientific findings.

Subsequently, the department collaborated with CoEPP to run masterclasses for NSW schools using CoEPP expertise. This was the first time a full-scale masterclass was delivered to rural and remote schools in NSW. It involved about 22 students in Years 10 and 11. During this masterclass, CoEPP was able to provide the software necessary to analyse data from the ATLAS detector. Students were given lectures and were guided to analyse data provided by the CERN experiments. The staff from Melbourne University and Sydney University were involved in this project. Table 1 shows the participating schools in this masterclass organised jointly by department and CoEPP.

School	Students	Teachers
Oberon High School	2	1
Bathurst High School	2	1
Kelso High School	1	
Forbes High School	2	
Dubbo College Delroy	2	
Parkes	12	3
Condobolin High School	1	1

Table 1 Schools participated in physics masterclasses organised by CoEPP and the department

Subsequently, a memorandum of understanding (MOU) was developed to establish a formal relationship among CoEPP, IPPOG and CERN. This relationship also led to the development of online resources for students as preparatory reading for the masterclasses. This resource (Figure 3) was fully developed and is now available at the department's websites, through **Scootle** and **Equella**.

Figure 3. **Particle physics masterclass**, Scootle, NSW DoE

Future of Australian masterclasses

The concept of a masterclass can be traced back to conducting music master classes and also to the German system of learning through master craftsmen. Music masterclass will be given by an expert musician to a group of talented music students to perfect their knowledge and skills. Masterclass is a successful, innovative learning and mentoring method which is usually conducted or organised by experts in the field.

Different masterclasses can have unique learning experiences. For example, CERN masterclasses provide real-time data and analytics tools to interact with CERN experts in the learning process. In this way students will have a real life experience of learning by interacting with masters or experts in the field. Similarly, Aurora College provides masterclasses across a range of subjects. These subject experts include engineers, psychologists, criminologists, agronomists, botanists, actors, lawyers, economists and librarians.

Connection to curriculum and assessment

The main challenge for our schools, teachers and students is to link their classes and curriculum to carefully integrated masterclass formats. This is not always an easy task and requires careful structuring of learning. Teachers need to have innovative teaching approaches to integrate masterclass content to the existing curriculum areas while making a masterclass format a novel inquiry based learning process.

Taking up the challenge

Teachers must be enthusiastic and prepared to take up a masterclass challenge. Conducting a masterclass requires a mindset that involves collaboration with various experts outside the school. Teachers also require guided professional development to learn how to run an effective masterclass. A key ingredient for successfully organising and running a masterclass is the interest of a teacher to organise these activities with the help of the department's staff. Currently, Secondary Education and Business Systems have organised the masterclass concept to a certain level of development, and it requires:

a. Explicit recognition by senior management on the value of connection to a lead research organisation such as CERN, and the value of masterclass as a blended learning activity.
b. Developing a sustainable program to provide masterclasses using a workable system such as Aurora and Distant learning network.
c. Developing mechanisms for teachers to request running masterclasses at a particular time as the connection to CERN will have to be made at a time convenient to CERN staff, and to Sydney University and University of Melbourne staff who have been involved in masterclasses.
d. Utilising already available resources such as **CERN virtual visits** to provide general science education to all children.

In June 2017, a virtual visit organised by the department for selected schools was concluded successfully. One of the teachers wrote:

‘Thank you to your team for making this opportunity available - my boys were amazed and excited! I have one in particular who dreams of working at CERN, and they rushed back from school sport to be here, soaking wet but so excited ... Tejas, who has the big dreams, waits to hear from Steven because he asked a very unexpected question (he does that to me regularly! but I encourage it). This afternoon is very precious to encourage students like this who have aspirations and go beyond the syllabus. So, a masterclasses was mentioned, and my boys are asking when can they do it, where, and basically just want in!’. Head Teacher Science, Normanhurst High School, NSW

Developing teacher capabilities

Future development work needs to focus on some of the following work:

- Developing teacher training packages in the form of tailored resources and professional development so that teachers can become the masterclass tutors. CoEPP or a University partner could run the teacher training program.
- Developing collaborative links with CERN staff is critical and it is important to cultivate positive relationship.
- Developing appropriate resources in conjunction with the department, CERN and IPPOG. Teachers would need to be trained in the installation and operation of HYPATIA software, data analysis and the interpretation of results.
- Developing specific masterclass resources for Australian students (by both DoE and CoEPP), including background reading material, classroom exercises, and other resources on relevant science concepts.
- Working with science teachers’ associations and identifying teachers who are keen to try new ways of physics teaching and connection with research organisations, such as CERN and other physics communities.
- Aligning masterclasses with classroom teaching, learning and assessment.

Continuous innovations are necessary to streamline the content and provide more rigorous support for the professional development of teachers. Given the improvement to the delivery, content and style of conducting masterclasses, these resources could become part of physics education in Australian high schools. The underlying pedagogies of the masterclasses may enhance deep content knowledge in physics, student motivation, and promote self-directed learning and critical thinking.

Teachers who are interested in running CERN particle physics masterclasses may contact S. Nair (sham.nair@det.nsw.edu.au).

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SPaRK - Blob: The ugliest animal in the world. Part 1

Dr Cathy Sly

Resource overview

An intriguingly humorous and subversive picture book by Joy Sorman and Olivier Tallec (translated by Sarah Klinger), 'Blob:The ugliest animal in the world', is the tale of a rather unusual creature that wins the annual contest for the ugliest animal in the world. The visual and verbal narrative reveals Blob's tenacity as he travels once again from his home in the depths of the ocean off the coast of Australia. His mission is to compete for the third time in the worldwide contest, hoping to be victorious this year.

Educational significance

Although this text lends itself to analysis using a wide range of **English textual concepts**, in this teaching resource the tale of Blob's rise to fame will focus on the concept of perspective. Applying an understanding of perspective to the focus text, 'Blob: The ugliest animal in the world', challenges readers to consider how their perspectives on 'ugliness', and conversely 'beauty', are cultivated, and how they can be altered given greater knowledge and understanding.

Also featuring in this issue of Scan, '**SPaRK - Blob: The ugliest animal in the world. Part 2**' will focus on the concept of point of view. Explicit teaching and using a familiar text will enable students to develop a deeper understanding of these two somewhat tricky concepts: perspective and point of view. As these concepts are often confused, it is important to explain and demonstrate their differences.

Apart from its value as a multimodal text for English studies, 'Blob: The ugliest animal in the world'could provide an engaging springboard for studies in the biology strand of the science curriculum.

Suggestions for using this resource

Initially, the explicit teaching of selected English textual concepts will enable students to understand the aspects they are looking for in the text.

Perspective

Perspective is a lens through which we learn to see the world. The lens is not clear but is modified by earlier learning and experiences. Any text that an author creates is presented from her/his perspective and a reader comprehends a text from her/his own perspective. The diagram below indicates some of the important aspects that can impact one's perspective.

Understanding perspective at different stages of learning:

Stage 3 related syllabus content for English textual concepts

Students understand that perspectives may differ and that these differences need to be considered.

They learn that

- perspective may be expressed in different ways through the values represented in texts and the language used
- texts may construct a perspective that challenges accepted ways of thinking
- different perspectives can be adopted for particular purposes.

Syllabus links

- Participate in and contribute to discussions, clarifying and interrogating ideas, developing and supporting arguments, sharing and evaluating information, experiences and opinions (ACELY1709)
- Understand how to move beyond making bare assertions and take account of differing perspectives and points of view (ACELA1502).

Stage 4 related syllabus content for English textual concepts

Students understand that perspectives convey values.

They learn that

- language reveals and shapes our attitudes towards people, events, groups and ideas
- shared perspectives are markers of groups
- perspectives in texts may test the responder's own moral and ethical positions.

Syllabus links

- Share, reflect on, clarify and evaluate opinions and arguments about aspects of literary texts (ACELT1627)
- Create imaginative, informative and persuasive texts that raise issues, report events and advance opinions, using deliberate language and textual choices, and including digital elements as appropriate (ACELY1736).

Artworks that create optical illusions are one way of showing students that perspective can differ from one person to another. The website '**Optics 4 Kids**' has some interesting examples if teachers wish to pursue this avenue.

Another way to explain perspective is to ask students how they would respond to any of the following. Various ideas can be compile d as a whiteboard diagram. This can be followed by a discussion on how people in other cultures or circumstances may have quite different perspectives.

- Eating any of the following: frogs' legs; snake; dogs; witchetty grubs.
- Boys or men wearing skirts.
- A house without separate rooms.
- A house without running water.
- Giving a bunch of flowers to a male.
- Football teams reciting a poem at the beginning of a match.

In summary, perspective relates to 'how' a story is being conveyed and received. That is, what personality traits or socially conditioned attitudes does the composer(s) bring to a text and what personality traits or socially conditioned attitudes does a responder bring to a text? In addition, there should be an understanding that 'lenses' and thereby interpretations may differ from person to person.

Teaching activities

Prereading

Prior to reading 'Blob: The ugliest animal in the world', it is worth asking students to consider the notions of ugliness and beauty in relation to creatures in the animal kingdom. Questions for discussion could include:

- Do you think there are some animals that are ugly and others that are beautiful? If so, give examples of each.
- What makes you perceive the creatures in this way? Is it their looks? Their behaviour? What you have read or heard about the creature? Do you tend to prefer animals that are popular with people you know?

- Have you read any books in which a particular animal is represented favourably in one book and unfavourably in another? For example, rabbits in Beatrix Potter books and rabbits in Shaun Tan's 'The rabbits'.
- Do you think storytellers have an influence on how we perceive creatures of the animal world? Give examples.

Questions such as those above can help to build a profile of students' perspectives on creatures in the animal kingdom.

Teachers who wish to evoke deeper thinking might ask students where their perceptions have come from (such as various texts, experiences, other peoples' ideas, images, etc.), which provides appropriate links to the 'making connections' aspects of the 'Super Six' comprehension strategies.

Reading

Depending on the number of books available, this text can be read aloud to the class or read in small groups. As the images form an important part of the narrative, they need to be studied closely. (Many of the **images are available digitally** in an article on the book by Maria Popova and could be used for whole class analysis.)

The composers of 'Blob: The ugliest animal in the world' employ irony and satire to create humour. They present less known and less favoured members of the animal kingdom as contestants in an annual event to find the ugliest animal in the world. By subverting the notion of beauty pageants, the composers influence readers to alter their perspective

about these so called ‘ugly’ animals and to question notions of ugliness. Although the animals are anthropomorphised and the narrative is fictional, all of the intriguing animals mentioned in the story actually exist and are worthy of further research from a scientific perspective.

Focusing on perspective

When reading ‘Blob: The ugliest animal in the world’it is important to note that two modes of communication are being used to tell the story. In this narrative one mode is verbal and relies on written text and the other is visual and employs images. Both these modes operate together to convey the story. When considering perspective students should reflect on both these tracks and see if the values conveyed by the verbal narrator are similar to or different from those of the visual narrator. Generally, the perspective offered both by the writer and illustrator is one that evokes curiosity and empathy towards unusual and less known creatures of the animal kingdom. Therefore, the perspectives of the writer and illustrator are favourable towards the animals.

Discussion questions to help students to focus on perspective could include the following.

What perspective do the verbal and visual narrators offer on:

- unusual creatures?
- ugliness?
- competition?
- fame?
- the effect of fame on personality?

Experimenting

Go beyond the book. All the animals mentioned in ‘Blob: The ugliest animal in the world’ actually exist and there is an Ugly Animal Preservation Society which is concerned that many of these curious creatures are endangered species.

Imagine you are a member of the Ugly Animal Preservation Society. Create a story, scientific report, or journal article that persuades readers to view your creature from a favourable perspective. This could be an oral, written, or multimodal presentation.

These links provide some useful information:

- **Ugly Animal Preservation Society**
- **Uglies are the spice of life**
- **The ugly animals are coming!**

References and further reading

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SPaRK - Blob: The ugliest animal in the world. Part 2.

Dr Cathy Sly

Resource overview

An intriguingly humorous and subversive picture book by Joy Sorman and Olivier Tallec (translated by Sarah Klinger), 'Blob:The ugliest animal in the world', is the tale of a rather unusual creature that wins the annual contest for the ugliest animal in the world. The visual and verbal narrative reveals Blob's tenacity as he travels once again from his home in the depths of the ocean off the coast of Australia. His mission is to compete for the third time in the worldwide contest, hoping to be victorious this year.

Educational significance

Although this text lends itself to analysis using a wide range of **English textual concepts**, in part two of this teaching resource the tale of Blob's rise to fame will focus on the concept of point of view. Explicit teaching of this concept can help to clarify and distinguish it from the previously discussed concept of perspective. By applying an understanding of point of view to the focus text, students can be encouraged to develop a deeper understanding of both the concept and the text.

Apart from its value as a multimodal text for English studies, 'Blob: The ugliest animal in the world'could provide an engaging springboard for studies in the biology strand of the science curriculum.

Suggestions for using this resource

Initially the explicit teaching of selected English textual concepts will enable students to understand the aspects they are looking for in the text. The English textual concepts, perspective and point of view, are often confused. Subsequently, it is important to explain and demonstrate their differences and functions by focusing on point of view in this SPaRK.

Point of view

Unlike perspective, which relates to 'how' a story is being conveyed and received, point of view relates to 'who' is telling a story? That is, it creates the position from which the subject matter is delivered. Point of view may be expressed through a narrator, character, or different characters.

Understanding point of view at different stages of learning:

Stage 3 related syllabus content for English textual concepts

Students understand that the narrator is different from the composer and that point of view positions the responder in a particular way.

They learn that

- a narrator may be inside or outside the story, in fiction and non-fiction texts
- point of view can create a more personal or distant relationship with the responder, evoking degrees of empathy or indifference
- composers choose the way stories are told, including character(s) through whom stories may be focalised
- point of view is shaped by language choices (for example, camera work, editing, voice over, framing, first person, third person etc.) in different modes and media.

Stage 3

Syllabus links

- Analyse how text structures and language features work together to meet the purpose of a text (ACELY1711)
- Identify and explain characteristic text structures and language features used in imaginative, informative and persuasive texts to meet the purpose of the text (ACELY1701).

Stage 4 related syllabus content for English textual concepts

Students understand that choice of point of view and focalisation shapes the meanings, the values and the effect of the text.

They learn that

- a narrator can tell a story, comment on a story or break out from the story to address the responder, directly
- point of view and focalisation are devices for persuading point of view and focalisation direct the responder to the values in the text.

Syllabus links

- Compare the ways that language and images are used to create character, and to influence emotions and opinions in different types of texts (ACELT1621)
- Analyse how point of view is generated in visual texts by means of choices, for example gaze, angle and social distance (ACELA1764).

Teaching activities

Prereading

Prior to reading 'Blob: The ugliest animal in the world' again, ask students to recall their notions of ugliness and beauty in relation to creatures in the animal kingdom.

Teachers who wish to evoke deeper thinking might ask students where their perceptions have come from (various texts, experiences, other peoples' ideas, images, etc.) which provides appropriate links to the 'making connections' aspects of the 'Super Six' comprehension strategies.

Reading

Depending on the number of books available, this text can be read aloud to the class or read in small groups. As the images form an important part of the narrative, they need to be studied closely. Many of the **images are available digitally** in an article on the book by Maria Popova and could be used for whole class analysis.

The composers of 'Blob: The ugliest animal in the world' employ irony and satire to create humour. They present less known and less favoured members of the animal kingdom as contestants in an annual event to find the ugliest animal in the world. By subverting the notion of beauty pageants, the composers influence readers to alter their perspective about these so called 'ugly' animals and to question notions of ugliness. Although the animals are anthropomorphised and the narrative is fictional, all of the intriguing animals mentioned in the story actually exist and are worthy of further research from a scientific perspective.

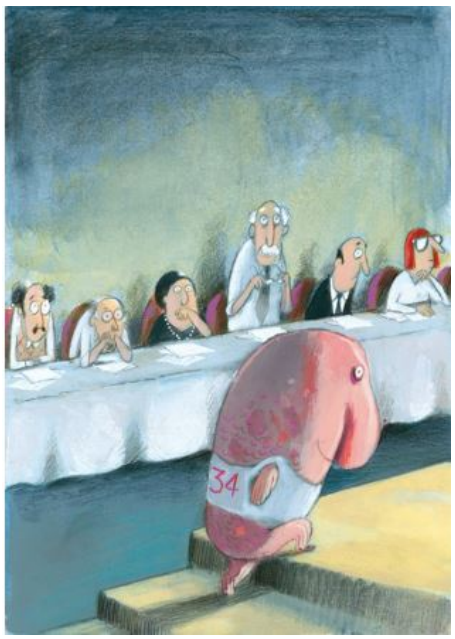

Image source: **BrainPickings**

Focusing on point of view

The story of Blob is, for the most part, told by an omniscient narrator. Students could be asked to speculate on the possible role of the narrator, for example: a storyteller, a journalist, a scientist, a member of the Ugly Animal Preservation Society, or a friend or relation of Blob. They would need to justify their suggestion using verbal and/or visual information from the text.

The inclusion of quotations from other commentators offers some different voices and points of view. Students could look for these quotations and identify the speakers and the point of view of each.

For example:

- A member of the jury who referred to Blob as, 'more darling and adorable than ugly and repulsive'. (p.17)
- Blob: 'But this year will be different … This year I am going to win.' (p.17)
- The master of ceremonies. (see p.21)
- The president of the Ugly Animal Preservation Society. (see p.22)

Point of view in the visual text

While the visual text generally supports points of view expressed in the verbal track, there are times when it extends the verbal information and times when it undermines the verbal track. Ask students to investigate the images closely to discover how the illustrator displays:

- wealth
- competition
- ugly creatures
- members of the judging panel
- fame
- beauty and ugliness
- loneliness and sadness.

Anthropomorphism, irony and satire

In 'Blob: The ugliest animal in the world' the composers make use of anthropomorphism, irony and satire to communicate their message in a humorous manner.

Anthropomorphism means giving human qualities to non-human creatures or

objects. Much of our understanding about animals is derived from literature encountered as children and beyond and, as Richard Tapper argues, 'Sometimes certain animals are idealized and used as models of order and morality, in animal stories and myths … By contrast animals are sometimes represented as the Other, the Beast, the Brute, the model of disorder or the way things should not be done' (cited in Baker, 2001, p. 83).

Students could be asked to consider what affect the anthropomorphising of ugly animals has on a reader?

David Herman suggests that animal guises can operate metaphorically and allegorically by 'mapping human traits onto nonhuman animals and thereby staging, more or less obliquely, conflicts and problems in the human domain' (Herman, 2012, p. 96).

Students could be asked to consider what affect the anthropomorphising of 'ugly' animals has in relation to a reader's perception of beauty pageants and competitions based on culturally constructed notions of beauty?

Irony involves conflict between what words/images appear to convey and what they actually mean in a particular context.

Satire involves the use of elements such as exaggeration, humour, parody, irony, sarcasm or ridicule to expose, denounce and deride folly or vice in human nature and institutions.

(Adapted from NSW Education Standards Authority, **English K-10, Glossary**)

By using the idea of an annual contest to select the 'ugliest' animal in the world, the creators of this narrative use situational irony to create an event that is opposite to a reader's expectations. Satire occurs as the tale parodies beauty contests and generates humour by focusing on animals deemed to be quite unpleasant creatures. By challenging expectations the composers make us aware of some of the strange and diverse animals that share our world and, at the same time, prompt us to question our notions of beauty and ugliness.

Ask students to select an illustration relating to Blob's world tour after he has won the contest (pp. 24-33). Get students to note any aspects of the illustration that can be said to be ironic or satirical and to explain why. (This activity could be done individually or in small groups. Findings can be presented to the class.)

Experimenting

Student research activity:

The chart below lists many of the creatures mentioned in the text.

The 'ugliest' (or most curious, intriguing, funny, weird) animals in the world	
Animal	**Habitat**
Axolotl Scientific name: *Ambystoma mexicanum*	 Xochimilco lakes near Mexico City.
Aye Aye Lemur Scientific name: *Daubentonia madagascariensis*	 Native to Madagascar.
Bald Uakari Monkey Scientific name: *Cacajao calvus*	 Forests of the western Amazon of Brazil and Peru.
Blob Fish Scientific name: *Psychrolutes marcidus*	 The deep waters off the coasts of Australia and New Zealand.

Find these other ugly creatures and add them to the chart.

- Kakapo
- Lake Titicaca Frog
- Naked Mole Rat
- Probiscis Monkey
- Sea Pig
- Starnosed Mole
- Vietnamese Leaf-nosed Bat

Research one of these creatures. Imagine you are a member of the **Ugly Animal Preservation Society**. Create a story, scientific report, or journal article that persuades readers to view your creature from a favourable perspective. (This could be an oral, written, or multimodal presentation.)

Suggestions for composing

1. The final two pages of the story show Blob at home having returned to the ocean floor. From Blob's point of view, tell a story he might be telling the fish and the young Blobs about his experience as the ugliest animal in the world. (This could be an oral, written, or multimodal presentation.)
2. From your point of view, was Blob a good ambassador for the Ugly Animal Preservation Society? Why or why not? Imagine you are a journalist reviewing Blob's year as the ugliest animal in the world. (This could be an oral, written, or multimodal presentation.)
3. Imagine you are a member of the Ugly Animal Preservation Society. Create a brochure or webpage that explains the purpose of the society and persuades others to take an interest in your mission to save these lesser known creatures of the world.

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