CRUNCH! KABOOM!

CONOR MILLS & CLODAGH STARR
ILLUSTRATED BY ALISON MUTTON
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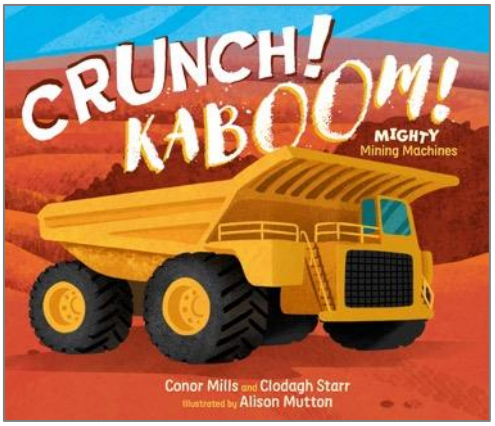
YEAR LEVEL: F–4



ABOUT THE BOOK

Outside the town, in the heat and the dust, where the sky is bright blue and the earth is like rust, is an iron ore mine that's bigger than big with mighty machines that blast, drill and dig.

A vibrant book exploring the huge machines involved in the mining of iron ore and its journey to becoming steel. The reader is taken through the process from stage to stage with colourful illustrations and text that comes alive through its shape, sound and rhyme. It will delight and engage young readers with its connection to the real world, and is guaranteed to become a firm favourite with any machine- or vehicle-loving youngster.

ABOUT THE AUTHORS

Conor Mills was born in Auckland, New Zealand, and made the move to Perth, Western Australia shortly after graduating from university to explore a career path in the mining and technology industries. Today, he calls New York City home, where he lives with his partner Dani and their son Felix.

Clodagh Starr was born and raised in Tāmaki Makaurau, Aotearoa New Zealand. She's been a writer since she was in primary school, and has written plays, short stories and films for audiences big and small. When she's not writing, Clodagh loves spending time with her wife, her cheeky nephews and a very spoiled black cat named Tonks. *Crunch! Kaboom!* is her first work of fiction for children.

ABOUT THE ILLUSTRATOR

Alison Mutton studied Illustration and Design at Curtin University and has been illustrating books for kids big and small since 2008. She works from a tiny studio in her backyard, supervised by her dog Myrna, and when she's not drawing, she likes to play the piano, needle felt and dance the Lindy Hop. With Lisa Van Der Wielen, Alison won the 2022 SCBWI Spark Award for best picture book for *Little Dune*. Another of Alison's picture books, *Looking for Lily* with Kristy Nita Brown, won second place in the CYA Conference Younger Readers Chapter Book category and was nominated for the 2023 WAYBRA Book Award. Alison enjoys the challenge of illustrating books on varied topics, bringing authors' words to life and learning new things with each project.

THEMES

- Mining
- Machines
- Onomatopoeia
- Word shapes – reading lines
- Size

AUSTRALIAN CURRICULUM OUTCOMES

- F–4 English
- F–4 The Arts
- F–4 Health and Physical Education
- F–4 Mathematics
- F–4 Science

USEFUL WEBSITES

- Rio Tinto, How Iron Ore Mining Works! (Part 1): youtube.com/watch?v=F1bJYHl5iJw
  This offers a good to understanding of the process. It follows the process exactly as shown in *Crunch! Kaboom!* with awesome images of the machines. While this may have too much information for students, you can pick and choose some images or information to share with them.
- Rio Tinto, How Australia Ships One Million Tons of Iron Ore Daily! (Part 2): youtube.com/watch?v=jaYzT1YQplg

CLASSROOM IDEAS

Discussion Questions

1. A sit and listen exercise.
    a. What sounds can the students hear all around them in the classroom? Make a list with pictures to go with each sound.
    b. Now go on a Listening Walk. What sounds can the students hear as they walk around? Again, make a list with pictures for each sound.
2. What do the students think the book is about from the front cover? What does the title make us think we will read about?
3. Do the students recognise any of the machines or trucks? What do they think they are called?
4. Matching exercise: prepare pictures of each vehicle/machine beforehand and have them ready on the whiteboard. Ask a student to come up and pick which one you are reading about.
5. Talk about how the book is full of sounds and how many of the words sound like the noise they are describing (onomatopoeia).
    a. Go through the book and find as many of these words as you can together.
    b. Make a class list and ask them if they know of any other words like this, e.g. pop, buzz, drip, etc.
6. Point out how the creators have written the words in different ways throughout the book, i.e. up the page, dripping down, round and round, etc.
    a. Discuss how this is reflective of the movement or action happening on the page and how it makes the book more interesting to read.
    b. Ask the students to point this out on each page as you read the book again. See if they can explain why the words have been written that way.
7. Talk about mining, what it is and where it happens. Some students may have family members employed in the industry – what jobs do they do?
8. Recap the process of making steel as shown in the book and discuss why this is non-fiction rather than a fictional narrative.
9. Discuss what things in the classroom or at home are made of steel.
10. Talk about the size of these machines and trucks. Ask the students what different words they can think of for ‘big’ and make a class list. This can be extended to make a list of all the different words they can think of for ‘small’.

Creative Writing

1. Have students choose their favourite machine to draw or colour in. Then ask them to write the name of the machine and pick a word for an action or sound that describes their picture. Have students write an explanation of how they would want this illustrated (i.e. in any direction or style, just like in the book for the onomatopoeia, etc.).
2. Have students write or dictate a sentence about their favourite machine/truck, saying why they liked it best.

The Arts

1. Have students create and colour in their machine and words from Question 1 in The Creative Writing section.
2. Wheel painting using toy cars, trucks and other vehicles: Roll the vehicles through a tray of paint so that the wheels are covered in paint. Then roll them over paper to create tread marks. Look at the different patterns the wheels make. Can they match the truck to the wheel pattern once it has dried?
3. Create a poster showing all the things in the classroom that are made of steel on one side and those that are not made of steel on the other side (this can be done with Velcro dots so the students can organise all the pictures multiple times).
4. Make a class mural of the book using sponge painting on blank outlines of the machines. Have a timeline prepared, starting from the drilling stage and finishing with the skyline of the city. For each picture, choose one action word as a heading. Discuss as a class what action you would do for each picture and practise together. Revisit the mural each morning, and as you read the action word, the students can demonstrate the action. Students can then choose to retell the story themselves using the action and pictures as prompts.

Health and Physical Education

1. Look at the page in the book where the workers are watching the mining (boom, boom, boom; p.10) and point out the safety measures that have been put in place to protect them.
    a. Why are they wearing ear protection, hard hats and standing so far back from the explosion?
    b. Even in the classroom, we need to make sure that everyone is kept safe. What rules do we have at school to keep us safe?
2. Moving like a machine or truck: move around the playground or classroom like a truck, ship, excavator, etc. What sounds would they make? What actions would they do? This can be made into a game of Simon Says once the students are familiar with the actions.
3. Teamwork: discuss how it takes a lot of people all working together for a mine site to work safely and effectively. Talk about how teamwork is also important in the classroom. Ask the students what makes the classroom run smoothly? What role do the students think they have in this team? Think about good listening skills, hands up to talk, taking turns, etc. This can be made into a list of the classroom rules.

Mathematics

1. Counting: have a number line ready and pictures of each truck and machine. Get the students to count how many there are, then put one picture next to each number as they count. Muddle all the pictures around so a different picture is next to each number. Count them again.
2. Size: Compare the size of a normal dump truck to the ones on the mine site.
    a. Talk about the different sizes and introduce the comparative language of big, bigger, biggest.
    b. Brainstorm other ways you could measure the machines (e.g. the length of two buses).

Science

1. Floating and sinking experiment: students can have different kinds of boats to float in a tub of water. How many things can they ‘load’ on the boats before they sink? Students can work in pairs and take turns to ‘load’ the items.
2. Have a sandpit set up with trucks of all different shapes and sizes and let the students play. Observe their play and the conversation they use before and after reading the book.
3. Discuss how the ore is filtered through vibrating screens to sort all the different sizes of ore. As a class, brainstorm other purposes for similar technology, such as coins in a vending machine, or set up an activity for students to try panning for ‘gold’ to experience this firsthand.