# EXPLORE, DEBATE, AND CREATE WITH



BY

ALEX SCARROW

Ideas for using TimeRiders novels with pupils in Year 6/P6, Year 7/P7 and Year 8/S1





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#### Introduction

Alex Scarrow's fantasy adventure novels are based in a world like our own where time travel is possible but too dangerous to play with because humans are too tempted to alter the past to suit their own agendas. And every change made to the circumstances of the past has far-reaching and traumatic effects in the future.

The TimeRiders series encourages young readers to think about issues such as our relationship with the past and the future, what it means to be human, and the responsibility we have to use technology for good and to recognize when to stop using it. It also encourages research and debate on exciting and controversial areas of scientific enquiry, including evolution, genetic engineering and the decline of the dinosaurs.

This pack refers to the first two TimeRiders novels: *TimeRiders* and *TimeRiders: Day of the Predator*. It suggests opportunities for pupils to explore the issues outlined above in discussion, role play, writing and creative media, and to connect them with work in history, science, art, media studies, drama, citizenship and philosophy. The Talking Points suggestions could also be used for a TimeRiders project in a school library, reading group or tutor group.

Many of the activities can be attempted without having read the TimeRiders books, although some are intended for pupils who have enjoyed the first two books. Background material and book extracts in the Mission Briefing sections offer a TimeRiders taster for those who have not yet read them.

We hope that you and your pupils enjoy exploring the world of the TimeRiders.

All at Puffin





#### MISSION BRIEFINGS

These mission briefings should be read by children who have not yet read the series

The briefing include extracts from the TimeRiders books by Alex Scarrow

## MISSION BRIEFING 1: JOIN THE TIMERIDERS

#### About the books

In the second half of the twenty-first century, time travel has been recognized as a danger to the planet because of the opportunities it offers for people to meddle with history. The inventor of time travel has persuaded all the governments of the world to boycott his methods. Time travel has become punishable death.

However, various groups of people are still trying to alter the course of history for their own advantage and a mysterious agency has been set up to stop them. Its agents – the TimeRiders – are young people who have been recruited at a point in history where they are likely to be assumed dead in a disaster: Liam is a steward on the Titanic, Maddy is a passenger on a plane blown up by a terrorist in 2010 and Sal is trapped in her family's collapsing apartment block in Mumbai in 2026.

The TimeRiders' base is tucked away under the Brooklyn side of the Williamsburg Bridge where they repeatedly live through the same two days: 10 and 11 September 2001. It's important that nobody notices they are there, and the events of 11 September ensure they will be forgotten in the chaos and trauma after the terrorist attack on the Twin Towers.

Meanwhile they prepare for their mission: to spot the tiny changes between re-runs of the same day that reveal illicit time travel, then to travel back through history and restore what has been altered. See Mission Briefing 3 to find out how they do it. But getting 'home' again, and even communicating with the base, is always a complex and dangerous business for the Time Riders.

There will eventually be nine TimeRiders adventure novels. The ideas in this pack refer to the first two: *TimeRiders* (referred to in this pack as TR1) and *TimeRiders: Day of the Predator* (TR2).

#### **About Alex Scarrow**

Alex Scarrow used to be a rock guitarist and games designer and enjoys using his blog at www.time-riders.co.uk to share his favourite concepts for games that never got made (although many of them did), as well as giving an insight into how he thinks about his material. He has planned a total of nine TimeRiders adventures. The first book, *TimeRiders*, won the Calderdale Children's Book of the Year Award. Alex lives in Norfolk.





## MISSION BRIEFING 2: MEET THE TIMERIDERS

'[TimeRiders] are the people who fix broken things' - Foster

Our three TimeRiders are ordinary young people born decades apart who appeared to die in extraordinary circumstances. Even more extraordinary, at the moment of their death, they were saved against all the odds: they were 'recruited' by Foster to serve the TimeRiders agency. To be recruited as TimeRiders, they had to meet two criteria: they must have been about to die in circumstances that mean their remains cannot be found; and they must have demonstrated skills or personality traits suited to their future tasks as TimeRiders.

#### The TimeRiders are:

#### MADDY

Role: Mission Analyst

Full name: Madelaine Carter

Age: 18

Origin: Boston, United States of America, 2010

A lanky, freckled, bespectacled girl-geek (or geek-ette), Maddy has a promising career in computer games ahead of her when she is recruited from a doomed aircraft in 2010, just moments before a terrorist's bomb explodes.

Already celebrated for her work as programmer and de-bugger on a hugely successful online role-playing game, Maddy is more interested in teaching her PC new tricks and hacking into the Internet from her iPhone than clothes or make-up; it's just as well, because the TimeRiders have to make do with a basic wardrobe.

The consolation of her new role is that she has the most powerful computer in the world to play with, linked to every database in the world. She can even access the US president's in-box.

Maddy's logical mind and common sense make her the team's leader and strategist. When Sal, as the observer, detects that someone in the past has tampered with time, Maddy turns to database detection to work out when and where the change has happened, then sends Liam, the operative, back in time to sort it out, along with his artificial intelligence support unit, Bob.

Foster, who is training the team to function on their own, shares some of the pressures of his role with Maddy, so she understands more than the others about the long-term ill effects of time travel. Maddy worries about the welfare of the other TimeRiders, Sal being the youngest and still suffering from the loss of her family, and Liam with the biggest adjustment to make to the modern world. Maddy has been recruited from a time only ten years ahead of the TimeRiders' base time, but that brings its own problems: she is forced to relive the day that her cousin was killed in the Twin Towers.





SAL

Role: Mission Observer Full name: Saleena Vikram

Age: 13

Origin: Mumbai, India, 2026

Sal works hard at her 'creative grunge' look, with a lip stud, dark eye make-up and a carefully selected hoodie. She feels bereft without her 2026 bangra thrash-metal music and technology, and the street fashions of Manhattan, cutting edge in 2001, seem like museum pieces to her. It's Sal's championship-level skill at Pikodu, a Japanese picture-based puzzle game, that has led to her recruitment as a TimeRider. Her ability to spot repeated patterns in grids of random images, and tiny shifts in the patterns, makes her ideal for the role of observer. It's Sal who monitors activity around Time Square on endless re-runs of the same days in September 2001, then alerts the team when she spots a change.

She misses her parents and brothers, whom she lost when the skyscraper where they lived collapsed in a fire, and has nightmares about the night she was 'recruited'. But she is enjoying exploring her new world, which she prefers to the New York she has seen on TV in 2026, where the world energy crisis has brought the city to a standstill. Once she has adjusted to her new life, Sal emerges as warm, funny and irreverent. She bonds with the other TimeRiders, enjoys teasing Liam and becomes the team's home-maker, the one who remembers to buy milk and get the laundry done.

Sal thrives on human contact and tries to build relationships with the New Yorkers she meets day after day. But while Sal is living each day many times, every encounter is a fresh start for her contacts and she longs for long-term friends.

#### LTAM

Role: Mission Operative Full name: Liam O'Connor

Age: 16

Origin: Cork, Ireland, 1912

Bright, quick-thinking and adventurous, Liam loved his home city but intended to see the world by working his passage as a steward on an exciting new luxury transatlantic liner called the Titanic. Once rescued from the doomed crossing, Liam has to catch up with the world of New York in the early twenty-first century. Even the food seems strange in 2001. He finds burgers and fries a little bland, but develops a taste for spare ribs and Rice Krispies.

Liam is the TimeRider who does most of the actual travelling in time, although the others will occasionally join him on a mission. It's not surprising that Liam is afraid of water, and he has never learned to swim, so he's not happy with being dunked in a tank of water every time he goes on a mission. But, in recruiting him, Foster recognized his courage, as well as his ability to adapt to new circumstances and to appreciate the wonders he will see as a time traveller. Learning not to be paralysed by fear when out of his depth – for example, when stranded in the age of the dinosaurs, or captured by the Nazi invaders of America – is the toughest part of Liam's learning curve. But his humour, bravery and quaint charm win him friends at whatever point in time he finds himself, although some of his best friends are computers.





#### They are guided by:

FOSTER: the agency representative

The team's recruiter and mentor, Foster is a veteran time traveller and source of wisdom and support. Constantly alert and rigorous in his demands on the recruits, he rarely sleeps. Foster tells Maddy that his real age is twenty-seven, but he appears fifty years older because of the debilitating effects of his repeated travels. That is why he must choose the right recruits and train them to operate without him.

#### BOB AND BECKS: support units

Bob and Becks are clones 'hatched' from genetically engineered embryos using technology from the future. However, we discover in the second TimeRiders book, Day of the Predator, that the embryos are stored in the past.

The clones have bodies with enhanced powers combined with artificial intelligence stored on a computer and can exist separately from their bodies as long as their neural processor — an implant the size of a mobile phone — is safe. They learn human language and behaviour from the TimeRiders, often with hilarious results: see the extract below. And when you've read the books, try out Mission Activity 3.

When Bob accompanies Liam on his time-travel missions, he not only uses his size and strength to protect Liam and keep them both safe but accesses all the data that Liam needs to make sense of his new surroundings. The only thing that Bob can't do for Liam is make decisions, which is Liam's job.

Bob and Becks (who replaces Bob as the active support unit in the second book) even learn to duplicate some human emotions, and there is something special about their bond with Liam, who relies on them for companionship when he is away from the rest of the team.

#### The TimeRiders and Bob enjoy some R&R

'Who's havin' the rack of ribs?'

Liam raised a hand. 'I'm starving,' he said.

'The salad?'

Sal raised her hand.

'The burgers?'

Foster and Maddy nodded.

The waitress looked at Bob, confused. 'I'm sorry, sir. What did you order?'

Bob glanced up at her with his piercing grey eyes. 'I do not eat human food unless it is a necessary mission requirement,' he explained dryly.

The waitress cocked her head. 'Excuse me?'

'Oh, don't worry about him,' said Foster. 'He's just not allowed to eat on duty.'

She smiled coyly at Bob, admiring his physique. 'So . . . are you, like, some kind of undercover cop, then?' Bob turned to Liam. 'Liam O'Connor, explain the term "cop", please.'

Liam shrugged and made a face. 'You're asking me?'

'A "cop",' explained Foster, 'is a slang term for a law enforcement officer.'

'I understand.' Bob nodded slowly and closed his eyes. 'I am filing the term for future use.'

The waitress looked from Bob to Foster, bemused.

'You guys ain't from around here, are you?'

Maddy finished chewing her first mouthful of burger. 'Oh, you can forget about them - they're Canadian.'





#### MISSION BRIEFING 3: TIMERIDERS IN ACTION

The TimeRiders' mission is always to prevent the course of history from being altered: to ensure that events that have been manipulated by previous time travellers are restored to how they were — even if it might seem that the outcome from altering the events would be good.

In the first book, Foster and Bob show Liam how it works by taking him to Dallas, Texas, on the day of President Kennedy's assassination in 1963. In this training exercise, Foster stops the assassin, Lee Harvey Oswald, from firing the fatal shot.

Foster walked through the door into the storeroom, Liam and Bob following cautiously. They stepped between stacks of school textbooks, precariously piled on top of each other, coated in a fine layer of dust.

Liam glimpsed, between teetering piles, the hairy tuft of the top of a head framed by a tall window. He turned to Foster and Foster nodded.

That's him.

They stepped across the floor quietly until they were standing over him.

'Excuse me,' said Foster.

Lee Harvey Oswald spun round. His eyes widened at the sight of three tramps calmly watching him. One huge and muscular, one looked very old and the third was little more than a boy.

His mouth flapped open.

The muscular man wrenched the rifle from his hands.

'Lee Harvey Oswald,' said the old man calmly, 'you'd better start running. Run as fast as you can,' he said, offering the slightest sympathetic smile. 'I suggest you head home.'

'Who . . . who are you?'

Foster smiled. 'Hmm, let's see. Oh, I know,' he said, grinning, 'we're the CIA. Anyway . . . you'd better get going or my man here will toss you out of the window head first.'

Oswald nodded uncertainly as he got to his feet, looking Bob up and down. He pushed past them and disappeared out of the storage room, casting one last frightened and puzzled glance at them as he descended the first flight of stairs, three steps at a time.

'Time violation,' cautioned Bob flatly. 'This timeline has now been altered.'

Liam shook his head. 'But . . . but have we not just done the thing we're never meant to do?'

Foster nodded. 'Correct. As we speak, time is already shifting, rippling forward through the years. The decades are adjusting themselves, making room for a new reality: that President Kennedy survived today.'

The old man looked out of the window and watched the open-top limousine, escorted by a string of motorbike cops, sweep sedately up the street towards an overpass . . . and a grassy hill.





Back in Times Square, New York, on Monday, 10 September 2001, Sal notices a CNN news bulletin that she hasn't seen before in the many times she has relived this day.

She watched a grainy image of several men in crumpled orange boiler suits holding clipboards and chatting amicably within the cramped confines of some sort of capsule . . .

Subtitles ticker-taped on to the screen: +++Cmdr Jerry Hammond and crew celebrate Anton Puchov's thirty-fifth birthday+++

Sal noticed that few, if any, of the pedestrians on the pavement around her seemed particularly interested in the broadcast, as if it was something commonplace - old news for them.

The image of the men manoeuvring awkwardly in the cramped interior changed to a picture of a rust-coloured sphere floating against an ink-black backdrop. A new ticker-tape subtitle appeared:

+++Mission to Mars: 80 days to Mars orbit+++

+++CNN warmly wishes Anton a happy birthday+++

'Oh my,' she gasped, and pulled the mobile phone out of her pocket.

Sal has spotted that history has been altered: it's now Maddy's job to work out when and where it happened.

She did a Google search on the Mars mission, quickly reading the results before her. Not for the first time in recent days her jaw slackened and dropped open.

There was an enormous space programme in operation, cooperatively funded by the Chinese, the Russians and America. A small scientific outpost existed on the moon, a 'cartwheel' space station hung in geo-stationary orbit of Earth, a number of supply shuttles had already been landed on Mars ahead of the men en route there. The world - this world - seemed obsessed with space exploration, driven to reach out to neighbouring planets.

She dug deeper into the history of the programme.

Archived newspaper articles from 1983 described a conference of nations discussing the funding of a 'permanent lunar outpost', to build an 'orbiting mission platform' for 'future projects further afield'.

She found even older newspaper articles, dating from the 1970s, a meeting of minds between the Russian Premier Brezhnev and NASA's goodwill ambassador John F. Kennedy . . .

Kennedy?

She looked at the name again.

Not . . . that . . . Kennedy? The one who got shot? The president?

Her history wasn't great. But she'd seen enough movies and read enough books to be certain the guy died back in the sixties sometime.

She saw Kennedy's name suddenly flash up on the CNN ticker-tape feed. A moment later an old man appeared on the screen, a very old man, frail and snowy-haired.

'No way,' she whispered, 'that's not him . . . is it?'

+++Ex-president and goodwill ambassador John Kennedy extends his congratulations and best wishes to the Mars crew+++

Maddy stared at the old man on the screen. 'Hang on. You should be dead,' she said. 'You should've died ages ago.'





The name of the place where this happened came to her out of the blue. 'Dallas, Texas,' she uttered.

She typed a search phrase into Google:
[+Kennedy +Dallas +assassination]

The search returned only one link that featured all three words. It was from a newspaper article dated 22 November 1963. It was an article about a 'suspected aborted attempt on the president's life'. She clicked the link and a newspaper article appeared on screen.

. . . a .41 calibre rifle found abandoned on the sixth floor of the School Book Depository overlooking Dealey Plaza. The man suspected of owning the gun, a Mr Lee Oswald, was later arrested at his home. He claimed to have made plans to kill the president during his visit to Dallas, but said he changed his mind at the very last moment. The story is further complicated by sightings of three strangers in the same building at the time the president's motorcade was passing, who staff described as 'being dressed like vagrants' and were certain had no reason to be in there . . .

Maddy slapped the bench and yelped. 'Yes!'

She knew exactly where and when Foster and the others had gone back to.

'Found you!' she screamed triumphantly.

Before they can come back to base, Foster, Bob and Liam have to 'correct' the change they made to events, and must ensure that the fatal shooting does take place. To find out how they do that, you'll need to read TimeRiders.







#### MISSION EXERCISES

Activities for teachers and librarians to run with children

Not read the TimeRiders books yet? Try these activities and enjoy exploring www.time-riders.co.uk

Once you've read TR1, you might find it interesting to return to the activities

and see whether the books help you come up with new approaches.

#### MISSION EXERCISE 1: AFTER THE EVENT

'If you change the past a little, you'll change the present a lot' - Sal

#### Writing

Choose any event in history that you have studied, or use one of the key events in TimeRiders (the assassination of President Kennedy or Germany's defeat in the Second World War).

- Write a news report (in the third person) dated a year after the event, but assuming that the event has not happened (for example, Lee Harvey Oswald, President Kennedy's assassin, was caught, or Germany won the Second World War).
- Repeat the exercise for a report dated five years after the event, then fifty years after, then 100 years after.
- Use another form of writing in the first person a blog or a letter to a friend to describe your daily life one, five, fifty or 100 years after the event.
- Write an obituary for a figure from history who died young, such as Anne Frank, imagining that this person survived into old age and outlining what they achieved throughout their life.

#### Art & design/multimedia

- Watch the trailer for TR1 at www.time-riders.co.uk and check out the images that reflect alternative versions of history, such as the Soviet flag being planted on the Moon, German airships in New York and so on.
- Find an original image to reflect the event in history that you have chosen in the previous exercise, or a different event.
- Using collage, animation, digital manipulation or any other appropriate technique, alter the image to show an alternative view of history and display it next to the original.





#### **Talking Points**

Could there ever be a good reason for allowing history to be altered? Read the TimeRiders extracts in Mission Briefing 3.

- Once the TimeRiders had stopped Lee Harvey Oswald from shooting President Kennedy, what could they have chosen to do?
- What might be their reasons for not restoring the original course of events?
- You can think about these questions whether or not you have read the book: then read it to find out why the TimeRiders took the course of action that they did.

Choose another event in history and imagine that you have the power to be a TimeRider, to visit the scene and alter the event in some way.

- Explain what you would do to make history turn out differently.
- Then discuss the reasons for and against doing it.
- The rest of the group can vote on whether you should do it or not.

What might be the disadvantages of being able to travel through time?

#### After reading TR1

Look again at the previous question. Why does Waldstein, the inventor of time travel, believe so strongly that his technology should never be used?

Compare the TimeRiders' experience with that of any other time-travelling character from fiction or popular culture.

#### Meet the TimeRiders again

The three young TimeRiders – Liam, Sal and Maddy – have distinct roles in their organization, which are explained in Mission Briefing 2. What are the challenges and dangers of each role? Which of the three TimeRiders do you think experiences the most change, or learns the most, in the course of the book (or both books)? What else can you add to their character profiles in Mission Briefing 2 after reading the books?





#### MISSION EXERCISE 2: THE REAL ORIGIN OF SPECIES

'If you change the past a little, you'll change the present a lot' - Sal

In the second book, TimeRiders: Day of the Predator, Liam and a group of high school students (one of whom is not what he seems) are trapped 65 million years ago in the Cretaceous period before dinosaurs became extinct.

TR2 introduces a species of reptilian hominids, which are intelligent enough to evolve into a race as powerful as homo sapiens (what we know as the human race). The book presents a view of the modern world in which mammals have not evolved as the most prominent species.

#### Learning to survive

TR2 shows us that in order to survive, a species needs to keep learning new skills.

- Make a list of three physical things you have learned since you started school. These might include riding a bike,
  playing football, dancing or skills that you learned when you were quite young such as tying shoelaces or fastening
  buttons.
- Think about how you learned each skill: by reading instructions, by watching someone (a teacher, family member or friend) do it and copying, by joining in with a group, or by trying it yourself right away.
- Research examples of how young creatures learn skills: for example, how birds learn to fly by imitating their mothers.

The three young TimeRiders – Liam, Sal and Maddy – have distinct roles in their organization, which are explained in Mission Briefing 2. What are the challenges and dangers of each role? Which of the three TimeRiders do you think experiences the most change, or learns the most, in the course of the book (or both books)? What else can you add to their character profiles in Mission Briefing 2 after reading the books?

#### Broken Claw's lesson: extract from TimeRiders: Day of the Predator

Broken Claw, the leader of a pack of dinosaurs that feed on smaller creatures in the jungle where Liam's group is based, observes the humans closely to learn to destroy them. This extract shows how the humans' speech and skill at weapon-handling have been turned against them.





Broken Claw watched the new creatures approach. Four of them armed with their killing sticks.

He turned to the others, crouched nearby, and softly hissed for them to make ready. He turned towards the younger one, crouched next to him. The youngest ones of the pack were best at this particular skill - mimicking the calls of wounded prey - their voice-boxes being smaller, allowing them a much higher pitch, the shrill pitch of fear and desperation.

He clacked his claws gently, instructing the young one to do it once again.

The young female's jaw opened, and her tongue and voice skilfully reproduced the cries the female new creature had been making earlier today as she lay dying from a fatal stomach wound.

'. . . Help me . . . please . . .'

They changed direction, veering directly towards Broken Claw and the others, just a few dozen yards away now, stepping out of the clearing and into the darkness of the jungle. The new creatures seemed to have absolutely no sense of how close to danger they were, their small seemingly ineffective noses unable to detect the smells that filled Broken Claw's nasal cavity: the smell of excitement from his pack, the smell of anticipation of a fine kill, the smell of their dark-skinned female brethren lying dead amid the ferns nearby - bled out hours ago.

How could they not smell any of this?

These creatures were either foolish or incapable of sensing all the warning signals in the air around them, stumbling blindly. Certainly - he understood this now - nothing for his pack to be wary of any more. He'd learned enough about them: that they were as vulnerable as the larger plant-eaters they usually hunted, more vulnerable, in fact, since they had neither their weight or strength to throw around.

And now . . . Broken Claw and several of the stronger males in his pack now possessed sticksthat-kill.

The four long digits on each of his hands tightened round the thick bamboo shaft. Broken Claw was determined to use his stick-that-kills on one of them as he had that older male earlier this morning up in the hills. A fascinating way of delivering death. An intriguing tool of death.

#### **Talking Points**

You can learn more about Broken Claw and his pack by reading TR2, then discuss the following in groups.

- List/brainstorm the characteristics that help Broken Claw's pack to survive in the jungle.
- List/brainstorm the reasons why they either need to stay in the jungle or develop new characteristics (if they were to move to the plains, for example).
- List/brainstorm the characteristics that the creatures would need to acquire to survive in the future.
- Take turns to describe the rest of your group as Broken Claw would see you if he was in the room with you, or do this exercise in pairs with the partners taking turns to describe each other. List or brainstorm the characteristics or skills Broken Claw would most want to acquire from your group.
- Discuss why Broken Claw has become leader of his pack.
- Several of the twenty-first-century survivors are highly intelligent and well informed about prehistoric creatures, plus the group has the benefit of Becks' artificial intelligence, yet they are unable to challenge Broken Claw's leadership. What advantages does he have over the humans?





## MISSION EXERCISE 3: WHAT MAKES US HUMAN?

This exercise is best done after reading both books, although some of it could be attempted after reading TR1.

#### **Talking points**

Discuss the following in small groups and pool your ideas.

In which ways are Bob (TR1 and TR2), Becks (TR2) and Broken Claw (TR2) like humans and how do they differ from humans? Which of the three has most in common with how we understand humans to be?

While discussing this you might want to consider:

- how each of them learns new behaviour and skills (see the extract at the end of Mission Briefing 2);
- how each of them processes new information;
- · how far each of them is affected by others' behaviour.

The following questions could be considered after reading TR1 with reference only to Bob.

- Imagine that you are designing a 'support unit' on the lines of Bob and Becks. What are the most important functions you would want it to have?
- Is there any way you would want it to improve what Bob and Becks can do?

#### MISSION EXERCISE 4: SURVIVAL ROLE PLAY

#### 'I'm from the twenty-first century, get me out of here'

- Divide into groups of six to eight.
- Imagine you are marooned on an island covered in jungle in the middle of a fast-flowing river with no modern technology.
- You have twenty minutes to work out how to stay alive and get off the island to go for help.
- Afterwards, pool all the ideas from the groups and find out whether you have any significant ideas in common.

#### After reading TR2, continue the exercise.

Discuss how Becks helps the group of refugees from the twenty-first century to survive in prehistoric times.

- What are the most important things they need to know?
- How would they manage without Becks's help?





## MISSION EXERCISE 5: POSTCARDS FROM THE PAST

#### Geology

• Each member of your group or each group within a class researches something important that you have learned about the Cretaceous period from fossils and shares the information with the rest of the group or class. Display your findings.

#### Art & design

- What methods could you choose to leave a message for future generations?
- Find images that show how past civilisations have told us about how they lived. Did they make the images with the intention of sending a message to the future, or for another purpose?

#### After reading TR2, discuss:

- Why have the twenty-first-century survivors in TR2 chosen to make clay tiles to send a message to their rescuers in the future, rather than, for example, burying a time capsule?
- If you have facilities for ceramics or can organize a trip to a ceramics studio, decide on a date in the future and a message you want to send, devise a code to write it in (in TR2 Liam and Becks use a Harry Potter book) and make clay tiles similar to those made by the twenty-first-century survivors in TR2.





## MISSION EXERCISE 6: RESEARCH AND DEBATE

#### **Genetic engineering**

- What are the advantages of using genetic engineering to create a human clone with specific skills or a high level of endurance?
- Can you think of ways in which society would benefit from this kind of human clone: for example, firefighters and other rescue services?
- Research the arguments for and against the use of genetic engineering.

Bob and Becks have been 'grown' or 'cloned' from 'engineered human genetic data'. This means they have bodies with superhuman powers combined with artificial intelligence stored on a computer. The technology used to develop them is from the future, so more advanced than the present day.

• If you have read the books, what do they tell us about what can go wrong with this technology?

#### The end of the dinosaurs

Part of TR2 is set in the Cretaceous period before dinosaurs became extinct. The layer of clay that separates rocks of this period from those of the later Tertiary period, when mammals replaced the dinosaurs, is known as the K-T boundary, which marks the end of the Mesozoic era about 65 million years ago.

There are many theories about precisely how the dinosaurs became extinct, including the impact of a small asteroid colliding with Earth or a massive volcanic explosion. Either of these is thought to have led to climate change drastic enough to kill most of the animal and plant life on Earth. Only the smallest and most adaptable creatures survived.

#### After reading TR2, consider the following:

- What does TR2 tell us about how the dinosaurs became extinct?
- Research the arguments for and against the theories expressed in TR2. List as many other theories about the causes of extinction as you can. Research the arguments for and against and then display your findings.

