



Lunch Orders

Term Three 2024: Artificial Intelligence



Al Mythbusting With Dr Matt Agnew



Artistic Intelligence With Ashley Ronning



Thinking Outside the Black Box With Ruby Quail



Getting to the Heart of Al With Dr Tim Dean







Contents

About Lunch Orders	3
A Summary of Events	3
AI Mythbusting	5
Artistic Intelligence	8
Thinking Outside the Black Box	11
Getting to the Heart of AI	15





About Lunch Orders

While you're nourishing your body, let us feed your mind with this series of fascinating deep dives into a different topic each term. Each serving opens with a 10-minute soapbox where an expert delivers their response to the provocation. They are then joined by host Bec Kavanagh for a Q&A that enriches and expands on their ideas. Lunch Orders will have you back into the schoolyard with time to spare, and a few extra facts to pack in your lunchbox too.

Lunch Orders is generously supported by George and Rosa Morstyn.

A Summary of Events

In Term Three, the focus of Lunch Orders was on AI. How does it work? Why are we afraid of it? What does the future of art, work and life look like with AI in it?

A note for teachers

The suggested activities are designed to be a springboard for exploring the overarching themes in the Lunch Orders series. Activities may be used in isolation to support other areas of study in your context or can be used in a sequence while sharing the videos with students. The curriculum links pertain to the Year 9 Victorian and Australian English curriculum; however, all activities can be differentiated and can be used with students from any secondary year level.

Links to the Victorian Curriculum: English – Year 9 (Version 2.0)

- Analyse how symbols in still and moving images and the use of sound augment meaning (VC2E9LA07)
- Analyse the effect of text structures, language features and literary devices such as extended metaphor, metonymy, allegory, symbolism and intertextual references (VC2E9LE04)
- Use interaction skills to discuss opinions regarding texts that have different purposes and audiences, analysing how language features position an audience to respond in particular ways (VC2E9LY01)
- Use comprehension strategies such as visualising, predicting, connecting, summarising, monitoring, questioning and inferring to compare and contrast ideas and opinions in and between texts (VC2E9LY07)

General capabilities

- <u>Critical and Creative Thinking</u>
- Ethical Capability
- Personal and Social Capability

Cross-curriculum priorities

<u>Sustainability</u>

Foundational skills

Digital Literacy







Links to the Australian Curriculum: English – Year 9 (Version 9.0)

- Analyse how symbols in still and moving images augment meaning (<u>AC9E9LA07</u>)
- Analyse the effect of text structures, language features and literary devices such as
- extended metaphor, metonymy, allegory, symbolism and intertextual references (AC9E9LE05)
- Analyse how representations of people, places, events and concepts reflect contexts (<u>AC9E9LY01</u>)
- Use comprehension strategies such as visualising, predicting, connecting, summarising, monitoring, questioning and inferring to compare and contrast ideas and opinions in and between texts (<u>AC9E9LY05</u>)

General capabilities

- <u>Critical and Creative Thinking</u>
- Digital Literacy
- <u>Ethical Understanding</u>
- Literacy
- Personal and Social capability

Cross-curriculum priorities

<u>Sustainability</u>

About the author

Emma Jenkins is the Education Officer at the Victorian Association for the Teaching of English (VATE). She was previously a Year 7-12 English teacher in Tasmania and Victoria, as well as the President of the Tasmanian Association for the Teaching of English (TATE). Emma has produced units of work for <u>Reading</u> <u>Australia</u>, <u>The Garret podcast</u> series, and <u>ABC Education</u>. She is the co-author of the AATE publication, <u>Micro</u> <u>Stories: Small fiction with big impact!</u> (2019), and the host of the VATE podcasts <u>VATE Village</u> and <u>YA Book</u> <u>Stack</u>.







AI Mythbusting

With Dr Matt Agnew



To access the recording of this Lunch Order, click here.

Pre-learning activities

Matt asks a series of important questions at the beginning of his soapbox. Explore these with students to prepare them for engagement with this term's Lunch Orders:

- What is artificial intelligence?
- What does it mean when something is 'artificial'?
- What is 'intelligence' and what does it mean to be 'intelligent'?
- Do you use AI? What AI technology do you use in your life already?
- What is an algorithm? And do you know how algorithms work?

Discussion questions and learning tasks

- Help students to understand the differences between ethics and morals and laws? Discuss the ways in which AI, or technology more broadly, is influenced by these concepts. Consider what kinds of things are unethical, immoral, or illegal, and how are people treated when they behave in these ways?
- Think about the ways that people can engage with technology and AI, including the ways that students
 are already engaging with AI (either consciously or unconsciously). How could this kind of technology be
 misused? Are there examples of AI being abused that students can recall? Taylor Swift has been a recent
 target with explicit deepfake images and the leaking of fake songs said to be by her.
- What does it mean to say that something is 'biased' either deliberately or unintentionally? Matt speaks
 about the ways that AI is inherently biased and perpetuates the systemic inequities already experienced by
 individuals later in his Lunch Order.
- What are the implications for AI that produces, circulates, and encourages <u>fake news, misinformation</u> <u>and disinformation</u>? Consider world events that have been impacted by the spreading of these lies and conspiracies such as <u>elections</u> and war.







Bec and Matt talk about the notion of sentience. Sentience is hard to define but relates to the capacity to
have feelings or be conscious about the world. There is a lot of discussion in tech spaces about <u>whether
or not Al is sentient</u> and whether it is <u>capable of sentience</u>. Ask students whether they think this is a good
thing – what might be the benefits of a sentient Al? Listen to Matt as he discusses some of the things he is
excited about when it comes to creating sentient Al toward the end of his Lunch Order.

Classroom activities

Activity 1

At <u>9:50 mins</u>, Bec asks Matt, "would we know if AI was lying?" In his response, Matt refers to Alan Turing and the <u>Turing test</u>. The Turing test involves a human conversing with a robot and another human in a blind test. If the first human can't tell the difference between their responses, then the robot is deemed to have human-level intelligence. The test was proposed in 1950, so it is important to note that standards for AI have increased dramatically since then!

Students may be familiar with CAPTCHAs – which is an acronym that stands for 'Completely Automated Public Turing test to tell Computer and Humans Apart'. This is known as a reverse Turing test where humans try to convince a computer that they're human. Students will recognise these from websites where they input their personal data and the purpose of these tests is to prevent scammers and bots. This YouTube video explains how CAPTCHA works.

Have students work in pairs to create a list of ways they could determine if they were talking with a robot. Perhaps they have already had a silly conversation with ChatGPT and can speak to their experience. Using this list, create a CAPTCHA that a robot would need to complete in order to try and 'prove' it is a human.

Activity 2

Around <u>12:55 mins</u>, Matt and Bec discuss the "brains behind the robot" and Matt mentions the names of several corporations that are driving the development of AI including <u>OpenAI</u> (ChatGPT) Microsoft <u>Copilot</u> and Google <u>DeepMind</u>. Matt is very clear that the motivation behind these companies is financial.

In addition to this, Bec and Matt talk about the moral, ethical and legal responsibilities of these companies. It is likely that students are using AI on a regular basis – either for fun or seriously. Some students will be using AI to complete their schoolwork, and authenticating the work of students is one of the main concerns of teachers. However, as students use these technologies, it is important for them to critique them as a tool and consider the ways in which using AI continues to entrench some people in disadvantage. As Bec says, 'we're embedding the worst of ourselves into our technology' (<u>16:57 mins</u>). Discuss how AI platforms contribute to issues of sexism and racism and what the responsibilities of tech companies are when it comes to creating a more equal society.







Consider sharing some films or short stories with students that explore some of the ideas of the impact of AI. For example, you could examine '<u>There Will Come Soft Rains</u>' by Ray Bradbury – a cautionary tale of technology outpacing humanity in the aftermath of nuclear war. While the automated house continues about its pre-programmed activities, the house/city burns down around it. Ask students if this is the purpose of AI – to be able to undertake basic household chores – and where the boundary between technology and humanity is crossed. What is the purpose of this kind of AI if nuclear war wages?

Activity 3

Throughout this Lunch Order, Matt and Bec discuss the positive impacts of AI and the ways in which AI can be used to support those who need it. Both discuss the <u>epidemic of loneliness</u> that has been reported in the United States among some groups and how AI can help in 'making loneliness and feelings of being alone no longer a problem'. Do students know of any other kinds of events, organisations or technologies that are designed to help curb the loneliness that people can feel?

Matt explains: 'The last jobs that will be replaced are the ones where the human element is so critical to it and that's teaching – I think there is something very important to the teaching and learning process that being human is a requirement – and then obviously, care' (28:48 mins). Although students may resent coming to school or dislike their teacher (!), there is something particular about the subject English, in particular, that can't be replicated by AI. Can students come up with a list of human traits for educators that AI can't replace? Hopefully students will conclude that, as Bec and Matt agree, AI cannot replace human connection and interaction.

Matt's provocation

To answer Matt's provocation, ask students 'what is a task that you would like AI to take over?' Then consider his provocation:

With the new time that you have [due to the use of AI to do tasks you no longer want to do], how would you reimagine what 'making a living means'?

Provide students with some time to reflect on Matt's provocation and think about the ways they might classify what it means to have an income, how they would like to spend their leisure time, and what kinds of jobs they might like to pursue if AI is able to take care of more menial tasks. Consider their future working week and what they would like it to look like and how they might be able to use/rely on AI technologies to change their schedules in the long run.







Artistic Intelligence

With Ashley Ronning



To access the recording of this Lunch Order, click here.

Pre-learning activities

- Ashley mentions that she was a fan of science fiction and that is why she looked forward to using AI. Why do you think that is?
- · Have you used generative AI to create artwork, music, or to write something? If so, how did it turn out?
- What do you know about consent and how it relates to AI?
- Do you know about copyright law?
- Have you heard of intellectual property (IP)?

Discussion questions and learning tasks

- Do you think that companies should have to inform people when they have used AI to generate material for them such as promotional posters, jingle music, or advertising copy?
- If you are a creative person, what are some of the things you like about your creative process? What does it feel like when you write a poem, compose a piece of music, create a story, or illustrate something?
- Are you feeling optimistic about the future of AI and technology? Ashley is finding it difficult to remain optimistic as her livelihood and artistic integrity is under attack. If you feel optimistic, why?







Classroom activities

Activity 1

At around <u>8:45 mins</u>, Ashley gives some examples of AI generated art that has gone wrong and shares some helpful tips to identifying art that has been created online. For more about how AI technology works to create art, you might like this TEDxNortheasternU talk with <u>Melody Liu</u> who explains the way in which AI is trained and how art created by AI is created. Ashley shares the example of Candlelight Concerts who ripped off the artistic style of <u>Jamie Hewlett</u> to promote a <u>concert featuring music by the Gorillaz</u>. Blatant like-for-like copying of artists' style can be obvious. Ashley shares some tips for identifying less obvious examples of AI generated art:

- Look for odd shapes and blurred lines, garbled text, and examples of body horror (e.g.: limbs missing, too many fingers, etc).
- Use your 'insider information' to help understand a piece of art. Ashley gives the example of being a musician and using her knowledge of instruments and gigs to view and interpret art.

Ashley talks through three examples of AI generated art that doesn't quite look right (<u>9:55 mins</u>). This process is easily adaptable for the classroom.

- <u>Willy's Chocolate Experience advertisement</u> has particularly funny examples of garbled text, spelling errors and nonsensical words.
- The Candlelight Concerts <u>advertisement for Linkin Park tribute</u> shows examples of body horror (the drummer is missing limbs), the bass guitar has five pegs (unusual) and leads are not plugged in to anything.
- <u>Hekka Festival poster</u> shows a clown that has too many fingers on one hand.

Look up examples of AI generated advertising/artwork gone wrong. A recent example-includes the <u>Queensland</u> <u>Symphony Orchestra's Facebook ad fail</u> (note also the irony of the QSO using AI to promote the arts when they should be paying artists for their contributions). Print/distribute these to students in a <u>gallery walk</u> where they employ some of Ashley's tips to identify the errors made by AI.

Activity 2

Challenge students to create an effective meme that captures the experience of using AI. They may draw inspiration from their own lives or use some of the points that Bec and Ashley discussed. The meme they both reference in this Lunch Order is this <u>quotation from Joanna Maciejewska</u> first posted to X (formerly Twitter). Students can use this <u>meme generator</u> or create their own.







Activity 3

Ashley's primary concerns about the use of AI in art are around consent and compensation. These areas are quite broad and worth discussing with students. While using AI technologies may seem rather harmful, there is a lot to consider when it comes to the ethical considerations and use of copyright protected material. Students are likely to be engaging with AI, however, some may have not considered the wider implications of how doing so can be considered a form of stealing from artists – especially at this stage where there are few rules and regulations to govern AI companies.

Discuss some important questions with students using a <u>barometer activity</u>. Create a continuum in your classroom that students can stand along to show if they 'agree' with the below statements, or 'disagree' with them. It is okay if they want to stand in the middle! Students should be prepared to defend their position on the continuum.

- It is okay to imitate the style of an artist, musician or writer.
- If something is on the internet, it is free for anyone to use in whatever manner they like.
- Al companies should not have to pay royalties to artists.
- I should not have to acknowledge if/when I use AI in my work.
- Al poses no threat to the creative industries.
- Creators who use certain platforms in their work (like Photoshop) should retain the rights of their work.
- It is not copyright infringement to analyse work and learn from them.
- I'm happy for Meta (for example) to scrape my data off their platforms and use it to train AI models.
- The future of AI is worrying.
- Everyone should be able to create art, even those people who have no artistic talent. Art shouldn't just be for those people who trained and studied it at university, or who are naturally gifted.
- To use AI is to manipulate your audience. You cannot truthfully use AI.

The Bodzilla's provocation

At the end of this Lunch Order, Ashley leaves the audience with this provocation:

What part of the creative process would you never want to change?

Provide students with some time to reflect on Ashley's provocation and think about the ways they engage with the creative process and the joy they get from working in this way.



Thinking Outside the Black Box

With Ruby Quail



To access the recording of this Lunch Order, click here.

Pre-learning activities

In a <u>blog post</u> in 2023, <u>Bill Gates</u> claimed that the '...Age of AI has begun'. In addition to the archaeologically and historically significant Stone, Bronze, and Iron Ages, contemporary technological periods include the Industrial Age, Machine Age, Nuclear Age, Space Age, and presently, the Internet Age (also known as the Information Age). Each of these ages is categorised by the developments, preoccupations, events, and tools that are used by humankind in this period. Recently, Taylor Swift visited Australia on her <u>Eras Tour</u> – playing on the concept of the time period of an 'era' and how this has related to her songwriting. Ticket holders were encouraged to '<u>dress as a particular era</u>' when attending the concert. Inspired by this, have students undertake the following:

- Investigate <u>the timeline</u> of the internet how has people's usage of the internet changed even in their lifespan?
- Ask older people around them about what they remember about the internet and how they used computers/technology when they were younger.
- Write down all the ways in which they use technology including specific apps or games.
- Consider some of the positives and negatives of each for example, the positive and negatives of using TikTok, or the positives and negatives of online shopping.
- What are some of their favourite things about AI or technology more broadly?
- Drawing on their findings and opinions, design a costume (or series of costumes) that represents the Internet Age and the Age of AI.



V A T E





Discussion questions and learning tasks

- There is a lot of talk about the negative impacts of AI. What are some of the benefits? Ruby outlines a few
 for consideration such as OpenAI's <u>Whisper</u> for transcription, using AI to run analysis for medical research,
 incorporating AI to make writing and visual processes more efficient, and upscaling of images for film and
 computer graphics.
- What do you think some of the drawbacks of AI are? If you have used some forms of AI before, have they been 'right' or 'wrong' in their answers? Ruby and Bec refer to AI's 'near enough is good enough' approximation style of providing answers. Has this been your experience?
- What kinds of things are important to get right as in, they are true and undisputable? If AI relies on
 probably and approximation, what kinds of things do we need to agree are true? Ruby gives the example
 of AI operating as if "one plus one probably equals two". It is true and undisputed that one plus one does
 equal two!
- How do you rely on technology or artificial intelligence to go about your daily life? Think about a regular day and count how many instances of using AI or technology you use from things like scanning your Myki on public transport, using an online platform to order your lunch at school, or how you do online banking.
- Do you agree with Bec that AI might be contributing to the 'dumbing down' of learning and engagement? (<u>30:30 mins</u>)

Classroom activities

Activity 1

At <u>11:27 mins</u>, Ruby mentions that because of running AI generators, Google used 50% more electricity than any year prior. According to <u>this article</u>, Google's AI search results require ten times the energy required to power a regular Google search. '<u>According to Statista</u>, Google averaged 8.5 billion searches per day in 2023, or 98,379 searches per second. If each AI-generated search requires 3 watt-hours of electricity, that's a usage rate of 295,138.88 watt-hours, or 295.14 kilowatt-hours. The average electric vehicle sold in 2023 had a 40-kilowatt-hour battery onboard, meaning the electricity used by AI search for a single second could have been used to power about seven and a half average electric cars'. <u>Earth.org</u> writes that research by the University of Massachusetts found that the training of large AI models produced the equivalent of 300 round trip flights between New York and San Francisco (4675km) – 626, 000 pounds (284 tonnes) of carbon dioxide. Further to this, the use of AI technology poses a risk to the environment due to:

- Disposal of e-waste that contains hazardous material
- Increase in waste due to rapid and frequent automated delivery of goods
- Overuse of fertilizers to increase production
- Boosting consumption through targeted advertising that push fast fashion or mass-produced products.

Ruby is clear in her soapbox that there is potential in AI – that it can be used to help encourage researchers, she cites medical researchers, to investigate new leads in their work. In the same way, AI can help scientists with the climate crisis. This World Economic Forum article <u>explores nine ways AI is helping tackle climate</u> <u>change</u>. Break class into nine groups to research each of these areas and share their findings with the class.







Activity 2

At <u>12:06 mins</u>, Ruby notes that 'essays are a lot less useful' when it comes to conveying information or reporting. For students, that also means for assessment! This is because essays are easy to replicate given the nature of their content and due to the way in which large language models (LLM) work to get information from the web. Given what Ruby discusses (that is, that most AI responses are an approximation, rather than 100% accurate), this means that sometimes the information is incorrect or not checked. There is a lot of nonsense on the internet to draw upon and attempt to pass off as 'true' or accurate for the context students are writing about.

She also mentions some of the 'baggage' carried by these AI platforms including Deepfakes, AI's use in warfare and policing, and the way in which AI is disrupting the justice system. In <u>Estonia</u>, AI judges are being rolled out to help with small claims cases while 'real' judges focus on more complex cases. Is this something to worry about?

Students are likely to be very familiar with essays and some will have written many already in their schooling career. As long as many universities require an ATAR for entrance, students are likely to continue to sit external examinations which require the delivery of essays. Ask your students how they would like to be assessed for an upcoming unit of work. Given that you will have had frank and honest conversations about the role of AI, how it is being used/abused, and the ethical and environmental considerations of AI technology, is there a more effective way to assess their understanding. Of course, one easy way around all of this is to just have students handwrite their assessments – but to what extent are these tasks reflective of their own original thoughts, queries, concerns and interests? Researcher Leon Furze makes some really interesting points about AI and the essay in <u>his blog</u>.

Activity 3

Ruby explains the concept of 'Effective Accelerationism' (<u>16:11mins</u>) – individuals who believe that technological progress is for the good of all humankind and needs to be rolled out as soon as possible. According to <u>Wikipedia</u>, its proponents "believe that unrestricted technological progress (especially driven by artificial intelligence) is a solution to universal problems like poverty, war, and climate change". They believe in the unrestricted development and deployment of artificial intelligence and are critical of regulation and government policy and law making regarding protecting people and people's intellectual and artistic property, from some of the pitfalls of AI.

Undertake a class debate with students. Allow time for each side to research and plan their arguments, assign speakers, and practise their work. Here is a <u>helpful guide</u> for the kinds of roles that students can have if they're not speaking.

The provocation for the debate will be: Technical progress is good for all of humankind. Remind students to consider all facets of AI that they may have covered across this Lunch Orders series including the positive and negative impacts of AI, some of the interesting things that AI can help with, the way in which AI models are trained on stolen material, and the way in which AI can reinforce negative stereotypes, assumptions, and systemic biases.







Ruby's provocation

At the end of this Lunch Order, Ruby leaves the audience with this provocation:

- At what point does AI start feeling like it has gone too far?
- What is the level that says AI 'has gone too far'?
- What is an acceptable level of development?

Provide students with some time to reflect on Ruby's provocation and think about some of the jobs, experiences, feelings, or processes they would be happy to have completed by AI or what needs to be continued to be done by a human being.







Getting to the Heart of AI

With Dr Tim Dean



To access the recording of this Lunch Order, click here.

Pre-learning activities

- What are ethics? What does it mean to behave in an ethical manner?
- What is philosophy?
- What do you think are some agreed ethical principles that people should have? In some industries there are professional and ethical codes of conduct. Medical professionals, for example, adhere to ethical principles around patients' autonomy, their duty to 'do good' and to 'not do bad', and their responsibility to treat all people equally. Teachers, for example, commit to the values of integrity, dignity, respect, and care through their work. You can read the Victorian Teaching Profession's Code of Conduct and Code of Ethics here.
- Tim and Bec talk in hypotheticals for a lot of this Lunch Order. What is a hypothetical? Where have you heard this term before? In philosophy, these are sometimes referred to as 'thought experiments' to help explore complex ideas and issues.

Discussion questions and learning tasks

- A lot of talk about how we can use AI mentions how damaging it could be to personal connections and relationships. How do you think we can use AI to better care for each other?
- Tim says that we "shouldn't be using AI to replace human connection" and we should be finding ways to use AI to bring us closer. What do you think he means and how can we use technology to unite us?
- Are you concerned about the way in which AI is being developed and employed?
- What do you think about a future where AI has developed agency and can act of its own accord? Do you think you would be able to trust a robot or other technological tool as much as you trust another human being?







- · How could we use AI to enhance life's experiences?
- At <u>6:27 mins</u>, Tim refers to the 'paperclip optimisation' thought experiment. This was first described by
 philosopher Nick Bostrom in 2003 and is used to illustrate the risk that artificial general intelligence may
 pose to human beings if it could successfully pursue even harmless goals like making a lot of paperclips.
 The experiment is meant to illustrate the risk to human being's safety when they create intelligent
 machines and lose control of how to program them. The <u>'Universal Paperclips'</u> game was created to help
 <u>capture the essence</u> of the thought experiment.

Classroom activities

Activity 1

At <u>10 mins</u>, Tim explains that large language models like ChatGPT, are good at giving advice. He says that many people use ChatGPT for relationship and life advice, or for the first step in seeking judgement-free counselling about a dilemma they have. Some <u>studies</u> have found that ChatGPT gives better advice than some professional columnists. Brainstorm a list of questions that students would like to ask ChatGPT and type them in! See what it says and whether the advice is suitable or not.

Some teachers will remember using 'chatterboxes' (also known as 'cootie catchers' or 'fortune tellers') as children. In some ways, ChatGPT is a more efficient and advanced version of these random generators, powered by probability and the internet. Here is a <u>brief history</u> of the 'cootie catcher'. Provide paper and pens and allow your class to create some of their own.

Activity 2

Tim delves into the notion of a 'good life' and the societal expectations about how we 'should' be living. At 33:23 mins, he is clear that each individual can decide for themselves what constitutes a good life and act accordingly to bring this to fruition. He also notes that it is a huge responsibility to know one's values and live according to these. There is likely to be times when this is easier and there will be times when this is harder!

Younger students may find it difficult to pinpoint and label their own values. Much of the discussion around AI is rooted in issues of social justice and equality – and whilst it is not impossible for students to practice empathy, it is a challenging concept to grasp, let alone apply in a process of critical thinking and reflection.







Encourage students to think about their values now. Here is a <u>value words list</u> and another <u>list of values</u> that students can put a tick against values that resonate with them. Have students write a short paragraph that explains why they have selected five of their values and tie them to a time in their life that reflects each one.

- Why have they selected this value?
- Why is this important?
- What has happened in their life to lead them to place importance in this value?

Considering all that students have explored through this Lunch Orders series; do they think it is possible for AI:

- To be capable of emotion?
- To become sentient?
- To feel any of the values they have listed?
- To act in a fair and just way toward everyone?
- To remain unbiased in its work and operations?
- To become autonomous and act of its own accord?
- To make ethical decisions that are logical and rational?
- To emulate what it is like to be a human being in this world?
- To feel love or compassion?
- To suffer or feel pain?

Tim's provocation

At the end of this Lunch Order, Tim leaves students with the following provocation:

Imagine you have a big red button in front of you and there is a 99% chance that if you press the button, you will bring about a global utopia and abundance for all. But there is a 1% chance it will wipe out all life on the planet. Do you think you would press the button?

Bec and Tim talk a little about the ways in which privilege, position, power and wealth may impact people's decision making, and whether those odds are enough for some people to gamble with. Provide students with some time to reflect on Tim's provocation and think about their justification. Encourage students to share their responses with the class.

