

Understanding AI: Rights, safety and wellbeing

KS2, Lesson 3: What is an AI chatbot?



What is an AI chatbot?

This lesson pack for key stages 2–4 has been designed to support pupils' AI literacy. This is the third of three lessons for years 5 and 6. It focuses on AI chatbots and how they are different from humans.

These lessons should not be taught in isolation, but always as part of a planned, developmental PSHE education programme. They are best used within the context of online safety or digital literacy.

Learning objective

To learn about AI chatbots and how they are different from humans.

Learning outcomes

Pupils will be able to:

- explain what AI chatbots are and why some people might use them
- evaluate qualities of human friendship
- identify factors to be aware of, if communicating with a chatbot
- assess similarities and differences between communicating with chatbots and interacting with friends

Climate for learning

Make sure you have read the accompanying teacher guidance notes before teaching this lesson. These include relevant subject knowledge for this topic, guidance on creating a safe learning environment, and curriculum links.

It is important to be sensitive to pupils' different experiences and not to normalise the use of generative AI or chatbots for this age group, as some may have never used generative AI tools and most generative AI has an age restriction of 13 years old, with parental permission.

Resources required

- Box or envelope for questions
- Resource 1: *AI chatbots* [one per pupil]
- Resource 2: *Qualities of a good friend* [one per small group, cut up]
- Resource 3: *Support for Billy* [one per pupil]
- Resource 4: *Venn diagram labels* [one for activity, cut up]
- 2 hula hoops
- Resource 5: *Venn diagram card sort* [one for activity, cut up]

Key words

AI chatbot

friendship

qualities

communicate

interactions

Baseline assessment

Baseline assessment activity (Slides 9–10, 5 mins)

Use slide 9 to establish or revisit ground rules. Explain that if pupils have worries or questions during or after the lesson that they do not want to raise in front of the class, they can write their question on a piece of paper, anonymously or with their name, and put it in the question box.

Show slide 10 and ask pupils to complete **Resource 1: AI chatbots on their own**, in one colour pen. Circulate during the activity to establish pupils' starting points and notice any common themes in their responses. Consider how the lesson may need adapting depending on any gaps or misconceptions. For example, more time may be needed for supporting pupils to understand what an AI chatbot is.

Introduction (Slides 11–14, 5 mins)

Introduce the learning objective and outcomes on slide 11. Explain that today's lesson will build on the learning in lessons 1 and 2, by exploring what AI chatbots are and how communicating with them might compare to interacting with human friends.

Using slide 12, introduce Billy, a 13-year-old boy (remind pupils that use of generative AI is usually restricted to 13 years and above in the United Kingdom). Explain that Billy has seen an advert for an AI chatbot, that is being marketed as a 'friend', but Billy wants to better understand how AI chatbots work and whether they can really provide quality friendship.

Ask the class what they think AI chatbots are. Explain that chatbots are computer programs that analyse what people type or say, and are designed to respond like a human would. Chatbots are trained by gathering data from lots of online conversations and learning patterns. Emphasise that chatbots are designed to communicate similarly to a human, but chatbots are not human. Unlike a human, AI chatbots do not have emotions, beliefs or intentions, and do not 'understand' what is being said, but the tool is able to use patterns learned from the training data to mimic human interactions.

Using slide 13, ask pupils:

- Where might someone come across an AI chatbot?

Take feedback, drawing out that chatbots can be used in different contexts, including:

- *customer service, e.g. helping with online orders, handling inquiries, providing customer support, tracking orders, booking appointments*
- *finding out information*
- *assistance and organisation, e.g. voicebots like Alexa and Siri*
- *social media*
- *AI chatbot friendship apps, e.g. where an AI platform markets chatbots to people as 'friends', 'avatars' or 'companions', but they are not real humans – they are chatbots*

Ask pupils to 'think-pair-share' in response to the question on slide 14:

- Why do you think people might use AI chatbots which are marketed as 'friends'?

Take feedback, using the ideas on the slide to support.

Explain that they are going to be thinking about what is important in friendships and how interacting with friends, such as school friends, compares with communicating with chatbots.

Core activities

Qualities of a good friend (Slides 15–16, 10 mins)

Explain that Billy has been thinking about his friends from school, Rani and River, and what qualities they have that are important to him. Go through Billy's list (on slide 15) with the class.

Using slide 16, ask small groups to use **Resource 2: Qualities of a good friend** to create a diamond 9, ordering the qualities they believe are most important in a good friend (towards the top of their diamond) through to least important (towards the bottom of their diamond).

Take feedback by asking groups to share their top three qualities and reasons why these are important to them. Discuss with the class that good friends will often have these qualities, but everyone has strengths and weaknesses, and good days and more challenging days, which sometimes might affect how these qualities are demonstrated. This is what makes us human!

Billy and the chatbot (Slides 17–21, 15 mins)

Tell the class that they are going to look at some of Billy's interactions with an AI chatbot. Share the interactions on slides 17–20. For each one, ask the class:

- What do you notice?
- Is there anything Billy needs to consider?

Take feedback for each scenario, explaining the following:

- **Scenario 1** – *The AI chatbot is agreeing that Billy is good at everything but the chatbot does not (and cannot) know Billy. Chatbots are also designed to agree with the user. This means that chatbots cannot be honest like school friends can, for example. Honesty helps friends build trust and grow together as individuals. Honesty can also help friends to work through disagreements or conflicts, which can even make relationships stronger.*
- **Scenario 2** – *Chatbots can make mistakes and may direct people to inappropriate support (like this website, which is for adults) or even into unsafe or risky situations. If this ever happens, Billy should speak to a trusted adult. If Billy feels sad or experiences other challenging emotions, he can talk to an adult at home or at school, who knows him and who he trusts – they will be able to give him advice and support, with his best interests at heart. With statements like, 'I'm sorry, Billy' the chatbot is mimicking human conversation, but chatbots cannot have feelings. The chatbot is also 'asking' Billy questions; this feature of chatbot design aims to gather more data about the user to help tailor the chatbot's responses.*
- **Scenario 3** – *The chatbot's use of questions and human-like communication (e.g. emojis) is designed to gather data and encourage the user to keep engaging with the chatbot, so the chatbot companies make more money. Billy might trust his friends with his secrets, or some personal details, but he shouldn't trust an AI chatbot with this information, as all text, photos and voice notes might be stored and used without his permission.*

- **Scenario 4** – AI can have positive uses. Here for example, Billy is using the chatbot for entertainment and fun. However, it is still important for Billy to consider that the chatbot is designed to keep him engaged (e.g. ‘Would you like to hear another?’). Billy will need to balance any time spent interacting with the chatbot with meaningful experiences with friends and family, and other offline activities.

Explain that these interactions have shown some features and risks of AI chatbot interactions. So, what would Billy need to consider if interacting with an AI chatbot? Take feedback then share the ideas on slide 21.

Then, in their books, ask pupils to write a note to Billy explaining three important things he should consider if communicating with an AI chatbot.

Finally, ask those pupils who completed the challenge activity to feedback their ideas to the rest of the class.



Support: Ask pupils to use **Resource 3: Support for Billy** to help with their note to Billy.



Challenge: Ask pairs to consider why they think AI chatbots are designed to always agree with the user. *Draw out that this design feature aims to keep users engaged so they spend more time interacting with the chatbot, which helps chatbot companies make more money.*

Similar or different? (Slides 22–23, 15 mins)

Use slide 22 to explain that Billy is feeling confused; he thinks that sometimes his interactions with the AI chatbot are similar to those with his school friends, Rani and River, and sometimes he feels they are very different.

Explain that the class are now going to explore the similarities and differences between communicating with chatbots and communicating with human friends.

Tell the class to sit in a circle. In the middle of the circle, overlap two hula hoops so that they create a Venn diagram, labelled using **Resource 4: Venn diagram labels**. Spread out the cards from **Resource 5: Venn diagram card sort** and explain that for each card, pupils are going to consider whether it applies best to chatbots, human friends, or both. Take each card in turn and as a class decide on where it should be placed. If pupils are unsure of any card, this can be placed outside the hoops.

Using the guide below for support, draw out key learning:

- **Chatbots only:**
***Always available** – human friends can’t always be available as they need to do things like sleeping and eating; and they have their own lives too. While always being available might seem like a positive, this could give people (like Billy) unrealistic expectations of human friends and how available they should be.*
- **Human friends only:**
***Knows me well** – chatbots can’t ‘know’ someone, as they aren’t alive. All chatbots can do is store the information shared with them. Whereas human friends will know about their friend’s life, feelings, likes/dislikes and experiences.*
***Trustworthy and doesn’t share private stories** – the information (including location data) someone provides to a chatbot may be shared elsewhere online which could lead to a person being unsafe. A good friend should be trustworthy.*
***Good to have a meaningful/personal conversation with** – a positive aspect of a human friendship is sharing each other’s experiences and feelings, which leads to more meaningful interactions.*

Chatbots might 'ask' lots of questions and store the responses but there's little two-way discussion, so it is unlikely to be as enjoyable or meaningful.

Would not knowingly cause me harm – chatbots can suggest unsafe or risky behaviours, whereas human friends wouldn't want their friends to feel unsafe or be harmed.

Shares some similar hobbies/interests – human friends may have shared hobbies and interests; or have experiences and memories they have enjoyed together. This is not true of chatbots.

Sometimes disagrees with me – human friendships are built on honesty, trust, support. They might not always be available but when they are they can support their friend to make the right decisions for them and to own their mistakes, apologise for them and be a better person.

Can understand feelings – human friends can see expressions and body language and have empathy for others. Because they truly know their friend, they can understand why they might feel a certain way. Chatbots are not human so cannot understand feelings or empathise.

- **Both:**

Fun – both human friends and chatbots can be fun to interact with.

- **Outside of hoops:**

Remembers what I say – there may be times that both cannot recall details that have been shared with them.

Always offers good advice – the advice given by a human friend is based on knowing the person and being able to ask a trusted adult for support if needed. A chatbot may offer advice but it can contain mistakes, and it is unclear where the advice is sourced from.

Using slide 23, explain that Billy feels much more knowledgeable about chatbots now. He would just like to know a final few points. Ask pupils:

- How might interacting with a chatbot over time, impact someone's human friendships?
- (For example, it could change their expectations of their human friendships as they might expect them to always be available or always agree with them.)
- What are three qualities that human friendships have (and chatbot interactions don't)? (For example, human friends can understand feelings, know their friends well, have shared experiences and memories together and may have similar hobbies and interests.)

Endpoint assessment and reflection

Endpoint assessment and reflection (Slide 24–25, 5 mins)

Remind pupils of the learning outcomes. Using slide 24, ask them to revisit their baseline assessment activity and add to, or amend it, using a different colour.

This is an opportunity to measure progress, evidence learning and inform your planning for future lessons.

Address any questions in the question box.

Using slide 25, ask pupils to reflect privately on the question, 'Which qualities do I believe are important in a good friend?'. They should not be asked to share this with others.

Signposting support

Signposting support (Slide 26, 5 mins)

Remind pupils that if they have any concerns about friendships, AI chatbots, or anything else they have encountered online, they can speak to a trusted adult, such as a parent/carer or teacher. You can also direct pupils to the following websites for more advice and support:

- www.childline.org.uk/kids
- www.ceopeducation.co.uk/8_10

Extension

Create a poster on 'What are AI chatbots?'. Include details to explain:

- what AI chatbots are
- where people might come across AI chatbots
- some reasons why interacting with chatbots is not like communicating with a friend
- two top tips for people to keep themselves safe, if interacting with AI chatbots