What Makes Us Human

FACILITATOR GUIDE

**CHANGING
BRAINS**

Materials

- Anchor Cards
- Abilities Cards
- Robot Cards
- 20 small tokens
- Optional: table sign

10–20 min **2–6 players**

Learning Objectives

- People's values determine which technologies are developed and used.
- New technologies change society, sometimes in unexpected ways.
- Scientists, engineers, and designers use their creativity to invent things and imagine the future, just like you do.
- Brain research benefits from many perspectives, including yours.

Big Questions

- What does it mean to be human? What is unique about the human brain?
- How humanlike could machines become? What might be the risks and benefits?

Note to Facilitator: This activity is designed as an open-ended, conversational experience. There are no right or wrong answers; the goal is to facilitate self-reflection and dialogue among participants. The game consists of two rounds. It works best with a small group (2–6 players), though a single player will also work. Time: 10–20 min.

Invitation for Visitors

"Would you like to play a game exploring what makes us human?"

Playing the Game

ROUND 1

Spread out the Abilities Cards randomly in the center of the table, then place the "Most uniquely human" and "Least uniquely human" Anchor Cards at opposite ends of the table, to the visitors' left and right, respectively. Explain to visitors that these cards show 10 abilities that we have as humans—things like making decisions, being creative, using our senses, etc. Wonder aloud if some of these human abilities might be more unique to humans than others; which of these abilities really make us who we are? Invite visitors to place the cards in order from most to least uniquely human, left to right across the table. (If they choose to group abilities rather than arranging them linearly, that's okay too.) Encourage discussion throughout.
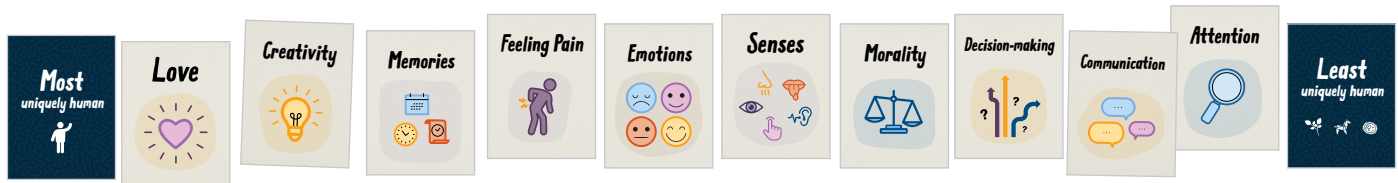
When visitors are finished ordering the cards, summarize what you see (e.g., "It looks like creativity and beliefs are most unique to humans, while senses and feeling pain are not so unique."). If visitors decide to rearrange the order, let them do so until they are satisfied. Then take the top 2–3 "most uniquely human" cards and pull them aside, saying, "What would happen if someone didn't have these abilities? Would they still be human?" Ask follow-up questions to help visitors elaborate on why or why not.

ROUND 2

Remove the Anchor Cards and lay out the Abilities Cards in the center of the table again, in random order arranged in two rows. Tell visitors that they have been recruited to help invent the most advanced robot in the world—a robot that

may have some or all of these abilities. To determine how much of each ability the robot will have, visitors can place tokens on the Abilities Cards: the more tokens on a card, the more of that ability the robot will have. Cards with no tokens mean the robot will not have that ability at all.

Then, pull out a Robot Card and tell them this is the type of robot they will be designing. Read the card's description aloud and invite visitors to start placing tokens on the Abilities Cards to design their robot. When visitors are finished allocating their tokens, summarize what you see (e.g., "Your Robot Chef has lots of decision-making skills and senses, but no emotions, morality, or ability to feel pain."). Let visitors rearrange tokens until they are satisfied.

Next, explain that it's time to put their robot to the test. Flip over the Robot Card and read the scenario on the back, ending with the question, "Based on its abilities, how does the robot react to this situation?" Encourage visitors to justify their answers by referencing the token placement on the Abilities Cards. Again, let them rearrange tokens if they so choose.

Once they are satisfied that the robot could react appropriately (however they define that) to the scenario, congratulate them on their successful design.

Wrap up with any or all of the following questions to prompt further discussion:

- If I could go out and build a robot with exactly these abilities, then bring it back here and introduce it to you, would you say that robot is human?

- On a scale of 0 to 10, where 0 is not human at all, and 10 is as human as you and me, how human is this robot? (If visitors gave the robot some abilities that they had ranked as very "uniquely human" in the first round, you might point this out.)

- Is the robot conscious, or sentient, or aware of itself and its surroundings?

- Is the robot smart? Can it think? Can it act independently of its programmers?

- If we could build this robot, should we? Why or why not? What might be the benefits, and what might be the risks?

- Would you rather have a human [job function] or a robot [job function]? Why?

At the end of the activity, remind visitors that the future of technology is up to all of us—and that having these kinds of conversations can help prepare us to create the future we want to see.

Game Adaptations

If members of a group are having difficulty making decisions together, you might suggest one person goes first and then others share how they would do things differently (for Round 1), or you might divide up the 20 tokens among participants (for Round 2). As much as possible, encourage a collaborative approach and remind participants it's okay to disagree!

Sample Script

ROUND 1

Spread out Abilities Cards randomly in center of table; place Anchor Cards ("Most uniquely human" and "Least uniquely human") at opposite ends of the table.


"These are some **abilities that we have as humans**—things that our human brain lets us do. We can communicate, we can pay attention, we have a sense of right and wrong…"

"I wonder if some of these abilities are **more unique to us as humans,** and if others are **less unique**. Which of these abilities really **make us who we are**? If you were going to put these cards in order, from the MOST UNIQUE to humans, to the LEAST UNIQUE to humans, **how would you arrange them**?"

After they are done arranging…

"It looks like you're saying **these are the most uniquely human abilities** [name top 3 cards], and these are **the least uniquely human** [name bottom 3 cards], right?"

"I wonder what would happen if a person did not have the ability to ___ [name top 2–3 cards, turn them over]—**would that person still be human**?" [discuss]
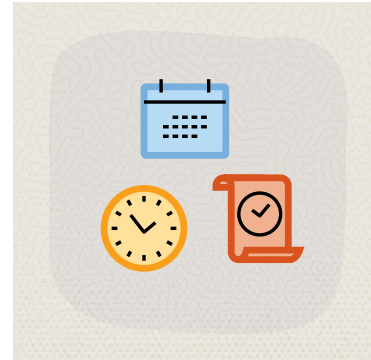
ROUND 2

Remove Anchor Cards; put Abilities Cards in center of table, arranged in two rows.

"Now, let's say you have been asked to help **build a brand-new kind of robot**. This robot **can have any or all of these abilities**, as much or as little of each one as you want to give it. You can put these tokens on each card to show how much of the ability you want your robot to have—more tokens means more of the ability, and if the card has no tokens at all, the robot doesn't have that ability."

"Specifically, the robot you are going to be designing today is a ____ [show Robot Card]. This robot is designed to ___ [read card, then place it on the table beside the Abilities Cards]. What abilities would you give to this robot?"

After they are done placing tokens…

"So it looks like your robot has a lot of ___ [cards with most tokens], some ___ [cards with a few tokens], and no ability to ___ [cards with no tokens]. Now, **let's put your robot to the test**!"

>*Turn over Robot Card and read the scenario.*

"Based on its abilities, **how would your robot react to this situation**?" [discuss] "Well done, it looks like your robot design is successful! Now I just have a few more questions for you…"

"If I could go out and actually build this robot, with **exactly these abilities**, then I brought it here and introduced it to you, would you say that robot is **HUMAN**? On a scale of **0 to 10**, where 0 is not at all human and 10 is as human as you and me, HOW HUMAN is this robot?"

"Would you say this robot is **CONSCIOUS**?" (or self-aware, or sentient)

"Would you say this robot can **THINK**?"

"And, if we could go out and build a robot with these abilities, do you think we **SHOULD**?"

>*After discussing…*

"Thanks for playing! Remember, the future of technology is up to all of us—and having these kinds of conversations can help prepare us to create the future we want to see."