

# **“Who Speaks for Earth” Activity**

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After students learn, and do activities about, the ideas behind the Search for Extraterrestrial Intelligence (SETI,) and the messages we might send and receive, it’s a good time to reflect about the social and political issues that might arise if we really do get a message from a civilization that lives around a distant star. This activity is designed to help them do that.

## **Activity Background**

Begin by reminding students or audiences that several groups of scientists around the world are scanning the sky for *techno-signatures*, signs of intelligent civilizations among the stars. In particular, projects are underway to find an artificially coded radio message from an extra-terrestrial civilization, not necessarily meant for us in particular, but one we can intercept.

Ask them to imagine that, one day, a team of SETI scientists announces that they have received an alien message, and that careful checking has shown that the message is real — coming from the stars and not a hoax by some pranksters on Earth. The message itself tells us that there is another intelligent species in the universe, what their location in the sky is, and what kind of message medium they prefer (radio waves, for example.)

Armed with that information, humanity could respond to the message by sending something similar back toward the star where it originated. (Even if we don’t speak “each other’s language”, the very existence of a message that is not natural, but shows coding by intelligent beings, is likely to be a major scientific discovery for each civilization.)

In fact, scientists conducting search programs have said that they intend to publish as much information as they can about any message they receive as they decode it. Once the information is publicly available, in theory anyone could use or build radio-astronomy equipment to send a reply, including countries, religious groups, private organizations, or even rich individuals.

The first question is: *do we answer?* Just because we have the scientific knowledge and engineering capability to do something, it doesn’t necessarily mean it *must* be done or *should* be done. Many scientists and philosophers have warned that there might be advanced, and possible hostile, civilizations out there. Are we ready to give away our location to them? (Remember, the senders are unlikely to know we exist, given that there is very little about our civilization that can be discovered from the distances of the stars.)



The Very Large Array of Radio Telescopes in New Mexico (NRAO)

Other people have pointed out that, if the message senders are significantly in advance of us, they might have much to teach us, about how to deal with problems on Earth or develop new technology. If we don't answer, are we precluding our opportunity to join get in touch with intelligent creatures who might be just one of a large number of intelligent species out there?

And who is it that decides whether Earth makes a reply? Is it the scientific group that received the message? Or the political leadership of the country where the message is first detected? Or any group that has access to a giant radio antenna (or array of antennas)? Should the U.N. decide? If so, can any objecting country veto the idea? How many countries need to approve before we go ahead?

Who would enforce a ban on sending messages? If a group sets up their own transmitter to send their views out to the aliens, can their country's government destroy that transmitter (if the general feeling is that we should not answer, or only answer after much thought and with one voice)? Is there a right to free speech when it comes to sending out messages that reveal humanity's presence to civilizations out there?

Furthermore, if we answer, then there is the question of what we tell the other civilization about ourselves? Do we tell the unblemished truth about the problems we have getting along with each other and taking care of our planet? Or do we do what people generally do on a "first date" – focus on our good points?

In considering these questions, science blends with sociology, psychology and politics. There is no correct answer that students can look up in a textbook. Reasonable people might well disagree on what the next step is after a message is received. Human beings rarely have to think about questions that concern possible danger (or benefits) to the welfare of the human species as a whole. (Although, these days, considerations of climate change present another invitation to “planet-wide” thinking.)

### **Activity Procedure**

Divide your students (or audience) into small groups (of 4 or so) and ask them to discuss and try to agree on the following three questions:

1. Should we answer a message that is clearly from the stars?
2. Who should make the decision about whether or not we answer?
3. How would you enforce that decision?

The students should select one person to be the “scribe” and take notes as they have their discussion. (Sometimes it also helps to have a discussion leader, who gives everyone a chance to be heard.) The scribe, or another group member, should be ready to report out their consensus opinion (or the fact that they could not agree) and summarize the points of their discussion.

After a period of discussion within groups, each group should report to the entire class. (If there is time, you could also organize a panel of representatives from groups that disagree, set up a mock trial, have students write an essay, or find other ways to discuss and debate the implications of answering the alien message.)

### **Background Information: Resources on the Web**

International Academy of Astronautics: Declaration of Principles Concerning the Conduct of the Search for Extraterrestrial Intelligence: <https://www.seti.org/protocols-eti-signal-detection-0>

Shostak, S. “What Happens if we Find a Signal?”: <https://www.seti.org/what-happens-if-we-find-signal> and “Humankind Just Beamed a Signal”:  
<https://www.seti.org/humankind-just-beamed-signal-space-aliens-was-bad-idea>

Gertz, J. “Post-detection SETI Protocols & METI: The Time has Come to Regulate them Both” (published in the *Journal of the British Interplanetary Society*):  
<https://arxiv.org/ftp/arxiv/papers/1701/1701.08422.pdf>

Traphagen, J. “Is Active SETI (sending messages) Really Dangerous?”:  
<http://meti.org/blog/active-seti-really-dangerous>

Brin, D. “Shouting at the Cosmos”:  
<https://www.davidbrin.com/nonfiction/shouldsetitransmit.html>

Denning, K. “Unpacking the Great Transmission Debate” (2010):  
[https://www.researchgate.net/publication/245139998\\_Unpacking\\_the\\_great\\_transmission\\_debate](https://www.researchgate.net/publication/245139998_Unpacking_the_great_transmission_debate)

Patton, P.: “Who Speaks for Earth: The Controversy over Interstellar Messaging” (a journalist’s review): <https://www.universetoday.com/119055/>