# BRAINS ON MOVE

Tips for sparking conversation and science inquiry skills – all while listening to podcasts in the car

How can you turn an everyday car ride into a fun opportunity to learn about science, technology, engineering and math? Podcasts!

The Science Museum of Minnesota got a National Science Foundation grant to conduct a scientific study in partnership with Brains On! to learn how a science podcast can spark conversations in the car. You can see what we learned at <u>BrainsOn.org/research</u>.

While you're listening as a family, our research team has some tips for adults on how to help kids get the most out of listening to a science podcast.

# Seize the Opportunity to Engage Kids

#### Talk Out Loud

Our study showed that when families responded to questions in a podcast out loud, it led to science-focused interactions that everyone participated in.

#### Let Them Listen Again

Kids love repetition, and it's good for their brain development. Play those episodes as many times as they want.

#### **Check In Before and After Listening**

Read the episode titles (Brains On! episode titles are always questions) and talk about what you think you'll hear. Then debrief with the kids later. Ask questions like: "Did you know that?" "What did you like about [the topic]?"

#### Engage with the Experts

Point out the interesting facts and examples that guests on the show bring up, discuss the cool aspects of their work, and help build trust in experts. Ask questions like: "Did you hear that?" "What do you think about that?"

#### **Listen for Questions**

When you hear hosts or guests ask each other questions on the podcast, repeat them out loud to the kids you're listening with. Or you could encourage them to respond with their own answer.

#### Ask Questions of Your Own

Keep the conversation going with your own open-ended questions such as: "What does that mean?" or "How do you think that works?" or "What are you wondering about?"

#### **Point Out Personal Connections**

Recall personal experiences connected to a topic and prompt your kids to do the same. You can ask questions like: "Do you remember when we ...?" "Do you think this is like that [show we watch, experience you had, etc.]?"

#### Be a Noticer

You know your kid best! Be alert for topics and questions that are particularly interesting to them and call them out: "You think a lot about [that topic], don't you?" "Don't you know a lot about that?"

#### Make the Most of Your Time with Your "Captive Audience"

Being in the car together without other distractions gives you the opportunity to discuss challenging issues together. For instance if there's a segment about why we have crushes, it's a chance for you to discuss potentially tough topics like puberty, hormones and consent.

#### To Pause or Not to Pause

Some families choose to – safely! – pause the episode to have a deeper conversation. Others talk right over it. Do what works for your family!

# Listen Together

It may be a quieter car ride if the kids are each plugged into their own devices, but if you listen to a podcast aloud with them it creates an opportunity not just to build stronger family connections, but also to foster more informal learning.

# About



# About the Study

The Science Museum of Minnesota carried out a research study to understand how a science podcast sparked conversations in a vehicle environment.

Researchers video-recorded 32 families with kids ages 6 to 12 listening to a new episode of Brains On! while driving. Researchers saw lots of different kinds of family learning conversations sparked through asking questions, making connections to personal experiences, and working together as a family to process information.

### About the Researchers

This research was carried out by the Science Museum of Minnesota's Department of Evaluation and Research in Learning. We study how people learn STEM in informal and everyday places like museums, classroom programs, family vehicles, outdoor spaces, and more. For questions about the research, please contact Dr. Amy Grack Nelson at <u>agnelson@smm.org</u>.

# About Brains On!

Brains On! from American Public Media is an award-winning science podcast for kids and curious adults. Our mission is to encourage kids' natural curiosity and wonder using science and history... but there's no age limit on curiosity.

# Funding

This material is based upon work supported by the National Science Foundation under Grant No. 1907014 titled Brains On! the Move: STEM Podcasts as Facilitators of Automobile-Based Family Learning Experiences. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the U.S. National Science Foundation.

Learn more at BrainsOn.org/research

