

Teacher's Guide to — Disease Detectives

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Planning and preparation are the keys to a successful field trip—even an electronic one! This guide provides a checklist and tips to help you and your students make the most of your upcoming Purdue zipTrips™ experience.

☐ Technology

Disease Detectives is no longer presented as a live show, which means your classroom will view an archived version of the zipTrip. Archived versions of zipTrips are viewed via streaming video over the web. Work with your school's technology specialist to connect to the program.

☐ Room Reservation

You will still want to reserve a large enough space for students to participate together. They'll need room to stand up and move in place! You will also need Internet access at that site.

Invite parents to help chaperone this virtual trip. There is a brief description of the field trip in Appendix A for you to use in a parent newsletter or other form of communication.

☐ Supplemental Materials

These materials are designed for classroom use before and/or after the show:

Online Videos: Five short online videos profiling different Purdue scientists using scientific inquiry to conduct cutting-edge disease research. These are found in the "Disease Detectives" trip once you have signed up for the show.

NOTE: There is a list of suggested discussion questions to go along with these videos in Appendix B, "Discussion Questions for Online Videos," at the end of this document.

NOTE: A possible timeline for using these materials is provided in Appendix C, "Recommended Timeline for Using Supplemental Materials," at the end of this document.

❑ Show Anticipation

Use the following prompts to initiate a **pre-trip discussion** with your students prior to the show:

- What do you think about science (not just the subject, but in the whole world)?
- Are you interested in science? Why or why not?
- What does a scientist do? Where do scientists work? Who do scientists work with?
- What are important characteristics of a scientist?
- If a scientist works with disease research, what types of things might they do?
- What types of tools or equipment might a scientist use?
- What type of questions might a scientist ask or answer?
- How do scientists answer a question?
- What is an experiment?
- We are going to participate in a zipTrip – what do you think it will be like?

Throughout the archived show, you will hear Purdue scientists will choose questions to answer. Please remember – there is not a live show, and therefore you won't be able to email questions.

APPENDIX A: Program Description for Parent Newsletter/Communications

Here is a brief description of the Purdue zipTrip for you to use in a parent newsletter or other form of communication:

“Cover your Mouth!” “Wash your hands!” “Brush your teeth!” These are all familiar sayings middle-school students hear everyday. But, have you ever thought about how these actions keep you from getting sick? Come on an electronic field trip with us to Purdue University to find out more about how humans and other animals get sick. We'll introduce you to scientists using scientific inquiry to do cutting-edge disease research, much like a detective. You'll even get to see a dog have his teeth cleaned at the Purdue School of Veterinary Medicine! The Purdue zipTrips project seeks to increase students' interest in science, consistent with STEM initiatives.

APPENDIX B: Discussion Questions for Online Videos

Prepare your students to watch the online videos by asking them to pay attention to the following details, then follow up afterward to discuss what they learned:

- What type of scientist is described?
- What does he or she do?
- What is the scientist trying to find out?
- Why did this person become a scientist?
- How is this scientist like you?
- What did you find interesting or surprising about this scientist?

APPENDIX C: Recommended Timeline for Using Supplemental Materials

Front-load Approach

DAY 1: Pre-assessment and Disease Detective Online Video

DAY 2: Week of Scientists Online Video

DAY 3: Week of Scientists Online Video

DAY 4: Week of Scientists Online Video

DAY 5: Week of Scientists Online Video

DAY 6: Show

DAY 7: Post-assessment

—OR—

Back-load Approach

DAY 1: Pre-assessment

DAY 2: Show

DAY 3: Disease Detective Online Videos

DAY 4: Post-assessment