

# Teacher's Guide to — It's A Gene Thing!

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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

*It's a Gene Thing!* is a live show, which means your classroom will view a live stream of the zipTrip. Work with your school's technology specialist to connect to the program. At least **two weeks before the LIVE show**, work with your school's technology specialist to test your web streaming connection. We will stream the program through Windows Media Player.

**Use this streaming URL:** <mms://video.dis.purdue.edu/zipTrips>

**Windows XP** users who would like to view the stream should use Windows Media Player version 11, available from Microsoft. Windows Media Player version 11 can be downloaded at:  
<http://www.microsoft.com/windows/windowsmedia/player/11/default.aspx>

**Mac OS X** users who would like to view the stream should use Windows Media Player version 9 for Mac OS X, available from Microsoft. Windows Media Player version 9 for Mac OS X can be downloaded at:  
<http://www.microsoft.com/windows/windowsmedia/player/mac/mp9/default.aspx>

### ❑ Room Reservation

You will still want to reserve a large enough space for students to participate together. 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.

### ❑ Get Excited!

Once you've made the technology arrangements and have the room reserved, it's time to get your administrators, fellow teachers, students, and even parents excited about participating in the zipTrip. After all, this is an unusual way to take a field trip, right? Let your administrators know about this unique event. Ask teachers on your team to join in the zipTrip. Invite parents to help.

Then prepare your students for the event by using the supplemental materials, including the online scientist videos and discussion questions.

### ❑ Supplemental Materials

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

*Gene Team* online videos: Three short online videos profiling different Purdue scientists using scientific inquiry to conduct cutting-edge disease research. These are found in the “It’s a Gene Thing” 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 LIVE 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 geneticist do? Where do geneticists work? Who do geneticists work with?
- What are important characteristics of a geneticist?
- If a geneticist works with disease research, what types of things might he or she do?
- What types of tools or equipment might a geneticist use?
- What type of questions might a geneticist ask or answer?
- How do geneticists answer a question?
- What is an experiment?
- We are going to view 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.

### ❑ Show Schedule

The trip is designed with student interactivity in mind. To help simulate an off-site field trip, encourage your students to respond to prompts and participate in the activities.

## APPENDIX A: Program Description for Parent Newsletter/Communication

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

Why do humans and animals look and act the way they do? It's all about DNA! In this zipTrip, learn how Purdue scientists are studying the building blocks of life. This visit starts with a look at how researching genetic combinations in mice teaches us more about human life. And something fishy is happening! A fish geneticist takes us to Alaska, an aquaculture farm, and to her lab as she tries to find out why certain fish travel the globe. Then get ready to use your scientific inquiry skills to help Purdue wildlife geneticists track tiger salamanders to find out more about the heredity of this species. 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 geneticist is described?
- What does he or she do?
- What is the geneticist trying to find out?
- Why did this person become a geneticist?
- How is this geneticist like you?
- What did you find interesting or surprising about this geneticist?

## **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