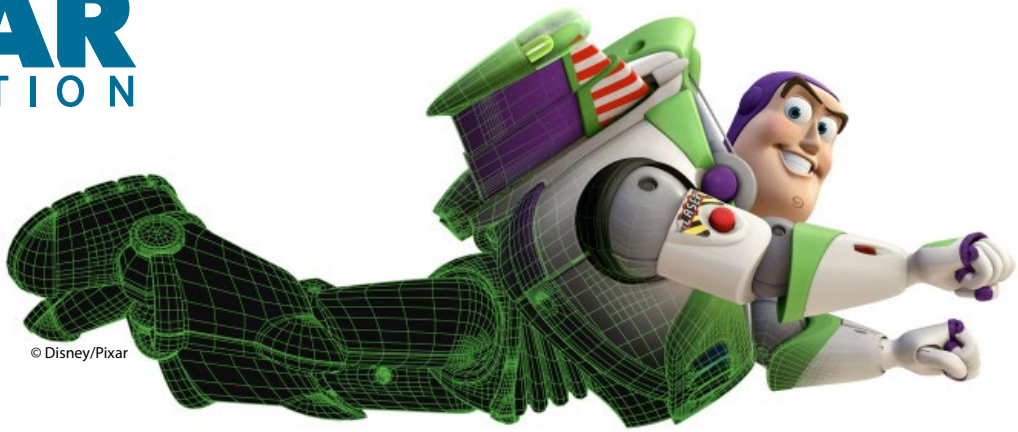
The Science Behind PIXAR EXHIBITION



Field Trip Planning Guide

1. Choose a subject to focus on.

ART | MATH | SCIENCE

2. Choose a focus area.

Art 1: Create your own virtual or physical set or character.

Art 2: Create a digital animation, stop motion animation, or flip book.

Math: Explore the world of numbers to create physical or virtual characters/sets.

Science 1: Create a scientifically accurate character in an appropriate model habitat.

Science 2: Create a stop motion animation.

3. Print out the corresponding flashcards associated with your subject's focus area.

4. Review the following pages for pre-, during, and post-visit activity information and culminating project ideas.

Field Trip Planning Guide

The Science Behind Pixar Exhibition is designed to be engaging and hands-on! As such, these field trip materials are designed to support an extended learning sequence that starts in the classroom, continues to the exhibition, and continues upon returning to school. Make sure to review materials and set expectations around documentation methods and acceptable use of technology. Below you will find a suggested scope and sequence for field trip activities, but it should be modified to most benefit your students.

All suggested materials were developed by Boston and Cambridge teachers. Link to appropriate standards can be found at twose.ca/pixareducator. Also available are worksheets, relevant standards, and additional educational resources.

Pre-visit

- Choose a subject and focus area in which students will concentrate on within the exhibit.
    - Art 1: Create your own virtual or physical set or character
    - Art 2: Create a digital animation, stop motion animation, or flip book
    - Math: Explor the world of numbers to create physical or virtual characters/sets
    - Science 1: Create scientifically accurate character in an appropriate model habitat
    - Science 2: Create a stop motion animation
- Print out the corresponding flashcards. You may want to print one set of flashcards for each group of students or print enough flashcards so that each group gets one flashcard to complete during their visit. There is a small letter/number code on the back of each card that corresponds with the subject and focus area.
- Pre-teach any necessary vocabulary.
- Explain that students should spend about 15-20 minutes completing the tasks on their flashcards, and then use the remaining time for individual exploration of the exhibition. Some flashcards suggest having students take pictures, videos, or sketch their results.
- Review field trip expectations and assignments with students and chaperone's. Prepare students for likelihood that they will not be able to see or do everything!
- If you choose to have the class complete a culminating project, explain the project that students will focus on after their visit.

During Visit

- Spend 15-20 minutes on focused activity (see exhibit activity cards for your subject's focus area).
- Spend 40-45 minutes of self-directed exploration and learning.
- Additional focused activity cards can be used based on student interest and motivation. However, it is important for students to be given the opportunity to experience some parts of the exhibition that truly excite and/or interest them.

Post-visit

- Have students reflect and share what they learned during their focused activity
- Post-visit resources can be found at twose.ca/pixareducator. These may support your subject's focus area or extend your students' learning to other areas.
- This may be an appropriate time to link work across all potential Pixar field trip subjects (art, math, science), or review the subjects/practices experienced in all subjects (computational thinking, careers, and modeling.)

Field Trip Planning Guide

You can extend your student's learning by facilitating culminating projects based on what student's experienced in the exhibit. Below are project ideas that can help start your planning process.

ART

Culminating Project 1: Create your own (physical or virtual) character and/or set

Have students work independently, or as a group, to create their own character and/or set. This can be a physical or virtual model, and can incorporate a variety of visual art practices.

Culminating Project 2: Create a digital animation, stop motion animation, or flip book

Have your students work in groups to create an animation, either digitally, stop motion, or as a flip book. Each student would become an "expert" on one (or more) particular stage of the pipeline by collecting information during the focused activity portion of the field trip. This culminating project can incorporate a variety of visual art practices. It would also work well in combination with the science-focused culminating project 2.

MATH

Culminating Project: Explore the world of numbers to create physical or virtual characters/sets

There is a vast array of math concepts and practices imbedded in the Science Behind Pixar exhibition. You can use students' experiences to review content specific ideas/concepts (coordinate grids, geometry, etc), or to explore them in a new context. Have students use the math concepts explained in the Pixar exhibition to create their own physical or virtual characters or sets. This culminating project links to specific math units and standards, and would work well with any other art or science focused project.

There are also Khan Academy: Pixar in a Box resources available for additional math content ideas at pixarinabox.org.

SCIENCE

Culminating Project 1: Create scientifically accurate character in an appropriate model habitat

Have your students gather information about the process involved in Pixar character and set creation, and then create their own scientifically accurate character in an appropriate model habitat. This culminating project would link well with studies of human body systems and/or habitats. It would also work well in combination with the art-focused culminating project 1.

Culminating Project 2: Create a stop motion animation

Have your students collect information about the ways in which animation creates the illusion of motion. This culminating project would link well with physics-based studies, such as forces and motion. It would also work well in combination with the art-focused culminating project 2.