



# Self-Guided Activities for Field Trips and Group Visits

## **Welcome to the MIT Museum!**

Within this packet, you will find guides to several exhibits of the MIT Museum. Please feel free to use our suggestions, to adapt them, and to use them as inspiration for exploring the MIT Museum.

Many of the activities have been planned for use with partner groupings as this often stimulates discussion and adds to the enjoyment of the exhibits. (They also work as individual activities.)

We hope these materials will enhance your visit. If you have any comments about the activities, you may contact the MIT Museum at [museuminfo@mit.edu](mailto:museuminfo@mit.edu).

MIT Museum Education Department, January 2017

*We thank the many teachers and students who have visited our galleries and whose ideas contributed to the development of these materials.*

## Introduction to the Exhibits

The MIT Museum's ground floor gallery features some exciting exhibits, many of which are based on current research at MIT ("Sampling MIT"). Additionally, you can engage with the Eight Einsteins and learn about Polaroid cameras on the ground floor. Upstairs, you will find exhibits about historical MIT robots, holography, and kinetic sculptures.

- 1) a) Pick two of the exhibits from "Sampling MIT" which interest you and briefly describe the projects.

Display 1:

Display 2:

- b) Why are scientists investigating this topic? What are they hoping to learn? What is the benefit to humanity?

Display 1:

Display 2:

- 2) List at least six of the famous people (not Albert Einstein) who can be seen in the Eight Einsteins exhibit.

- 3) What defines a Polaroid camera? Describe one positive and one negative aspect of this type of camera.

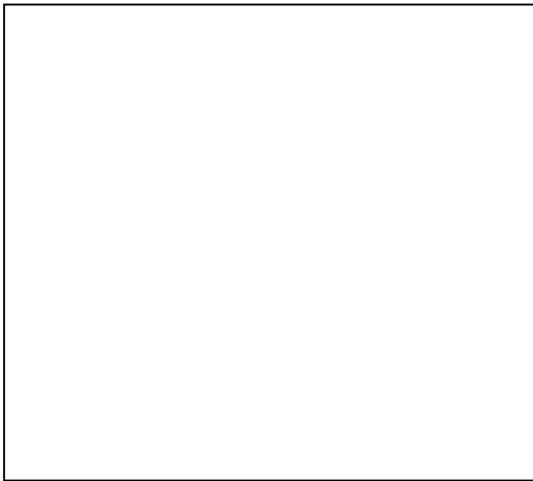
## Robots and Beyond: Exploring Artificial Intelligence at MIT

4) Why was Kismet created, and how was it designed to achieve that purpose?

5) Other than Kismet, choose a robot that is interesting to you. Draw it, title the drawing, and list at least two things that the robot does.

Title: \_\_\_\_\_

What does it do?



6) If you were to design a robot that would sense the environment and learn from it, what would it do?

## Holography

7) What two holograms do you find most appealing and why?

Hologram 1 title/description:

Hologram 2 title/description:

8) Is holography an art or a science? Support your conclusion with information from the holography exhibit.

9) What are some practical applications of holography?

### Arthur Ganson: Gestural Engineering Sculptures

10) What do the sketches in the exhibit tell you about Ganson's process of design and creation?

11) Pick your two favorite mechanical sculptures and describe two similarities and two differences between them. (Example: how is the movement in "Margot's Cat" and "Cory's Yellow Chair" different?)

12) How many steps does the artichoke petal take in 5 min? (Hint: use multiplication!)

Steps per 10 sec: \_\_\_\_\_

Steps per 60 sec: \_\_\_\_\_

Steps per 5 min: \_\_\_\_\_

13) Ganson says, "When making a sculpture, it's always a challenge to say enough but not say too much, to coax with some kind of recognizable bait, then leave the viewer to draw his or her own conclusions and thereby find personal meaning." Choose a sculpture and describe the meaning you draw from the work.

Title of piece: \_\_\_\_\_

Your thoughts:

### Kurtz Gallery of Photography

14) This gallery features rotating exhibits that feature artifacts that require special preservation. Name one way that this gallery is different from the rest of the museum galleries.

15) Art frequently causes an emotional response from the viewers. Name one piece in this gallery that appealed to you and describe how it made you feel.

### Images of Discovery

16) Why was a strobe light critical for capturing so many of the images in this exhibit?

17) Spend some time at Doc Edgerton's "Piddler". Can you get the water drops to stay motionless?

18) Do you think altering a photograph by changing the color, focusing on a part of the subject, or flipping the image, for example, changes the meaning or misrepresents the scientific subject? Why might a photographer want to adjust the viewer's perspective of the image?

19) The exhibit, *Inventions: MIT Student Showcase*, presents a number of ideas developed by MIT students. Which do you like best? Does the invention require you to use multiple senses to appreciate it? (If so, which ones?)

## Projects and Prototypes

20) All of the projects featured in this gallery were created by MIT students. Find one project you find interesting and draw it, title the drawing, and share what you learned about how this project was created.

Title: \_\_\_\_\_

How was it created?

