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.

MIT Museum Education Department, June 2014

We thank the many teachers and students who have visited our galleries and whose ideas contributed to the development of these materials.
Self-Guided 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 Slide Rules and Harold “Doc” Edgerton on the ground floor. The Edgerton display continues on the second floor, where you will also find exhibits about Polaroid and MIT history.

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) What unexpected uses for slide rule can you find?

3) a) Harold Edgerton Corner, 1st floor: In the online photo gallery, find one picture that appeals to you. What makes this photograph so interesting?
b) Harold Edgerton Corner, 2nd floor – The Piddler Machine: At the top of the stairs to the 2nd floor, go right and you will see “The Piddler”. See if you can make the water droplets look like they’re moving down, standing still, and moving up. What makes the droplets appear that way?

4) 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

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

6) 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?

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

8) What two holograms do you find most appealing and why?
   Hologram 1 title/description:

   Hologram 2 title/description:

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

10) What are some practical applications of holography?

Arthur Ganson: Gestural Engineering Sculptures

11) What do the sketches at the entrance to the exhibit tell you about Ganson's process of design and creation?

12) 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?)
13) 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: _____

14) 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:

**Daguerre’s American Legacy**

15) This exhibition is all about people. Provide two reasons why it was important to people in the early 1800s to have their images captured through the daguerreotype process. What are two reasons that people today want to have their picture taken?

1. (1800s)

2. (1800s)

1. (2000s)

2. (2000s)
16) Which daguerreotype, ambrotype, or tintype is your favorite image? Why?

5000 Moving Parts

17) Can you align your breathing with “BREATHE”? How many breaths per minute does the machine take and how many do you in the same time?

Machine's breaths/minute:

Your breaths/minute:

18) Why did Anne Lilly place the seats in “To Conjugate” facing away from each other?

19) Why do you think the artist who created “Please Empty Your Pockets” shows you objects that other people placed on the conveyor belt along with the object you used?

20) The Inventions: 2014 Student Showcase exhibition 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?)