THE IF/THEN®
GENDER REPRESENTATION TOOLKIT

For Formal and Informal Learning Environments
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GOALS OF THE TOOLKIT

• Help both formal and informal educators collect data on their visual representation of gender.
• Prompt conversations among your organization’s staff about gender equity and support your organization’s broader Diversity, Accessibility, Inclusion, and Equity efforts.
• Encourage educators to improve gender representation in their materials and visual communications by leveraging the IF/THEN® Collection or other related resources.
About IF/THEN®

Launched in 2018 by Lyda Hill Philanthropies, the IF/THEN® Initiative aims to advance women in science, technology, engineering, and math (STEM) through three primary efforts: highlighting women working in these fields as role models, inspiring young women to learn about STEM careers, and convening cross-sector partnerships to illuminate the importance of STEM everywhere. The IF/THEN® Coalition includes partners across industries—science, media, fashion, education, philanthropy, entertainment, sports, and more—undertaking projects to improve representation of women in STEM.

About Lyda Hill Philanthropies

Lyda Hill Philanthropies encompasses the charitable giving for founder Lyda Hill and includes her foundation and personal philanthropy. The organization is committed to funding transformational advances in science and nature, empowering nonprofit organizations, and improving communities. Miss Hill has a fervent belief that “science is the answer” to many of life’s most challenging issues and has chosen to donate the entirety of her estate to philanthropy and scientific research.

About the Association of Science and Technology Centers (ASTC)

Founded in 1973, ASTC is a network of nearly 700 science and technology centers and museums, and allied organizations, engaging more than 110 million people annually across North America and in almost 50 countries. With its members and partners, ASTC works towards a vision of increased understanding of—and engagement with—science and technology among all people.

www.astc.org

In its role as an IF/THEN® Coalition Member, ASTC developed the IF/THEN® Gender Representation Toolkit for science centers and museums to use in their museum content.

This version of the Toolkit has been updated and adapted by Lyda Hill Philanthropies in order to reach a broader audience including formal and informal educators in schools, after school programs, in other educational environments, and at home.

For questions about this project, email info@ifthenshecan.org
Why gender representation matters

Women make up half of the total U.S. college-educated workforce, but only 28% of the science and engineering workforce. Educators have a part to play in ensuring that groups underrepresented in STEM fields are more visible to their young audiences. The images and videos displayed in classrooms, in community centers, and elsewhere have the potential to inspire students and others who visit these spaces. Our hope is that everyone can see themselves reflected in images and be motivated to consider education and careers in STEM fields.

“THE IF/THEN® COLLECTION OFFERS UNLIMITED OPPORTUNITY TO INFLUENCE THE VISUAL WORLD AROUND US, BECAUSE WE KNOW ‘IF SHE CAN SEE IT, THEN SHE CAN BE IT’. OUR GOAL IS FOR GIRLS EVERYWHERE TO SEE STEM AS EXCITING, RELEVANT, AND COOL, AND SEEDING THE VISUAL LANDSCAPE WITH IMAGES OF RELATABLE AND DIVERSE WOMEN IS KEY TO MAKING THIS HAPPEN.”

- Nicole Small
CEO of Lyda Hill Philanthropies®
Co-founder of the IF/THEN® Initiative
OVERVIEW OF PROCESS FOR TOOLKIT COORDINATORS

Review the Assessment Tool (Page 11)
Including all accompanying resources within the toolkit

Decide where to use the Tool
i.e. curriculum and program materials, websites, social media, flyers, signage, etc.

Determine additional categories to track (if desired)
Learn more on page 9

Identify data collectors
Data collectors may include your organization’s staff or volunteers

Coordinate staff session: “Planning and Prep”
Learn more on page 6

Collect data
Use the Tool to collect data from the spaces you’ve decided on in step 2

Enter the collected data into the spreadsheet
Data reporters will enter the data collection results into the spreadsheet found at www.ifthencollection.org/toolkit

Coordinate staff session: “Debrief and Next Steps”
Learn more on page 13

Deciding where to use the Tool
Before getting started with the Assessment Tool, determine what categories of content you will analyze with the Tool. You may choose to conduct your assessments on all content your organization creates or uses, a few areas, or in a single space. If you are unsure about which areas should be the focus of the assessment, you can start with a cursory review of several spaces. How many spaces you are able to assess will depend largely on the size of your physical space, breadth of digital content and number of data collectors. Use the Tool to assess as many images and videos as you are able. Any amount of data that you collect is an important contribution to understanding your organization’s gender representation.

Curriculum and Program Materials
Includes content from classes, workshops, demos, or any other physical or digital educational content.

Signage
Includes posted signs or posters around your location that are visible to students, staff and/or parents

Program Materials
Includes content from classes, workshops, demos, or any other educational materials

Web Presence
Includes any websites your organization operates and social media pages.

Promotional Materials
Includes flyers, catalogues, brochures, mailers, and other similar marketing materials.
STAFF SESSION RECOMMENDATIONS FOR TOOLKIT COORDINATORS

You will find outlines for two in-person sessions for data collectors and staff at www.ifthencollection.org/toolkit. The Toolkit coordinator may act as the facilitator of these sessions, or may choose another staff member to lead them.

STAFF SESSION: PLANNING AND PREP

Length: 30–60 minutes
Required for all Data Collectors
Complete before collecting data

This training session helps data collectors understand how to effectively use the Tool to collect data, and why the Tool is needed. Before you hold this session, consider:

- What areas of your facility will you collect data from and in what order?
- Who will collect data from each space and when will they collect it?
- Will staff conduct assessments individually or as a team?
- What, if any, additional categories will you count using the Tool? (See ideas on page 8)

STAFF SESSION: DEBRIEF AND NEXT STEPS

Length: 60–90 minutes
Highly Suggested for all Data Collectors and stakeholders
Complete after collecting data

This session focuses on individual reflection, including debriefing the experience of using the Tool and discussing what was discovered. This session will also give staff an opportunity to explore potential next steps for your organization in addressing inequities discovered through using the Tool. You may consider inviting additional stakeholders to this session, including staff from the areas you assessed and/or leadership.

Keep in mind...

You know your own organization best, so feel free to tailor aspects of these recommendations. You can customize these sessions based on your group size, available time, and discussion content to better fit your organization’s needs. You may also choose to create additional guidelines for using the Tool depending on your organization’s size, the number of staff members, or specific goals. The Assessment Tool is one part of your organization’s process to increase gender equity, but can be integrated into other areas of your organization’s equity work.
HOW TO USE THE ASSESSMENT TOOL DEFINING LOCATIONS

To ensure each organization follows the same data collection practices, we have shared language to help assist in the use of the Assessment Tool on page 11.

**Space**
For example, a space could be a website, an advertising campaign, an area of signage, a curriculum book, a set of promotional materials, or any other content that includes images or videos.

**Element**
An element is a section of a space. Dividing up a space makes it more manageable to collect data and reference that data later. Choosing what constitutes an element is up to the data collector. However, an element should be labeled in a way that makes it easy to find later. For some small spaces, you may choose to consider the entire space as one element, such as in the flyer example below.

**Type**
The type of media being analyzed within an element. Types mainly include photographs or videos, but you may choose to include animations, drawings, or other media. Collect data for only one type of media on each data collection sheet.

**EXAMPLES**

**Program Building**
- **Space** the entirety of a building
- **Element** distinct area within a building
- **Type** all videos within the space

**Websites**
- **Space** the entirety of a website
- **Element** a tab or page within the website
- **Type** all videos within that tab or page

**Flyers**
- **Space** all promotional flyers
- **Element** the entirety of one flyer
- **Type** all photos within the flyer
HOW TO USE THE ASSESSMENT TOOL GLOSSARY

To ensure each organization follows the same data collection practices, we have shared language to help assist in the use of the Assessment Tool on page 11.

**PERCEIVED GENDER**

You will use the Tool to count the perceived gender of people in images or videos. Use each person’s visual cues such as clothes, hair, and body language, to help decide how you are perceiving their gender. Bear in mind that when using the Tool, your goal is to categorize people based on your initial assumptions, which will help the data better reflect what your audience is most likely to think when they see an image.

**I perceive this person to be a woman/girl or man/boy**

- Data collectors should record their own perceptions of the genders for the people in the images reviewed.

**I do not perceive this person to be a woman/girl or man/boy**

- If a data collector does not perceive the person to be a woman/girl or a man/boy, or cannot decide what gender they perceive, record a tally mark here.
- If there is not enough information to perceive a person’s gender (for example, if only a small part of their face is visible) they should not be included in the count.

**Gender non-conforming**

- Place a mark in this box if you perceive a man or woman to have visual cues (e.g., clothing, hair style, etc.) that are primarily different than what is typical for their gender

**What if I choose the wrong gender?**

In conducting this Assessment, we are unable to ask the people in the images about their gender identity, so it’s OK if you mark a person in a gender category different than how the person might identify. The purpose of this Tool is not to decide someone’s gender identity, but to capture your personal perception of gender as it appears in your content, so we better can understand how your audience may view representation in your content.

**AGE**

**Perceived as a Child**

- Between birth and 17 years

**Perceived as an Adult**

- Age 18 or above. If you are unsure if an individual is a teenager or young adult, count them as an adult.

**STEM**

**Children “doing science”**

- Children using a scientific tool, such as those used to observe or measure
- A child that is merely observing another individual “doing science,” should not be counted as doing science.

**Adult STEM Professionals**

- Adults shown as a professional in a STEM field. This may be shown with clothing (e.g., a lab coat), job-related tools or instruments, or with accompanying text that describes the person as a STEM professional.
HOW TO USE THE ASSESSMENT TOOL RULES & TIPS

To ensure each organization follows the same data collection practices, we have provided standard rules below. Please refer to these when using the Tool on page 11.

Images of people

- The focus of counting is on images of real people. However, your organization may choose to include drawings, animations, cartoons, or comics of humans if desired.
- A person should be visible enough to be counted (e.g., do not count a close-up part of a face). A person’s face should be at least partially visible.
- Groups of people above 7 individuals should not be counted. However, if only one person in a crowd is in focus, they can be counted.
- A person whose image occurs more than once in an element should only be counted once.

Videos of people

- An individual must be visible for at least 5 continuous seconds to be counted.
- Looping videos without discrete beginnings or ends should be considered for 30 seconds at a randomly selected time.

Additional Representation Categories

You may want to learn about representation—and possible gaps—in more areas of your organization. Fill in the blank spaces provided in the bottom two rows of the Assessment Tool to collect data on additional categories. You may choose to collect data on any category that is important for your organization and community. Examples of additional categories you may decide to count may include:

- Racial or ethnic categories, such as Black, People of Color or BIPOC
- People with visible disabilities, such as people who use wheelchairs
- Working collaboratively vs. working alone
- Being active vs. being passive (or talking vs. listening for videos)
- A combination of other categories, such as people of color who are STEM professionals, wheelchair users who are underrepresented minorities, adults doing science (but not STEM professionals), etc.

Tips for collecting data

- To ensure consistency, you may choose to have multiple data collectors assess the same spaces, then compare results. However, data collectors should record their own perceptions. It is not necessary for data collectors to agree on how to record each person in an image/video.
- Use the Notes page to record any thoughts you have as you collect data. You may choose to note images that reinforce (or break!) common stereotypes, patterns you observe, or anything else that you may want to discuss with your colleagues during the staff session after using this Tool.
- After the Assessments are complete, participants should give their forms to the data reporter so that they may enter all data into the spreadsheet found at www.ifthencollection.org/toolkit.
- Depending on the size of your organization, you may choose to have data collectors assess spaces that align with their area of work (e.g., marketing team assesses social media, etc.)
**FILLING OUT THE ASSESSMENT TOOL**

The IF/THEN® Gender Representation Assessment Tool will equip your organization with an easy method of gathering data on how gender is being represented in your websites, program materials, and other content. Data collectors will use paper print outs of the Tool on page 11 to collect data. Print as many copies of the Tool as needed to collect data from every space and element you’ve chosen to assess (at least 1 page per element).

1. Write in a name for the Space and Element you are assessing, and choose the type of media. The names should be descriptive enough to allow you to identify later where this data was collected.

2. Starting with all the images of adults, mark each person in the Total Adults row based on how you perceive their gender.
   - If you don’t perceive the person to be a woman or a man, place a mark in the *I do not perceive this person to be a woman or a man* box.

3. If a person is displaying cues (e.g., clothing, hair style, etc.) that do not match what is typically associated with the gender category you have placed them in, place a mark in the corresponding **Gender Non-Conforming** box.

4. For any adult that appears to be a STEM professional or any child who is actively participating in STEM, place a mark in the corresponding **STEM professional/“Doing STEM”** box.

5. If your organization has decided to look at additional representation categories, use the blank spaces on the bottom two rows to record the information.

6. Repeat steps 2–5 for all images of children.

**Examples**

- **Space** is the entire area that is being evaluated, such as a building or website
- **Element** is a section within the determined space, such as a room or a web page
- **Type** is one way to account for people who may not be a binary gender.

Every person observed will be tallied based on how you perceive their gender.

Look at a person’s clothes, hair, and body language, see if they are expressing in ways that are largely different from what is typical of their (perceived) gender, to determine if you should mark them as gender non-conforming.

Look at a person’s actions and clothing, plus any objects around them (such as work-related tools) to determine if you should mark them as a STEM professional.

Record any additional representation categories here.
**ASSESSMENT TOOL**

Print as many copies of this page as needed to capture data from all the spaces and elements you plan to assess (at least one copy per element).

<table>
<thead>
<tr>
<th>Space</th>
<th>Element</th>
<th>Type (choose one)</th>
<th>I perceive this person to be a woman</th>
<th>I perceive this person to be a man</th>
<th>I do NOT perceive this person to be a woman or man</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADULTS</strong></td>
<td></td>
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<td>Total Adults</td>
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<tr>
<td>Gender non-conforming</td>
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<tr>
<td>STEM Professional</td>
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<td><strong>CHILDREN</strong></td>
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<td>Total Children</td>
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<td></td>
<td></td>
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<tr>
<td>Gender non-conforming</td>
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<tr>
<td>“Doing STEM”</td>
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</tbody>
</table>

See pages 7-10 of this Toolkit for definitions and more information about how to use this Tool.
**NOTES**

Use this space to record any thoughts about your observations. You may choose to note images that reinforce (or break) common stereotypes, patterns you observe, or anything else that you may want to discuss with your colleagues during the staff debrief session after using this Tool.

<table>
<thead>
<tr>
<th>space</th>
<th>element</th>
<th>type</th>
<th>Notes</th>
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**AFTER USING THE TOOL**

Data Reporters should…

- Collect all forms from Data Collectors
- Download the data entry spreadsheet at [www.ifthencollection.org/toolkit](http://www.ifthencollection.org/toolkit)
- Enter all data into the spreadsheet and view the “data totals” tab to see some quick statistics on your data

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**Gender Representation Toolkit**

**Data Collection Summary**

<table>
<thead>
<tr>
<th>Adults</th>
<th>Children</th>
<th>Gender</th>
<th>Profession</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0</td>
<td>STEM</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>Non-STEM</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>STEM</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>Non-STEM</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The data entry spreadsheet will automatically compile your data into a quick summary report. Additional tabs allow you to track your organization’s progress over time.
Why is gender representation important in learning environments such as museums?

According to the 2017 Museums and Public Opinion report, 97% of Americans believe that museums are educational assets for their communities. Science centers and museums are regarded as highly credible sources of information by 78% of Americans, while 74% of Americans believe science centers and museums should recommend actions or behaviors (National Awareness, Attitude & Usage Study, 2010). The overwhelming majority of public trust in museums as institutions of moral standard and education, places science centers and museums in a position of opportunity to make a sizable impact on the representation of women and gender minorities within STEM. It is important for museum visitors to see diversity in the STEM workforce.

The gender gap in STEM fields, coupled with persistent gender stereotypes, can negatively impact girls’ understanding of their abilities (MacTavish, E.R., 2016) and discourage women from pursuing jobs in STEM fields (Cheryan, S., Master, A., & Meltzoff, A. N., 2015). The conscious action of including an equitable and diverse representation of gender within museum content is a continued step in challenging stereotypes and encouraging public conversation around understanding gender.

Should I count someone as a STEM professional if they don’t look like it, but the text says they are?

Yes! STEM professionals can be identified through text, clothing, tools, action, or any other context clues that indicate they work in a STEM field.

What careers can be considered as STEM Professionals?

Anyone who uses science, technology, engineering, and/or math regularly in their career can be considered a STEM professional. This includes a wide range of careers and topics from social sciences, medicine, science museum educators, and more. We know there might not always be a clear answer if a photo depicts a STEM professional. Do your best and ask yourself “would audience see this person as a STEM professional?”.

What if I choose the wrong gender?

The purpose of this Tool is not to decide what someone’s gender identity is, but instead capture your personal perception of gender as it appears in your museum’s content. In conducting this assessment, we are unable to ask the people in the images about their gender, so it’s OK if you mark a person in a gender category different than how the person might identify. This process isn’t perfect, and each person’s perception of gender comes from their own understanding of the world around them, based on their unique life experiences and personal identity surrounding things like culture, gender, race, and sexuality.

How can we fix the issues we found?

Organizations that undertake the assessment process will have access to the IF/THEN® Collection, a digital media asset library containing free photos and images. Participating in the assessment process will galvanize your efforts to address gender equity in your institution by providing data that will enable you to better identify areas for improvement, establish goals, and develop strategies for continued growth.

How can I download assets from the IF/THEN® Collection?

In order to download photographs, videos and other documents from the IF/THEN® Collection, you will need a Download Access Code. To request a code, please email info@ifthencollection.org to make us aware of your download need(s), including information regarding your intended usage. Submitted requests may take up to 7 business days to receive a response. All uses of the assets are subject to the Terms of Use that are posted on and accessible through the IF/THEN® Collection site.
ADDITIONAL RESOURCES

GIRLS AND WOMEN IN STEM

SciGirls Strategies: How to Engage Girls in STEM
Twin Cities Public Television

SciGirls empowers you to create a more gender equitable and culturally responsive learning environment that inspires, engages, and helps girls thrive in STEM. This book outlines their educational approach, rooted in what research has revealed engages girls in STEM. These strategies have also been proven to work with all learners, not just girls.

Portray Her: Representations of Women STEM Characters in Media
Geena Davis Institute on Gender in Media and Lyda Hill Philanthropies

This report was informed by an extensive ten year content analysis of STEM characters in entertainment media and a nationally representative survey of girls and young women. The report assesses how STEM professions are represented in media, and how these representations (and messages from society) affect girls’ perceptions of and participation in STEM. The results show the profound role that media play in shaping young people’s aspirations and career paths.

The Scully Effect
21st Century Fox, Geena Davis Institute on Gender in Media, and J. Walter Thompson Intelligence

This report presents the findings of the first systematic study of the influence of Dana Scully, a character from the popular show The X-Files, on girls and women pertaining to STEM—also known as the “Scully Effect.” Researchers found nearly two-thirds (63%) of women that work in STEM say Dana Scully served as their role model, highlighting the importance of representation of women in STEM careers.

UNDERSTANDING GENDER

GLAAD Media Reference Guide
GLAAD

“GLAAD Media Reference Guide” is an online glossary of words and phrases that are used when discussing gender. The glossary consists of terms and definitions to aid in breaking down the complexity of gender and explain the vocabulary used, while also including a section on defamatory language that should be avoided when talking about gender. This resource is a good place to start for anyone who may be unfamiliar with the various words used when talking about gender, or for anyone who is looking for detailed yet simple definitions to better understand.

Talking About Pronouns in the Workplace
The Human Rights Campaign

“Talking About Pronouns in the Workplace” briefly explains what pronouns are, why they are important, and what organizations can do to open the workplace up to including pronouns in the everyday work environment. This handout is a good resource for anyone who is looking for ways to make their workplace more welcoming and inclusive, as well as anyone who may be unsure about pronouns and how they factor into discussions about gender.

CREATING GENDER INCLUSIVE SPACES

Welcoming Guidelines for Museums
The LGBTQ+ Alliance of the American Alliance of Museums (AAM)

The “Welcoming Guidelines for Museums” uses the outline from AAM’s Core Standards for Museums (previously called the Characteristics of Excellence) to compile and elaborate on the preferred practices for museums when working with LGBTQ professionals and communities. This document also looks at six functional areas where museums can begin to apply these guidelines: Communication and Development, Curatorial, Guest Experience, Human Resources, Public Engagement, and Visitor Research and Evaluation.

Feminine Exhibition Design
Margaret Middleton

This article examines how implicit bias in museum design discriminates against feminine aspects of design and challenges the myth of gender neutrality. To more deeply explore femininity in museum design, Middleton proposes six principles of feminine design informed by those who value femininity in their design practice.

Exhibit Designs for Girls’ Engagement
The Exploratorium

This NSF-funded Exploratorium-run project aimed to identify the most important design attributes for engaging girls at STEM exhibits. The Exploratorium studied more than 300 physics, engineering, math, and perception exhibits at the science centers and identified nearly 100 exhibit design attributes that had the potential to better engage girls. The result is an overview of nine design attributes strongly and positively related to girls’ engagement.