THE IF/THEN®
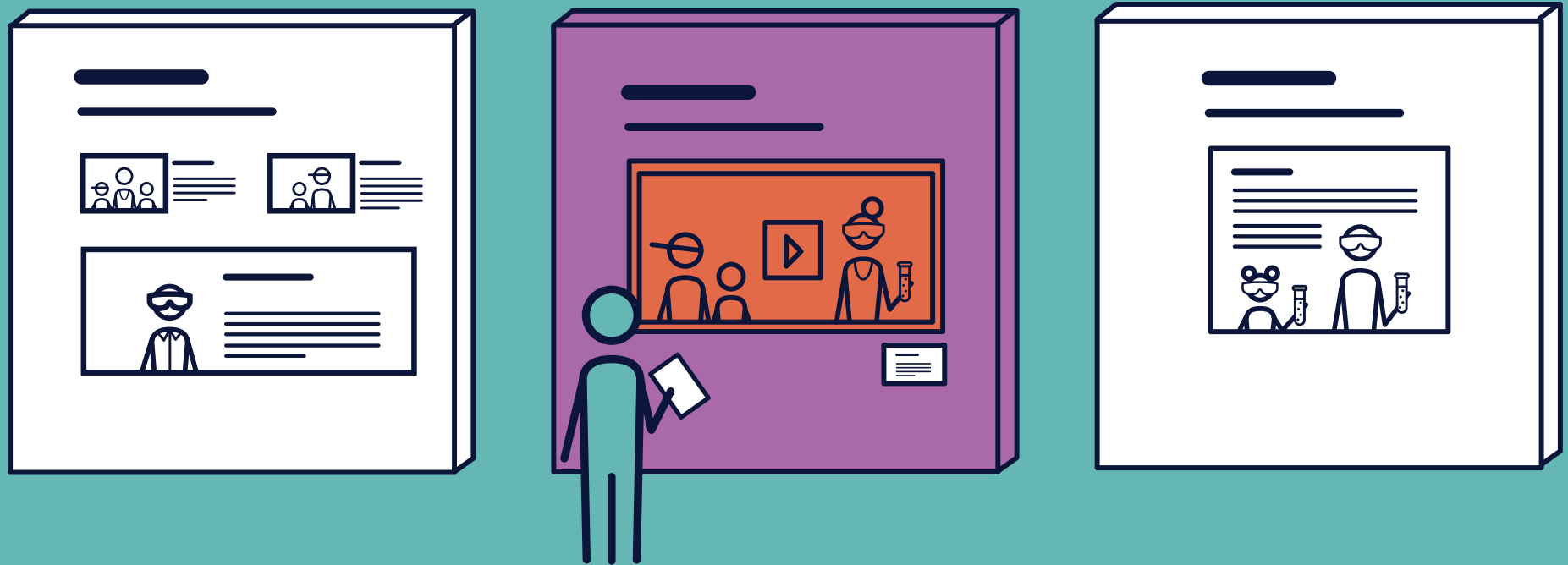# GENDER REPRESENTATION TOOLKIT

FOR FORMAL AND INFORMAL LEARNING ENVIRONMENTS

TABLE OF CONTENTS

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 OUR TOOLKIT PARTNER

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

ABOUT THE TOOLKIT

In this Toolkit you will find

- An Assessment Tool to collect data on gender representation at your organization
- Guides for two planning, discussion, and debrief sessions designed for your organization's staff to complete before and after using the Tool
- Rules and definitions on how to use the Assessment Tool, including a one-page guide for data collectors
- Additional resources including FAQ and suggestions for further reading

Your team will need

- A **Toolkit coordinator** responsible for recruiting data collectors, organizing training and discussion sessions for staff, and ensuring data is collected and reported.
- **Data collectors** will use the Assessment Tool in the spaces chosen by the Toolkit coordinator. Staff members in any role and from any department may act as data collectors. You may choose to have as many data collectors participate as needed.
- A **data reporter** will gather data collection sheets from data collectors and enter into data collection spreadsheet to compile for evaluation and analysis.

In a small organization, the above roles may all be filled by one person.

Time commitment

The estimated number of hours for each step of the process is below. The amount of time needed will vary.

- **1–3 hours** for Toolkit coordinator to prepare training sessions
- **2 hours** per data collector to attend training and discussion sessions
- **1–4 hours** per data collector to collect data using the Tool
- **2–3 hours** for data reporter to enter data into spreadsheet and compile results

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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

1

Review the Assessment Tool (Page 11)

Including all accompanying resources within the toolkit

2

Decide where to use the Tool

i.e. curriculum and program materials, websites, social media, flyers, signage, etc.

3

Determine additional categories to track (if desired)

Learn more on page 9

4

Identify data collectors

Data collectors may include your organization's staff or volunteers

5

Coordinate staff session: "Planning and Prep"

Learn more on page 6

6

Collect data

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

7

Enter the collected data into the spreadsheet

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

8

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

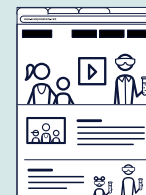Includes posted signs or posters around your location that are visible to students, staff and/or parents

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 SESSIONS 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
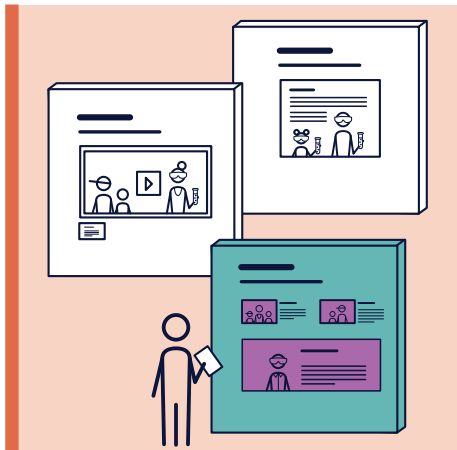
Space the entirety of a building

Element distinct area within a building

Type all videos within the space
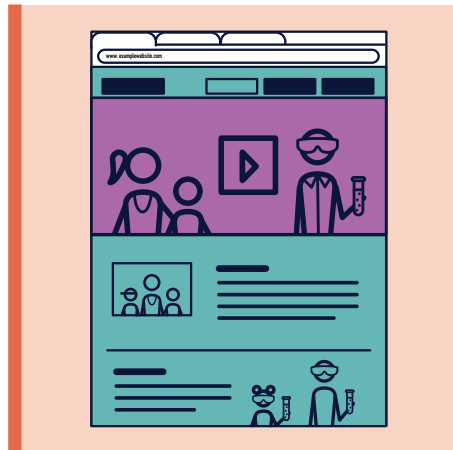

Websites

Space the entirety of a website

Element a tab or page within the website

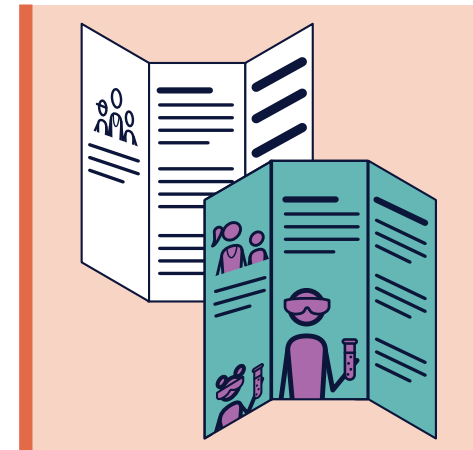**Type** all videos within that tab or page

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.

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.)

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.

FILLING OUT THE ASSESSMENT TOOL
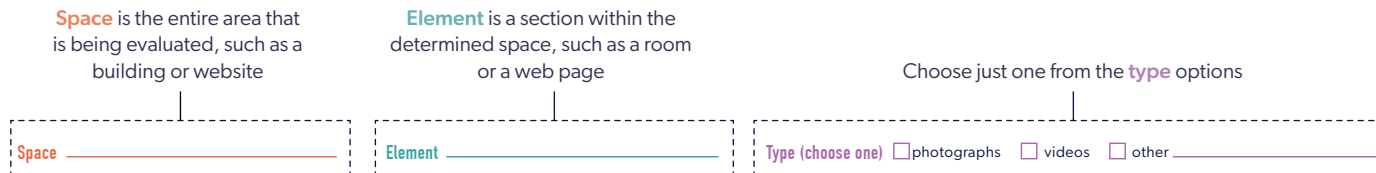
The *IF/THEN*® Gender Representation Assessment Tool will equip your organization with an easy method of gathering data on how gender is being represented in your websites, program materials, and other content. Data collectors will use paper print outs of the Tool on page 11 to collect data. Print as 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

Choose just one from the **type** options

Space _____   Element _____   Type (choose one) ☐ photographs ☐ videos ☐ other _____

ADULTS		I perceive this person to be a woman	I perceive this person to be a man	I do NOT perceive this person to be a woman or man
	Total Adults	卌 卌 I	卌 卌 III	II
	Gender non-conforming		I	
	STEM Professional	IIII	卌 III	
	person of color	卌 II	卌 II	I

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.

This option is one way to account for people who may not be a binary gender.

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).

Space _____ **Element** _____ **Type (choose one)** ☐ photographs ☐ videos ☐ other _____

ADULTS

	I perceive this person to be a woman	I perceive this person to be a man	I do NOT perceive this person to be a woman or man
Total Adults			
Gender non-conforming			
STEM Professional			

CHILDREN

	I perceive this person to be a girl	I perceive this person to be a boy	I do NOT perceive this person to be a girl or boy
Total Children			
Gender non-conforming			
"Doing STEM"			

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.

space	element	type	Notes

AFTER USING THE TOOL

Data Reporters should…

- Collect all forms from Data Collectors
- Download the data entry spreadsheet at **www.ifthencollection.org/toolkit**
- Enter all data into the spreadsheet and view the "data totals" tab to see some quick statistics on your data

Download this data entry spreadsheet at **www.ifthencollection.org/toolkit**

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.

Gender Representation Toolkit
Data Collection Summary

		Adults									Children								
		Perceived to be a Woman				Perceived to be a Man				Total Adults	Perceived to be a Girl				Perceived to be a Boy				Total Children
		Gender Conforming		Gender Non-conforming		Gender Conforming		Gender Non-conforming			Gender Conforming		Gender Non-conforming		Gender Conforming		Gender Non-conforming		
		STEM Professional	Non-STEM Professional	STEM Professional	Non-STEM Professional	STEM Professional	Non-STEM Professional	STEM Professional	Non-STEM Professional		Doing STEM	Not Doing STEM	Doing STEM	Not Doing STEM	Doing STEM	Not Doing STEM	Doing STEM	Not Doing STEM	
Space #1	[Space Name / Identifier]									0									0
Space #2	[Space Name / Identifier]									0									0
Space #3	[Space Name / Identifier]									0									0
Space #4	[Space Name / Identifier]									0									0
Space #5	[Space Name / Identifier]									0									0
Space #6	[Space Name / Identifier]									0									0
Space #7	[Space Name / Identifier]									0									0
Space #8	[Space Name / Identifier]									0									0
Space #9	[Space Name / Identifier]									0									0
Space #10	[Space Name / Identifier]									0									0
Space #11	[Space Name / Identifier]									0									0
Space #12	[Space Name / Identifier]									0									0
Space #13	[Space Name / Identifier]									0									0
Space #14	[Space Name / Identifier]									0									0
Space #15	[Space Name / Identifier]									0									0
Space #16	[Space Name / Identifier]									0									0
Space #17	[Space Name / Identifier]									0									0
Space #18	[Space Name / Identifier]									0									0
Space #19	[Space Name / Identifier]									0									0
Space #20	[Space Name / Identifier]									0									0
	Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

FAQ

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.
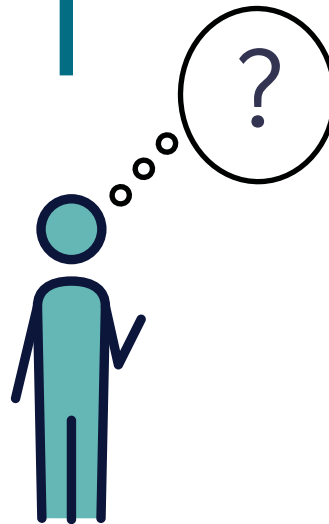
ADDITIONAL RESOURCES

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.

The Gender Unicorn

Trans Student Educational Resources - Anna Moore and Landyn Pan

> "The Gender Unicorn" is a graphic that most accurately portrays the distinction between gender, sex assigned at birth, and sexuality. The resource not only details why the graphic was created, citing its similarities to the plagiarized Genderbread Person, but also provides information on how to understand and use the graphic. This resource allows people to apply what they have learned about gender to themselves and explore their own identities.

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.