

Toolkit of IDEAS

Version 2.0

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Revised by Kari L. Jordan with input from The Carpentries community, August 2022

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Thank you

The Carpentries is an awesome community of smart and generous people. Thank you to all the people who contributed ideas and energy to this toolkit.

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Thank you to The Carpentries Core Team for all your contributions. Special thanks to Alycia Crall and Brynn Elliott for the co-working sessions and for arranging the community calls.

A special gigantic thank you to Kari L. Jordan for her leadership and enthusiasm. She champions IDEAS! She led this toolkit from ideation through to funding, served as a thought partner, and ensured that organisational support was available at all levels to deliver this.

Funder

Thank you to Chan Zuckerberg Initiative for funding the creation of this toolkit.

The Carpentries Commitment to IDEA

Diversity, Equity, and Inclusion Statement

Our Community is Our Strength

At The Carpentries, we are committed to building a diverse, equitable, and inclusive community that values all individuals and their unique identities. We prioritise accessibility and inclusivity in our curricula and programs and value transparency, fairness, and honesty to build trust within our community. Building an inclusive community is an ongoing process that requires consistent effort and commitment, and we strive for continuous improvement.



Accessibility Statement

The Carpentries is committed to providing inclusive and accessible content that enables all individuals, including those with disabilities, to participate and engage fully. We are actively working to increase the accessibility and usability of Carpentries' content and, in doing so, adhere to many of the available standards and guidelines, including those from the World Wide Web Consortium.

Introduction

What is the Toolkit of IDEAS?

The Toolkit of IDEAS (Inclusion, Diversity, Equity, and Accessibility Strategies) is a practical resource for Carpentries' Instructors, helpers, and workshop hosts. We know that many people care about inclusion, diversity, equity, and accessibility but are not sure how it connects to teaching foundational coding and data science skills. This toolkit aims to bridge this gap. This is version 1, which means it is a starting point and not a fully comprehensive resource. The hope is that the Core Team and community members will continue to update and extend this resource over time.

What was the process for creating this toolkit?

The Toolkit of IDEAS came out of the recommendations from ReadySet, a diversity, equity, and inclusion consulting firm that did an organisational assessment of The Carpentries in 2020. Kari L. Jordan, Executive Director of The Carpentries, conceived the idea and obtained funding from the Chan Zuckerberg Initiative to execute it. She then contracted Tara Robertson Consulting Inc. in March 2022 to help lead this project.

Tara Robertson consulted with Carpentries' Team Leads and then worked with Alycia Crall and Brynn Elliott to hold four listening sessions with the community—two on diversity, equity, and inclusion on June 9, 2022, and two on accessibility on June 23, 2022. Forty members from the community attended, and nine written submissions were provided through a form. We also contacted leaders in Africa, Latin America, Australia, and Aotearoa/New Zealand to get additional input and to ensure the toolkit is not too U.S.-focused (it still might be!) The first draft of the toolkit was presented during two sessions at CarpentryCon 2022, The Carpentries conference biennial, to

provide an opportunity for additional community input. Recommendations made during those sessions were then incorporated by Brynn Elliott, in consultation with the Community Development Team, to create the Toolkit of IDEAS 2.0.

Changes and improvements

- Inclusion of DEI and Accessibility Statements
- Inclusion of sections on intersectionality and how to manage disruptive learners
- Host-specific information for contacting Disability Support Services on campus or utilising human resources or diversity and inclusion departments for setting up accommodations.
- More examples of potential actions to address these topics
- Restructured format to enhance the flow of sections, making it easier for readers to access relevant information.

How is the toolkit organised?

For each of the four sections in the toolkit, you will find:

- A definition of the topic
- How it connects to The Carpentries' values
- Things you can do to support the topic:
 - Before the workshop
 - During the workshop
 - After the workshop

Shared values are the starting point for communities of practice as they identify principles that guide their behaviour. Where applicable, we reference [The Carpentries Values](#) throughout this toolkit as they guide how we advocate for inclusion, diversity, equity, and accessibility.

The “before,” “during” and “after” sections take a BOTH/AND approach. They include BOTH questions for you to reflect on AND concrete things you can do to promote inclusion, diversity, equity, and accessibility. When considering the questions and tips, consider your role in supporting a Carpentries workshop (i.e. Instructor, helper, workshop host). Within these sections, we also incorporate intersectionality, recognising the multifaceted aspects of individuals' identities. It creates an inclusive environment where learners experience a sense of belonging, acknowledging that



each person's unique identity intersects with various social, cultural, and personal factors.

A commitment to inclusion, diversity, equity, and accessibility requires a shift in mindset and continuous learning. As we are a global project with Instructors and learners from many different backgrounds running workshops in different environments, it is impossible to make a checklist that works for all of these scenarios. The questions to consider are intended for reflection and discussion. There are no right answers.

We heard in the community listening sessions that Instructors felt a desire for checklists and tactical advice, which is why we have included lists of things you can consider doing in each section. Inclusion, diversity, equity, and accessibility are not checklists, however. You need to be curious to learn, humble when you get it wrong, and take time to reflect on your growth and learning, as well as how you want to do things in the future. It is an ongoing learning process.

Inclusion

Definition

Inclusion is about how people feel. It is creating an atmosphere where learners feel a sense of belonging. Most of us know what it is like to feel included, and most of us have also experienced the feeling of not feeling included, too.

The Carpentries defines inclusion as “the active, intentional, and ongoing engagement of diverse people and communities that increase awareness, content knowledge, and empathic understanding of how we interact within (and change) our community.” Our goal is to create workshops that are inclusive for everyone.

How does this connect to our [core values](#)?

Inclusion explicitly shows up in the following three core values:

- Value All Contributions: We value all contributions by individuals and entities to our community, code, lessons, and broader ecosystem as long as those contributions adhere to The Carpentries Code of Conduct.
- Inclusive of All: We advocate for inclusivity—welcoming and extending empathy and kindness—to leverage contributions from all community members, regardless of their identity or expression.
- People First: We believe that the individuals who make up our community are the most important part of our organisation and our strongest resource. We strive to make decisions that lower barriers for individual participation.

Before a workshop

Questions and actions to consider

- What barriers prevent learners from registering for a Carpentries workshop? How can you ensure your learners feel that a workshop is for them?
 - **Things you can do:**
 - Consider connecting with potential participants from underrepresented groups in your field to express your commitment to inclusion and answer any questions they may have about the workshop. Highlight the relevance of the content



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to their work or research.

- Who are your role models for inclusion and learning? What qualities did they have as teachers? What specific things did they do to create an inclusive learning environment?
 - **Things you can do:**
 - Reflect on educators or mentors who inspired you through their inclusive teaching practices. Emulate their strategies by actively engaging with all learners, acknowledging diverse perspectives, and encouraging questions.
- Where and when will you offer a workshop? Who might not be able to attend because of the choices you are making?
 - **Things you can do:**
 - Make a list of upcoming meetings and events relevant to the audience(s) you hope to engage in and choose a time that does not conflict with other events.
- What is one new thing you want to try as an Instructor to make this workshop more inclusive?
 - **Things you can do:**
 - Set a goal for yourself, write it down, and share it with the instructional team before the workshop. Check-in during the workshop on how you are doing and evaluate how you did at the end.
 - Challenge yourself to incorporate at least one new inclusive teaching strategy into your workshop, such as using inclusive language, facilitating group discussions, or providing multiple ways to engage with the content.
- How do you want to set up the workshop as an inclusive learning environment for this specific group of learners?
 - **Things you can do:**
 - Include a section in the registration form that allows participants to share any specific needs or accommodations they require to fully participate in the workshop. Ensure confidentiality and follow up with them to provide necessary support.
 - Check the accessibility recommendations in this toolkit for tips on asking what disability accommodations learners need.
 - For in-person workshops, ensure that the physical space is accessible, including the bathrooms. Where is the nearest



gender-neutral bathroom? Is there a place for parents to breast or chest feed or pump milk?

- Consider learner needs when scheduling breaks, including
 - Bathroom breaks
 - Breaks that are long enough for parents to breast/chest feed or pump breast milk
 - Snack or meal breaks
 - Breaks to move around and/or stretch
 - Breaks to reflect on what they are learning
- If you are offering snacks or catering, include a section in the registration form that allows participants to share any dietary restrictions or preferences. Ensure that snacks and meals provided accommodate various dietary needs, including vegetarian, vegan, gluten-free, etc., so there is food available for everyone.
- While planning, identify multiple ways that individuals can participate during the workshop based on individual preferences (e.g. speaking versus adding a comment into the chat).

During a workshop

Questions and actions to consider

- What do you want to share about yourself as an Instructor and from when you were a learner?
 - **Things you can do:**
 - **Optionally** share information about yourself with your learners. By sharing a bit about when you were a novice learning new concepts or tools, or about times that you have made mistakes, you can contribute [to building psychological safety](#) in the workshop and help learners feel they can speak up when they have questions. Tell learners why The Carpentries' [Code of Conduct](#) matters to you.
 - Consider including your pronouns when you introduce yourself and allow others to do the same (but do not make it mandatory). If your language does not have gendered pronouns, be conscious about other ways you might misgender someone with



language, and aim to avoid doing so.

- How might the lesson content impact your learners?
 - **Things you can do:**
 - Consider the dataset(s) you are using in your workshop. Reflect on whether the kinds of data being analysed have the potential to impact your learners negatively.
- How do you, as an Instructor, address disruptive learners?
 - **Things you can do:**
 - Set ground rules: At the beginning of the workshop, establish ground rules for behaviour that everyone should follow, such as respecting others, refraining from side conversations, and turning off electronic devices during the session.
 - Redirect attention: If you notice a participant is distracted or disengaged, try to redirect their attention by asking them a question, involving them in a group activity, or providing them with a specific task to complete.
 - Engage the group: Encourage group participation and interaction to keep everyone engaged and focused. This can be done through activities, discussion groups, or group work.
 - Take a break: If the distraction continues, consider taking a break to allow participants to stretch, move around, or take a mental break. This can help refocus their attention when the session resumes.
 - Speak privately: If the distraction continues, speak to the participant privately and professionally to understand the reason for their behaviour and provide appropriate support or guidance.
 - If necessary, report the conduct using [The Carpentries Code of Conduct](#).

After a workshop

Questions and actions to consider

- What went well? What are you proud of?
 - **Things you can do:**
 - Reflect on the aspects of your workshop that promoted inclusion and led to positive learning experiences for participants. Record



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those actions to review before future workshops you teach.

Celebrate your successes and acknowledge the impact of your efforts.

- What would you change next time?
 - **Things you can do:**
 - Identify areas where you believe your workshop could have been more inclusive. Consider seeking participant feedback to gain insights into their perspectives and suggestions for improvement.
 - Engage in constructive feedback with your co-Instructor to evaluate your teaching methods and inclusion practices. Encourage open dialogue and ask them to pinpoint areas for improvement rather than focusing solely on positive feedback.
 - Review the post-workshop survey results from the learners to understand whether they felt the environment was inclusive.
 - Commit to implementing one specific inclusion-related change before your next workshop, such as incorporating a new activity or providing additional resources. Share this commitment with your instructional team to create accountability and track progress.

Diversity

Definition

Diversity is about who is in the room.

The Carpentries defines diversity as “individual differences (e.g. personality, language, learning preferences, and life experiences) and group-social differences (e.g. race, ethnicity, class, gender, gender identity, sexual orientation, sexual identity, country of origin and ability status, as well as cultural, political, religious or other affiliations) that can be engaged in the service of learning.” Our goal is to offer workshops for diverse audiences.

The lack of diversity in the tech industry can perpetuate these issues. If coding and data science teams lack diversity, their products and services are less likely to consider the needs and experiences of underrepresented groups.

How does this connect to our [core values](#)?

Diversity explicitly shows up in the following core value:

- **Strength through Diversity:** Appreciating that identities are complex and individual, we believe in empowering a diverse group of people to work with data and code to answer the questions important to them and to address challenges in science and society.

Before a workshop

Questions and actions to consider

- Who is not represented in your workshop? Where can you promote your workshop to reach people who have not attended before? Both in terms of demographics, meaning gender, race, disability, and age, and in terms of disciplines, such as digital humanities, microbiology, population health, and so on.
 - **Things you can do:**
 - The Carpentries does outreach to specific organisations and communities that are underrepresented. For universities offering



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on-campus workshops, check to determine if these organisations also have branches/chapters at your campus. Building relationships with them is a great way to reach students and recruit Instructors to build a more diverse Instructor pool.

- In the U.S., The Carpentries does outreach with:
 - [National Society of Black Engineers \(NSBE\)](#)
 - [Native BioData Consortium](#)
 - [Society for the Advancement of Chicanos and Native Americans in Science \(SACNAS\)](#)
 - [Society of Women Engineers \(SWE\)](#)
 - [The National Association of Multicultural Engineering Program Advocates \(NAMEPA\)](#)
 - [The National GEM Consortium](#)
- Globally, The Carpentries does outreach to organisations including, but not limited to:
 - [Bioinformatics Hub of Kenya](#)
 - [H3ABioNet](#)
 - [NSBE Ghana](#)
 - [OpenCider](#)
 - [Women of WACREN](#)
- What campus or community meetings can you speak at to start building new relationships?
 - **Things you can do:**
 - Find places to promote your workshop to reach people who have not attended before.
- Who are the Instructors? Who are the helpers? What agreements does the teaching team have to model a respectful learning environment?
 - **Things you can do:**
 - Discuss with your instructional team the importance of creating a respectful and inclusive learning environment. Develop clear agreements on behaviour and communication that reflect these values.
- How do we honour different styles of learning and ways of knowing?
 - **Things you can do:**
 - Recognise that participants may have diverse learning styles and ways of acquiring knowledge. Encourage active participation and provide flexibility in learning approaches. Emphasise that



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there is no one-size-fits-all learning style.

- Incorporate whiteboards, sticky notes, or other multimedia tools to support different learning styles.
- Could the material I plan to teach make a participant feel stereotyped or disempowered?
 - **Things you can do:**
 - Review the material you plan to teach with a critical eye to identify any instances that could perpetuate stereotypes or disempower participants. For example, data sets underrepresenting certain racial or ethnic groups may lead to biased decision-making that disproportionately affects those groups. Ensure that the content is respectful, inclusive, and empowering for all.

During a workshop

Questions and actions to consider

- How can you acknowledge that learners may have what they perceive as naive or novice questions? What can you do to make it safe to ask these questions in the workshop?
 - **Things you can do:**
 - Create a welcoming atmosphere by explicitly stating that all questions are valuable, regardless of their complexity. Emphasise that everyone is on their learning journey, and curiosity is encouraged.
 - As the facilitator, demonstrate a non-judgmental attitude by being open to all questions, regardless of complexity. Encourage participants to ask questions by asking some yourself, especially basic ones, to set the tone.
 - Implement anonymous question submission methods, such as digital platforms or anonymous surveys, to give participants a safe space to ask questions without fear of judgment.
 - Throughout the workshop, use inclusive language that emphasises a collaborative learning environment. Phrases like "Let us explore this together" or "We are all here to learn" promote inclusivity.



- Who asks questions or speaks up in your workshop, and who does not?
 - **Things you can do:**
 - Observe the dynamics of participant engagement in your workshop. Encourage equal participation by actively inviting input from all attendees, especially those who may be less vocal. Give them opportunities to contribute in ways that are most comfortable (e.g., speaking versus adding a comment to the Zoom chat).
- Are you aware of your own biases? Which biases show up for you in a workshop setting?
 - **Things you can do:**
 - Affinity bias is a type of unconscious bias where we gravitate towards people who are like us. Learn more about [19 types of unconscious bias](#).
 - Take an implicit [bias](#) self-assessment to raise personal awareness.

After a workshop

Questions and actions to consider

- What did you learn about diversity from this workshop? What will you do differently next time?
 - **Things you can do:**
 - Reflect on any biases or assumptions you might have had and how the workshop helped you become more aware of them.
 - Make a plan of how you will implement changes in future workshops to be more inclusive, such as adapting materials, promoting diverse perspectives, or adjusting your teaching methods.
- What follow-up will you do with learners to build on the relationships you have begun with them?
 - **Things you can do:**
 - Establish a follow-up plan to maintain connections with participants and nurture a supportive learning community. Provide resources, networking opportunities, or mentorship to continue supporting their growth.



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- Identify some places where learners can go next on their journey in data skills and coding.
- Invite learners to be part of the Carpentries community by introducing them to the [Welcome Tip Sheet](#) and encouraging them to join a monthly welcome session.
- Identify resources for new coders on your campus or in your geographic area.
- Research and share information about other mentorship and learning communities in open science, such as [PyLadies](#), [RLadies](#), [Black in Data](#), and [other networking communities for underrepresented data scientists](#).
- Create informal networks of support for learners as well as find/create/share professional opportunities.

Equity

Definition

Equity is about fairness and justice. **Equity** must not be confused with **equality**. Equality means individuals are given the same resources or opportunities. Equity recognises that each person has different circumstances and allocates the exact resources and opportunities needed to reach an intended outcome.

The Carpentries defines equity as “the creation of opportunities for equal access to and participation in programs that are capable of closing participation gaps in our community.” Our goal is to offer workshops where everyone can participate and learn.

How does this connect to our [core values](#)?

Equity is implied in the core value:

- People First: We believe that the individuals who make up our community are the most important part of our organisation and our strongest resource. We strive to make decisions that lower barriers to individual participation.

Before a workshop

Questions and actions to consider

- How are the workshop fees (if any) equitable?
 - **Things you can do:**
 - Identify options for reduced fees or scholarships to ensure affordability for all participants.
- Who is organising the logistics for the workshop? This means booking the catering, cleaning up the garbage in the room at the end of the day, booking the room and picking up the keys, and other necessary administrative tasks. Is the division of this work equitable?
 - **Things you can do:**
 - Identify a workshop host who can take care of the logistics.
- Some Instructors teach as part of their paid jobs, while some Instructors volunteer their teaching services. Think about volunteer vs. paid time for



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Instructors—what is equitable in your situation?

- **Things you can do:**
 - Ask your co-Instructor if it would be helpful to write a short email to their supervisor documenting their contributions to the community through teaching this workshop.
- Is access to computers a barrier for some learners?
 - **Things you can do:**
 - If access is a barrier, brainstorm solutions. Is there a computer lab or library on campus that you could use? Can you partner with other organisations to borrow or use the equipment?
- Is childcare a barrier for participants?
 - **Things you can do:**
 - Figure out concrete supports for parents and caregivers. This might include arranging a fund to reimburse childcare costs, partnering with the campus daycare, or scheduling the workshop at a time that does not conflict with school pickup or dropoff.

During a workshop

Questions and actions to consider

- What does equitable participation in a Carpentries workshop look like for you?
 - **Things you can do:**
 - Mentally log (or take turns as Instructors actually logging!) who speaks the most during a workshop. Check-in with the quieter folks during breaks, or invite them to respond during question and answer periods.
 - The workshop environment should be inclusive and welcoming to all participants. This includes accessible physical spaces, materials, and digital platforms to accommodate various needs and abilities.

- How are you ensuring that everyone is invited to participate throughout the workshop?
 - **Things you can do:**



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- Ensure learners are aware of when questions can be asked, including during breaks.
- If using a collaborative notes tool during your workshop, remind learners that their feedback can be shared anonymously.
- Do not always call on the loudest, most experienced or fastest learner. Create opportunities for quieter and less experienced learners who need more time to participate.

After a workshop

Questions and actions to consider

- How does teaching Carpentries workshops get recognised in your organisation or career trajectory?
 - **Things you can do:**
 - Advocate for Carpentries teaching and instructional pedagogy to be valued in formal recognition and promotion processes.
 - Invite Core Team Members from The Carpentries to speak with leadership at colleges and universities.
 - Invite faculty and leadership to observe part of a workshop to notice the impact of the teaching style on the energy and engagement of the classroom.
- How can you raise the profile of the work involved in teaching for The Carpentries in your organisation?
 - **Things you can do:**
 - Leverage The Carpentries pedagogy to create inclusive learning environments and gain immediately applicable teaching skills.
 - Apply The Carpentries' formalised pedagogical model, showcasing your dedication to a community with common objectives.
 - Utilise openly accessible Carpentries resources to enhance your teaching and contribute to educational materials.
 - Take advantage of streamlined Carpentries processes to provide tangible evidence of your teaching and contributions to educational resources.

Accessibility

Definition

[According to the World Bank](#), fifteen percent of the world's population experiences some kind of disability. Accessibility is about providing barrier-free access to learning environments and ensuring the full participation of people with disabilities.

The Carpentries defines accessibility as “the design of products, devices, services, or environments to be usable by people who experience disabilities.” Our goal is to host accessible workshops that fully include both Instructors and learners with disabilities.

How does this connect to our [core values](#)?

Accessibility explicitly shows up in the following two core values:

- Access for All: We value accessibility as core and create multiple avenues for participation where all people can learn and contribute.
- Inclusive of All: We advocate for inclusivity—welcoming and extending empathy and kindness—to leverage contributions from all community members, regardless of their identity or expression.

Before a workshop

Questions and actions to consider

- What funding is available at my institution to support accessibility services?
Does my institution offer accessibility services for free?
 - **Things you can do:**
 - Check with the Accessibility or Disability Support Services office at your institution. If your institution does not have these services, utilise [accommodation services made available through The Carpentries](#).
- What accessibility needs do you have as an Instructor? What is your level of comfort in talking about this with your co-Instructor(s) and learners?
 - **Things you can do:**
 - As an Instructor, if you require specific accommodations, such as captioning for videos you use in the workshop, ensure you



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communicate these needs to your co-Instructor(s) and discuss how to implement them effectively.

- What will you do to ensure the decisions you make as an Instructor are not creating access barriers for learners?
 - **Things you can do:**
 - Use the guidelines set forth in the Toolkit of IDEAs in your teaching practices
 - Explore [Universal Design for Learning](#) and use diverse methods for instruction, including presenting content in various formats, including text, audio, and visuals, to accommodate different learning styles and preferences.
- Who can you connect with in your organisation or region to learn more about accessibility to include learners with disabilities in your workshops?
 - **Things you can do:**
 - Most colleges and universities have a Resource Office that can help to ensure that events are accessible to all attendees. This office will provide guidance on what types of accommodations are available and how to arrange them. Institutions have different requirements on the amount of lead time needed to set up accommodations. We recommend contacting them as soon as you schedule a Carpentries event.
 - Organisations may have a variety of resources available to help with providing accommodations. This could be Human Resources or Diversity and Inclusion Departments. These departments can share what accommodations are available and how to arrange them. This may include a Disability Officer, a Diversity and Inclusion Manager, or an Accessibility Coordinator.
 - Employee resource groups (ERGs) might be available to support inclusion and provide guidance and support on accommodations.
- How will you give yourself grace and welcome the learning opportunity when you inevitably make a mistake or get something wrong?
 - **Things you can do:**
 - Embrace the understanding that mistakes are part of the learning process. If you make an error during the workshop, view it as an opportunity to model a growth mindset for your learners. Acknowledge the mistake, correct it, and continue, emphasising



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the importance of learning from challenges.

- How does your teaching style reflect your learning preferences? How can you expand the way you teach to include other learning preferences?
 - **Things you can do:**
 - Consider whether your teaching style aligns with your own preferred learning methods. To accommodate diverse learning preferences, explore incorporating hands-on activities, discussions, and audio resources to cater to participants who may learn differently. This broadens the learning experience for everyone.
- How do you create an accessible learning environment?
 - **Things you can do:**
 - In the workshop registration, consider using language that demonstrates your commitment to accessibility. For example: “We are dedicated to providing a positive and accessible learning environment for all. Please notify the Instructors in advance of the workshop if you require any accommodations or if there is anything we can do to make this workshop more accessible to you.”
 - Ask about learner needs for the workshop. It is not necessary to know about someone’s disability or medical condition (and it is insensitive and, in some places, illegal to ask). For example, someone who is hard of hearing in an online workshop might need videos to be captioned, automatic captions on Zoom turned on, and the Instructor to use a microphone so their voice is clearer. Trust that learners know what they need.
 - Understand that the intersectionality of disability and other social identities can also affect accessibility. Something could be accessible to people with physical disabilities but not accessible to people with cognitive disabilities or language barriers.
 - Learn more about [Universal Design for Learning](#). This framework can be used to improve and optimise teaching and learning for all people based on scientific insights into how humans learn. By incorporating Universal Design, a more inclusive environment is created, reducing the number of individual accommodations that are necessary.
 - Use the [Accessible Presenter Guidelines](#) developed by The



Carpentries to ensure that your resources and teaching are accessible.

- Share the agenda and workshop materials with learners at least 24 hours before the workshop.
- If creating video content for your learners, ensure these videos have captions. Numerous video conferencing platforms feature integrated automated captioning with varying levels of accuracy that continue to improve over time. Both free and paid captioning services are available across these platforms. Certain platforms even provide the option of obtaining live-generated captions, which ensures greater precision but may come with additional costs.
- Check file formats for keyboard navigation and screen reader accessibility.
- Do not use image-based PDFs—they are inaccessible to screen reader users.
- Join the [#accessibility](#) channel on The Carpentries Slack to share your wins and ask questions.

During a workshop

Questions and actions to consider

- What steps can you take to make the workshop more accessible and user-friendly for all participants, including those who may have diverse learning needs?
 - **Things you can do:**
 - Outline workshop content in an introductory slide to give learners the overall context of what will be taught during the workshop.
 - Ensure that breaks are built in to help with the processing of new information.
 - Ask participants if the text is readable.
 - Is it big enough?
 - Is there enough colour contrast?
 - If using a whiteboard (in person), make sure that learners in the back of the room can view the writing on it.
 - Use plain language; avoid idioms and metaphors.



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- Instructions for group work should be written out and displayed during work time so learners can refer back to them.
- Using a shared note-taking method can benefit participants (such as Google Docs or Etherpad).
 - Note that Etherpad may be visually challenging for live note-taking given the various background colours.
- If there are CART (Communication Access Realtime Translation) interpreters or sign language interpreters providing communication access for learners, they will often work in pairs and need to switch out. When these changes happen, check that they are ready before continuing on with the workshop.
- Utilise workshop Helpers to ensure learners are not falling behind.
- **Recommendations specific to virtual workshops**
 - For virtual workshops, keep track of the chat and repeat the questions and answers that come up there.
 - Utilise automatic closed captioning- either through [Zoom](#) or other online platforms. The Carpentries does not allow external AI bots to be used for notetaking purposes to protect the privacy of all attendees unless they have been specifically requested as an accommodation.
 - Use a headset with a boom mic or an external mic for higher-quality audio.
 - Recognise that participants may have varying internet connection speeds and access. Encourage asynchronous participation options for those who may face connectivity issues. Allow participants to turn their cameras off and turn off other video feeds to allow for better connectivity.
 - Incorporate regular breaks to combat screen fatigue and allow participants to briefly step away from their screens during longer sessions.
 - Use interactive online tools like polls, chat, and virtual breakout rooms to actively engage participants and encourage contributions.
 - Some participants may be hesitant to speak up in online settings. Encourage participation through various means, such as written chat contributions or anonymous question submissions.
 - Foster a sense of online community among participants through



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icebreakers, introductions, and interactive activities to combat the potential isolation of virtual learning.

- What is the right teaching pace to use so you balance covering the material with moving at a pace that is right for all learners?
 - **Things you can do:**
 - Consider adjusting the pace based on learner feedback during the workshop. If some participants request more time for certain topics, be flexible in your schedule.
- How can you move at a speed that includes everyone?
 - **Things you can do:**
 - If learners express the need for additional practice or clarification on a particular topic, allocate extra time to ensure everyone grasps the concept. Utilise workshop Helpers to get learners caught up.

After a workshop

Questions and actions to consider

- What improvements would you like to make next time?
 - **Things you can do:**
 - Reflect on the feedback received from participants regarding accessibility and develop an action plan for enhancing accessibility in future workshops.
- What learnings can you take into other teaching you do?
 - **Things you can do:**
 - Apply the accessibility strategies and insights gained from Carpentries workshops to other educational settings, fostering a more inclusive teaching approach.
- How can you evaluate the accessibility of your workshop?
 - **Things you can do:**
 - Include questions related to accessibility and accommodation satisfaction in post-workshop surveys to continually assess and improve your inclusive practices.
- What came up during the workshop related to accessibility that you need to learn more about before your next workshop?
 - **Things you can do:**

- Have a post-workshop meeting with Instructors and Helpers, and discuss what went well with accommodations and how the workshop could improve. Commit to learning about a specific accessibility gap that occurred and make it better for the next workshop.

Next steps

How you can get involved

This is version 2 of the Toolkit of IDEAS. It is not fully comprehensive and will change and grow over time. The hope is that the Carpentries Core Team and community members will continue to update and extend this resource. If you're passionate about inclusion, diversity, equity, and accessibility and want to contribute to the development of this toolkit, reach out to workshops@carpentries.org to get involved. Together, we can continue to make The Carpentries community a more welcoming and equitable space for all.

Community members have two paths for contributing to the Toolkit. Firstly, they can directly incorporate changes and additions into the [GitHub Repository](#). Alternatively, contributions can be submitted through the [Toolkit of IDEAS Contribution Form](#). The Workshop Administration Team will review all submissions.