Instructor Training Day 2
Welcome back

Icebreaker: What you learned yesterday?

One (favourite) thing (concept, idea, theory) you remember from yesterday.

Goals for this workshop:

Get familiar with and understand how to apply research-based teaching principles, especially as they apply to The Carpentries audience.

Understand the importance of a respectful and inclusive classroom environment; commit to creating such an environment; and be able to identify and implement The Carpentries policies and general practices to accomplish this.

Practice and develop skills in the teaching methods used in Carpentries workshops

Learn enough about The Carpentries organization to know where to go for help, how to start organizing a workshop, and how to get involved with community activities.

Morning

Getting Started on Instructor Certification

The Carpentries: How We Operate

10:25  morning break

Live coding is a skill

Preparing to teach

12:30  lunch break

Afternoon

More practice live coding

Working with your team

15:25 afternoon break

Launches and Landings (how to start he workshop)

Putting it all together

Wrap-up

17:00 End & Drinks

Exercise: What questions do you have? (5 min)

Yesterday we asked you to read some resources about the logistics of teaching and running Carpentries workshops.

Please add your questions about logistics and preparation to the Collaborative Document.

We will answer these questions in the Collaborative Document during your work time and will return to this list later today.

Getting Started on Instructor Certification

Questions

What do I need to do to finish certifying as a Carpentries Instructor?

Objectives

Describe the final steps required to qualify as an Instructor.
Schedule your community discussion session.

Instructor checkout

1. Make (and send us a link to) a small **contribution** to a lesson or glossary.
2. Take part in an online **community discussion** session.
3. Take part in an online **teaching demonstration** session.

All trainees have **3 months (90 days)** from the end date of your training to complete checkout.

Exercise: Be The Expert, Checkout Q & A (10 min)

In pairs, read and discuss one of the three checkout procedures described on this page:
https://carpentries.github.io/instructor-training/checkout/index.html

Make notes in the Collaborative Document:

- What points do you think it is most important or helpful for people to remember?
- What questions or points of confusion do you have, or think others might have?

When you are done, report back to the full group about that stage of the process.

Exercise: Schedule a Discussion session (5 min)

Visit the discussion Etherpad to sign up for a session: **https://pad.carpentries.org/community-discussions** If the session you would like to attend is full, contact the discussion host and co-host to ask if you can attend.

If you would prefer to do your teaching demonstration before your discussion, visit the demo Etherpad and sign up there: **https://pad.carpentries.org/teaching-demos** There is a demo rubric (linked from Collaborative Document) provided as a guide for Trainers evaluating potential new Instructors during the teaching demonstration.

What does the badge mean?

1. **You can teach** Carpentries workshops.
2. **You get to vote** for Carpentries Executive Council
3. **You can register** for Carpentries **Bonus Modules**.
4. **You can share** it your CV

The Carpentries: How We Operate

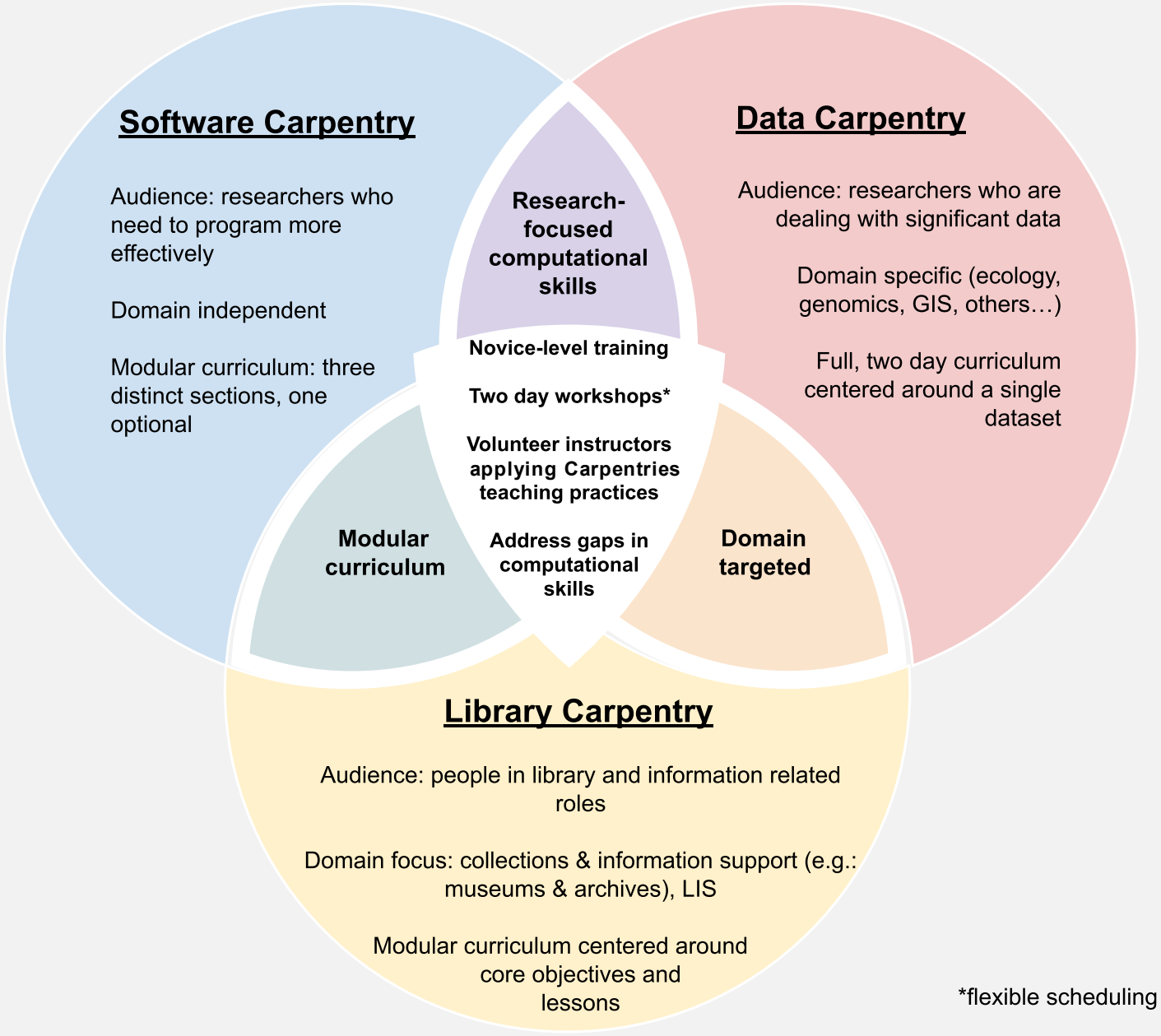
Questions

- How is The Carpentries organised and run?
- What is the difference between SWC, DC, and LC workshops?
- How do you run a Carpentries workshop?

Objectives

- Get connected with The Carpentries community.
- Describe where you can go to get information on running a workshop.

A VERY BRIEF HISTORY OF THE CARPENTRIES



*flexible scheduling

Rules

Using the Names and Logos

- The names “Data Carpentry”, “Library Carpentry”, and “Software Carpentry” and their respective logos are all trademarked.
- You may only call a workshop a Data Carpentry, Library Carpentry, or Software Carpentry workshop if it meets the requirements.
- Please report ‘Mix and Match’ Workshop (there is a form for it)

Materials

All Carpentries lesson materials are freely available under a permissive open license.

Exercise: Carpentries Jargon (classroom)

How many of the following terms you can define?

- Lesson
- Episode
- Workshop
- Lesson Program
- Instructor
- (Instructor) Trainer

Organising a workshop

Two types of workshops:

Centrally organised

- From institutional membership
- Ad-hoc paid

Self-organised

- Consult The Carpentries Handbook

  docs.carpentries.org

Setting Out On Your Own... Together: Lesson Incubation

- Use Carpentries Lesson Template
- Put it in the incubator
- Use Curriculum Development Handbook

Keep in touch

Want to listen?

- Sign up for our newsletter
- Follow us on Twitter, Facebook, or LinkedIn

Want to interact (or listen with options to engage)?

- Join our Slack organisation
- Join our Email lists (start with “Discuss”!)

Want to join meetings (to meet new people or listen in)?

- Sign up for Community Discussions (or just drop in if there is space!) or other events when announced
- Explore taking on one of the Roles identified above

Exercise: Get connected (5 min)

Take a couple of minutes to **sign up for The Carpentries channels** you want to stay involved with on this page: **https://carpentries.org/connect/**

When you are done, share a channel you find interesting or useful on the Collaborative Document.

Key points

The Carpentries materials are all openly licensed, but names and logos are trademarked.

Carpentries workshops must cover core concepts, have at least one certified Instructor, and use our pre- and post-workshop surveys.

Guidance for teaching and hosting workshops is provided in The Carpentries Handbook.

Photo by Jakub Dziubak on Unsplash

Life coding is a skill

Questions

- Why do we teach programming using participatory live coding?

Objectives

- Explain the advantages and limitations of participatory live coding.
- Summarize the key dos and do nots of participatory live coding.
- Demonstrate participatory live coding.

(Participatory) Life Coding

Instructors **do not use slides** to teach coding, but work through the lesson material, **typing in the code** or instructions, with the workshop **participants following along**.

Exercise (5 min) Up and Down

List some advantages and challenges of participatory live coding from both a learner's and an instructor's point of view in the Collaborative Document.

Exercise: Compare & Contrast

Watch two participatory live coding demo videos as a group and then summarize your feedback on both in the Collaborative Document. Use the 2x2 rubric for feedback we discussed earlier.

In the videos, the bash shell for loop is taught, and it is assumed learners are familiar with how to use a variable, the head command and the content of the basilisk.dat and `unicorn.dat` files.

Top Ten Tips for Participatory Live Coding in a Workshop

1. Stand up and move around the room if possible.
2. Go slowly.
3. Mirror your learners' environment.
4. Use your screen wisely.
5. Use illustrations.

Top Ten Tips for Participatory Live Coding in a Workshop

6. Turn off notifications
7. Stick to the lesson material.
8. Leave no learner behind.
9. Embrace mistakes.
10. Have fun!

Exercise (25 min): Practice teaching

1. Split into groups of three.
2. Assign roles, which will rotate: presenter, timekeeper, note-taker.
3. Have each group member teach 3 minutes of your chosen lesson episode using live coding. For this exercise, your peers will not “code-along.” Before you begin, briefly describe what you will be teaching and what has been learned previously. Do not record this exercise.
4. After each person finishes, each group member should share feedback (starting with themselves) using the same 2x2 rubric as yesterday. The timekeeper should keep feedback discussion to about 1 minute per person; this may leave some time at the end for general discussion. The note-taker should record feedback in the Etherpad.
5. Trade off roles.

Preparing to Teach

Questions

- How should I prepare to teach?

Objectives

- Create a profile for a learner in your workshop.
- Critically analyze a learning objective for your workshop.
- Identify checkpoints in a lesson for formative assessment.

Exercise (3 min): Imagine a Learner

Take a moment to silently imagine a learner who might attend your workshop.

- What is their background?
- What problem do they face?
- What will they gain from attending your workshop?

Your learners

You will never know the full spectrum of neurodiversity represented in your workshop.

Thinking deeply about learners as people can help you prepare to bring your best self and provide an inclusive environment for everyone.

Remember Your Pre-Workshop Surveys

Examine Learning Objectives

Beware the Urge to Complicate

Prepare to Use Formative Assessments

Exercise (3 min): Where are your Checkpoints?

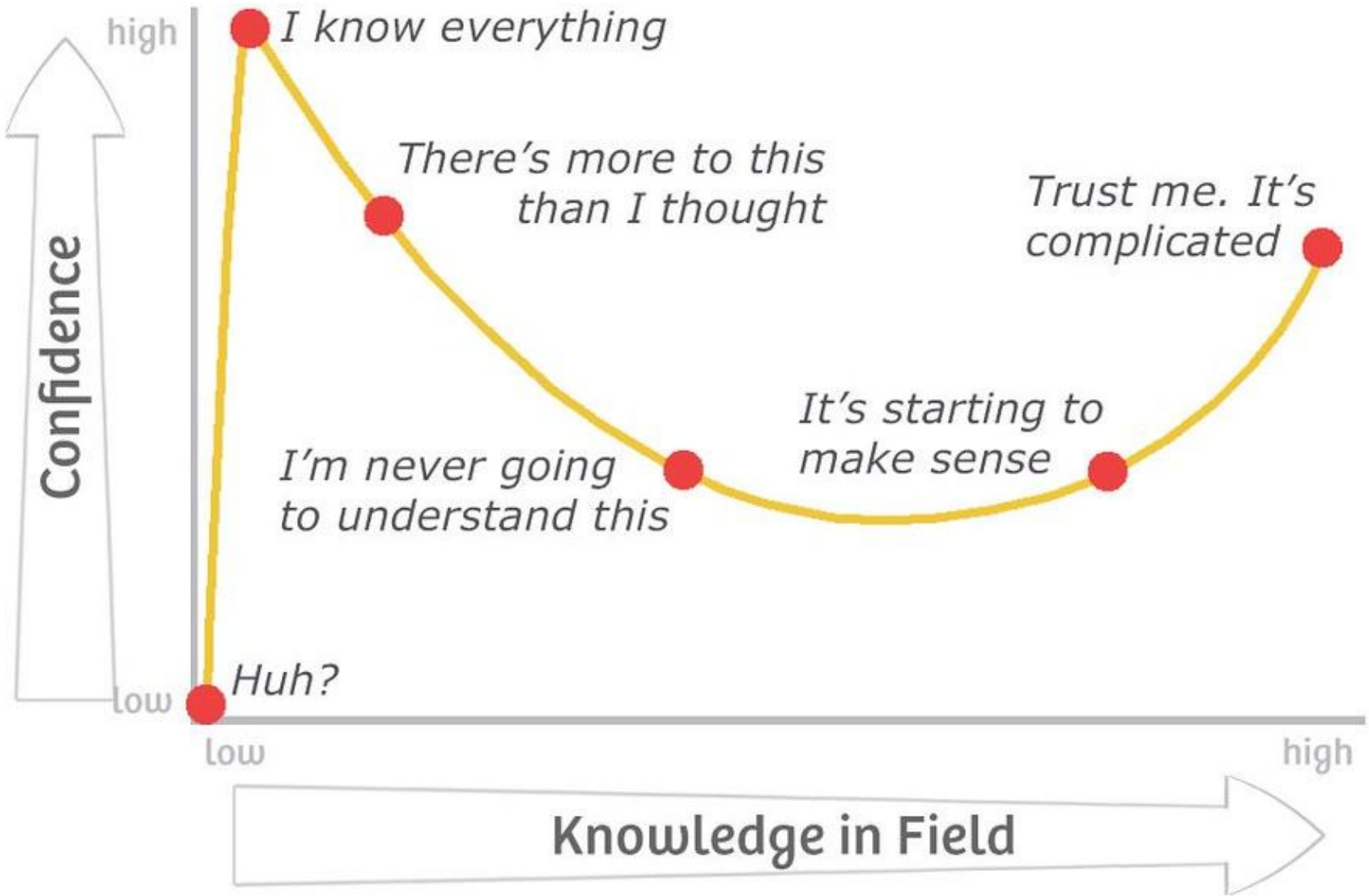
Have a look at your learning objective again and identify where in the lesson that objective should reasonably be achieved.

How frequent?

- Every 5 – 10 minutes.
- Depends on the “density” of the content.
- Used to break-up instructional time and refocus attention.

“Do You Understand?” is Ineffective as a Formative Assessment

Dunning-Kruger effect



Prepare to Cut

- Keep breaks on time
- Watch out for dependencies
- Leave time to wrap up your workshop.
- Do not speed up.
- Communicate with your team.
- Communicate with your learners

Review the Instructor Notes

Review Prior Feedback