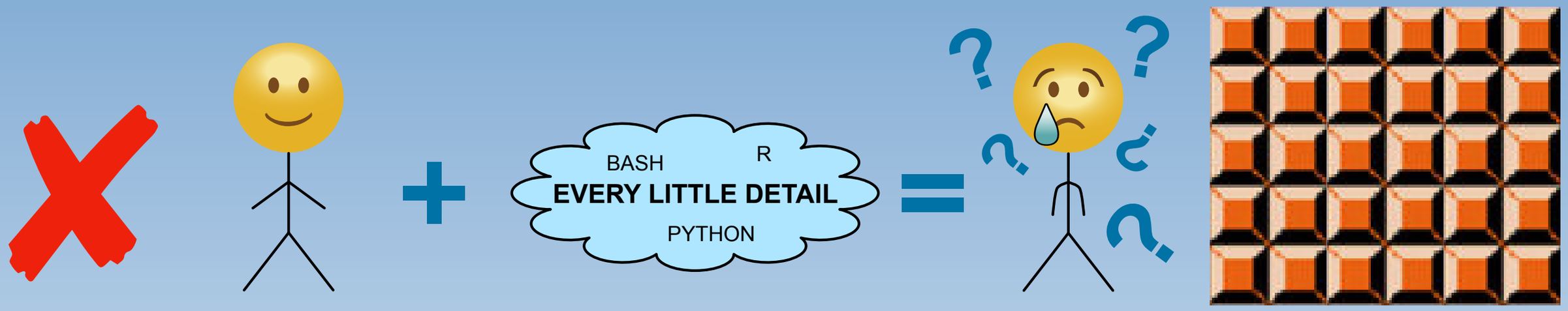
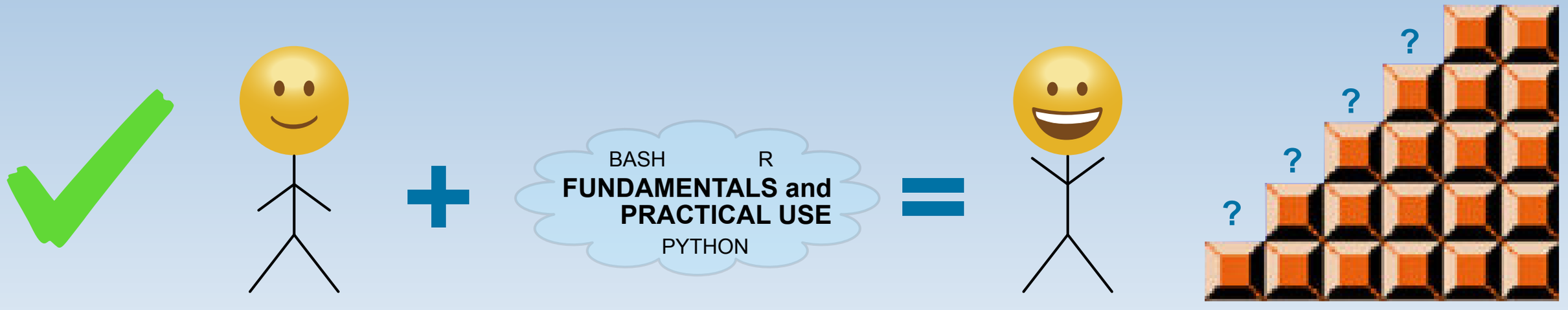
5 things I wish I knew

when I started getting into bioinformatics





Happy Belly Bioinformatics

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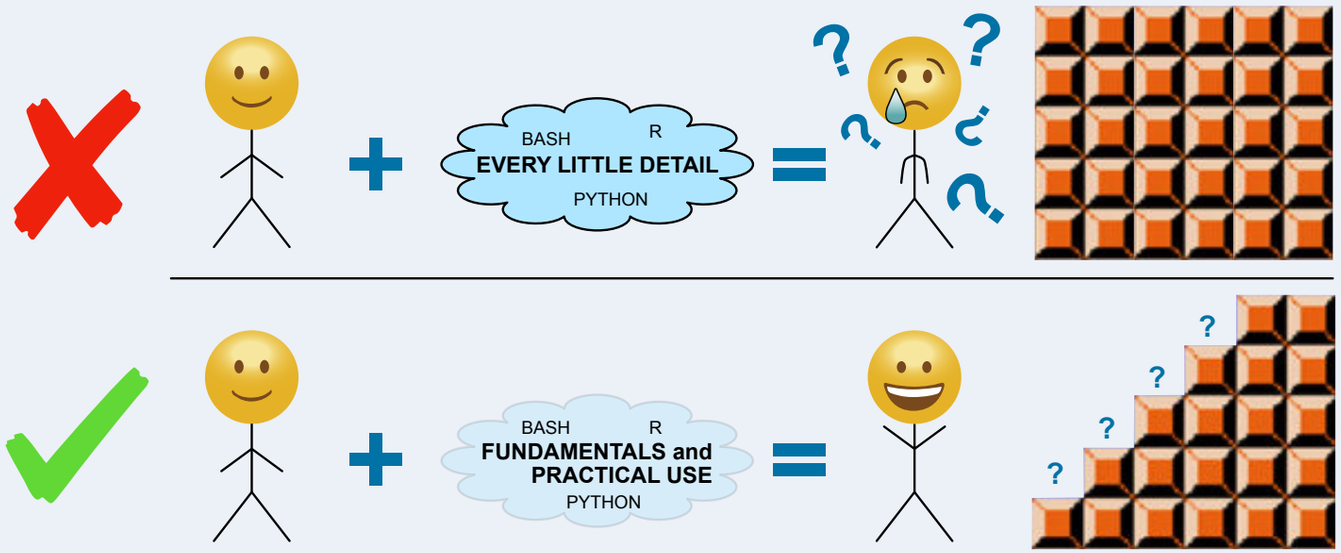
1) Fundamentals and concepts are important, not details

We don't need to master everything we come across

- this can be very hard for a lot of us!

- we are not computer scientists, we are biologists using computers
  - e.g. we don't need to be able to program perfectly in R/python/ whatever, in order to use them effectively in our research

    - building just a general foundation enables us to more deeply learn what we need, when we need it



Think of it like Excel. Many of us use that effectively without knowing how to do everything it can do!

2) Don’t let yourself become paralyzed by options

- There is not always a “correct” choice about how something should be done

- It is okay sometimes to just choose a path, *document it*, and move forward
  - this doesn’t mean all options are always equal, of course, but it can be very difficult at first to know which things need to be explored exhaustively (by us) and which don’t

If you feel yourself going in circles on making a decision, try reaching out to someone who may have already spent time thinking about it.

Sometimes we just need someone else to tell us “there is no agreed upon standard way to do this”, and it makes all the difference 😊

3) Try to find a bioinformatics community to be a part of!

We are not alone!

- many of us have little or no bioinformatics guidance in our labs/departments/ institutions
- it is super-helpful to have a community of people you can connect with that are working on similar things – there are lots of us!

Talking with someone who has already spent time thinking about what we may just be starting to get lost in can save us a lot of time and trouble! (and we may be able to do the same for them with something else)

https://angus.readthedocs.io/en/2019/feel-free-to-reach-out.html

4) Good documentation is not only necessary scientifically, but it also helps you and the community

Why necessary for science?

- reproducibility
- assessment/interpretation of results

Why helpful for you?

- excellent documentation keeps future-you from being angry with past-you
- helps when we need to just “make a decision and move on”
- bioinformatics is filled with decisions that we as the researcher need to make as we go, and they’re usually not simply “right” or “wrong” choices
- clearly documenting everything can make it feel a lot easier to make these decisions because the transparency means anyone can see it and try other ways if they’d like

Why helpful for the community?

- aside from just being necessary for science, it can also be a great resource for people to learn from

5) Be aware that we will often need to let some things go :/

When to look further into something and when to let it go?

- also very hard for us scientists!

- there are many more squirrels to chase than there is time for us to chase them
  - this is true about many things, but it seems to be operating on a whole other level in bioinformatics
- there are no easy guidelines to this, as it is ultimately up to us, the researcher

Take-away: Don’t feel bad when making a decision to let something go. Instead, know ahead of time that is going to have to happen, and that it’s ok!

What it’s like being a bioinformatician

Summary

1) **Focus on the fundamentals and concepts, not the details**
   - with a solid foundation, we can always learn and apply specific things when needed

2) **Don’t let yourself become paralyzed by options**
   - sometimes it’s ok to “just make a decision" and move on
   - if unsure, try reaching out to someone who may have already spent time thinking about that particular thing

3) **Try to find a bioinformatics community to be a part of**
   - it is super-helpful to have a small community of people you can connect with that are working on similar things – We are not alone!

4) **Good documentation is not only necessary scientifically, it is important for you and for the community**
   - not only for knowing what we did, but it also helps in those times when we need to “just make a decision”; and it can help others learn

5) **Be aware that we will often need to let some things go :/**
   - don’t feel bad when making a decision to let something go, instead, know that we have to do this sometimes, and that it’s ok!

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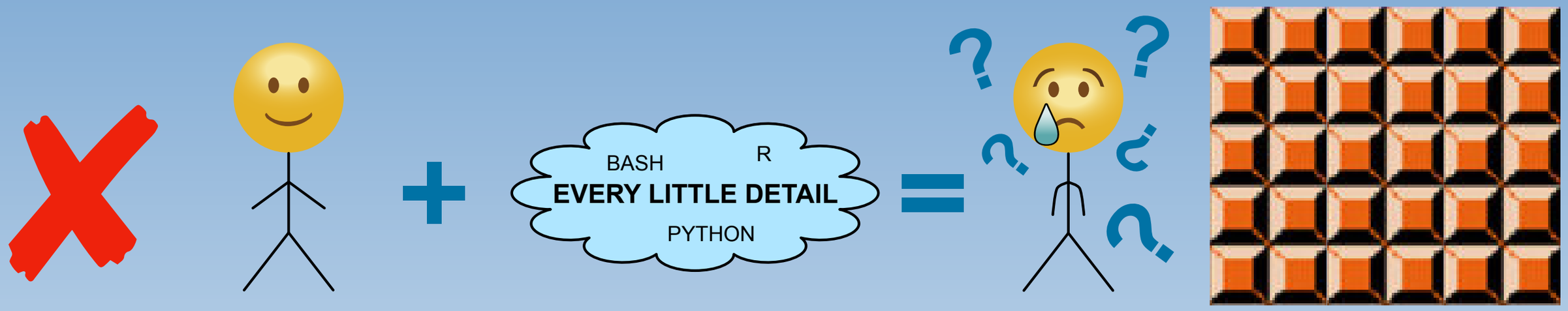

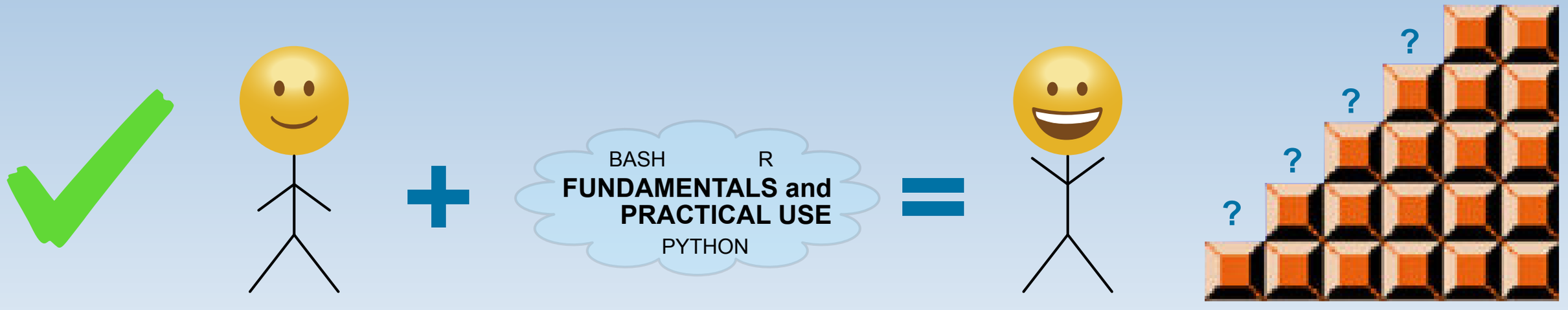

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