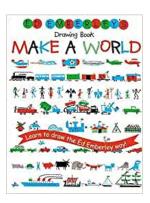
# Make a world Overview of break-out group

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#### Make a world

Using simple shapes, Ed Emberley shows would-be artists how to draw over 400 things, such as an airplane, anteater, submarine, train, kangaroo, gondola, and much much more!

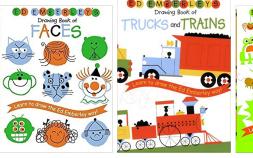


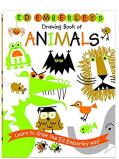
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says Amazon, the original book was published in 1972

#### Make a world

As many good and profitable things, it has developed into a saga





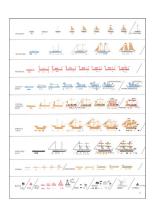


#### Make a world - overview

The breakout group will introduce some basic concepts for simulating observations using R

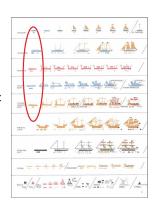
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## Apple orchard

I will show some simulations on estimating the number of apples in an orchard (something I wanted to do as part of the TESA webinars that we did in October 2018 for participants to prepare for the Intro to Stock Assessment course)

In putting the notebook for this section together (and looking at the participants list) I realised that it is perhaps basic for this workshop, so could provide a gentle introduction to the workshop

### Fish growth

I will share some current ideas I am interested in exploring regarding fish growth and the ageing of fish using otoliths.

How many otoliths do we need to age in order to get the information we want about fish growth?

What are the trade-offs of looking at yearly growth increments instead of just collecting age-length pairs?

This section is much more open-ended, and in reality I am looking for help, guidance and ideas to pursue this topic further.

## Collaboration on the GitHub repository sim-make-a-world

Clone or fork the sim-make-a-world repository which contains all the resources associated with the breakout group

I am hoping to stimulate conversations, bounce ideas around, foster potential collaborations, and learn from the wealth of expertise of the workshop attendees

## Topics to discuss and debate

What are the key ingredients necessary to take a simulation study from "just an idea" to an interesting, replicable and defensible analysis?

Because the simulated world is infinite, where to draw the line? What are the major pitfalls to avoid in order to successfully turn a simulation study into a useful product?