

Networking Against Plastic Pollution

A set of activities to do with your family or at school
to network against plastic pollution
and make a change - one step at the time while having fun



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INTRODUCTION

We are all bombed by a plethora of information regarding the harmful effects of plastics, the amount of litter, and innumerable actions to be undertaken. With the result that we usually end up doing nothing, feeling that solutions are not really existing, or are too expensive.

Though, if seen in a system thinking perspective, this is a typical framework of a complex system, and has to be targeted as such. The process to overcome this impasse relates to system thinking, where possible strategies to deal with complexity include to raise awareness about complexity itself and intertwining of actions and their effect, and rather than trying to simplify the system start a process towards: 1) identification of a core problem, 2) embrace new ideas which can lead to a change and 3) make sure that our ideas are making our life easier and happier.

«NETWORKING AGAINST PLASTIC POLLUTION»

The micro-initiative «Networking against plastic pollution» started from the intention to tightly integrate actions against plastic pollution into everyday life. The official launch of the 18-month action was made in May 2018 during the 8th 'International Sandy Beach Symposium' in Heraklion, Crete and was concluded in November 2019.

There are many potential actors capable of making the difference, but they are not currently involved, or not fully aware, of the issue of plastic pollution. The initiative targeted the engagement of families all over Greece as an example of such actors, through alternative channels, i.e a blog dedicated to travelling with children in Greece 'Thepaperboat' ¹ and a blog about family lifestyle in Thessaloniki 'Pigolampides'².

The micro-initiative was funded by the «Beyond Plastic Med initiative (BeMed)»³ jointly sponsored by Prince Albert II of Monaco Foundation, Tara Expeditions Foundation, Surfrider Foundation Europe, International Union for Conservation of Nature και Mava Foundation. The project was coordinated by the environmentalist Olympia Papadopoulou from Tero⁴ company, in collaboration with the marine biologist Lucia Fanini (associate of the Hellenic Centre for Marine Research⁵) and Ioanna Serafeimidou, founder of both blogs.

HOW TO USE THIS GUIDE

A storytelling approach through blog posts was used to initiate open dialogue with the readers (parents / kids), pass scientific information and call for their active participation in specific actions. Along with each specific topic a competition with awards was announced. This guide includes all posts published during the project in seven thematic sections, the material we prepared and information & educational material collected from environmental organizations, websites, blogs, etc.

All articles in English and Greek can be found in the blog "The paper boat"⁶.

We hope this guide will create a good opportunity to discuss the problem of plastic pollution with children in an environment of inspiration, creativity and joy!

1 www.thepaperboat.gr

2 www.pigolampides.gr

3 www.beyondplasticmed.org/bemed

4 www.tero.gr

5 www.hcmr.gr

6 <https://thepaperboat.gr/networking-against-plastic-pollution>

ARTICLE 1

Ideas for a plastic-free beach!

For the Greeks, the **Aegean Sea** and the **Mediterranean Sea** are our beloved home. Around springtime we start counting days before we are back on the beach enjoying the cool sea breeze, the sunshine, the golden sand and the clear blue sky. This year, summer (eventhough a bit late on its yearly “rendezvous”) finally arrived in Greece and most of us are ready to go to the beach (if not yet there...).

Everything moves on a beach: bathers, the little animals inhabiting the sand, the sand itself and also the **litter** -most of it is **plastic**. You can see it stranded. Some comes from quite far away, you can see that from the labels. Plastics may be cleaned by machines, so beachgoers won't see it. And even if some piece escapes the machines, and if is not something that we just dumped, still we all tend to think: “It is not my problem”.

But actually is.

In fact, we have been throwing plastics away, without thinking to the effects of this action for so long, that this became an **emergency**. Not only big items, also little ones are all around, threatening wildlife and ourselves (we are increasingly finding nanoplastics in our tap water, for example).

You will probably agree that **Plastics is a common problem**. But, if this is our common problem, we can also find shared solutions! **You are not alone in the fight against plastic pollution!**

Some people and some groups already found ways to reduce and to remediate our impacts. One or more of these ways can be just fine for you and your family...or you even may want to try out and share a new one!

The paperboat goes “green” and invites you on board for an exciting discovery voyage to exchange ideas and find out, with your family, your own way to reduce plastics' use and plastic pollution. **We are initiating an open dialogue with all of you** and invite you to actively participate to our thematic challenges that will be organized for the next 18 months.

Ideas to reduce plastic use on the beach:

1. Bring on the beach your own **insulated or glass bottle** with water. Avoid buying plastic water bottles.
2. Leave a **fabric bag** folded in your beach bag – you can use it to collect your waste, or treasures found ashore, or (why not?) even for a quick clean-up. It's washable and ready to be reused!
3. Bring snacks from home in **stainless containers** (even in plastic ones but not single-use ones)
4. Bring fruit in **paper bags**.
5. After enjoying the fruits with your family, paper bags can be used as trash bags for **food waste**, without risk of one more plastic bag forgotten or lost in the environment.
6. Prefer **fabric beach bags** instead of plastic ones.
7. Use your **own cup for drinks**. Most cups can also be completely closed, preventing spills or sand in your drinks.
8. When asking for a drink, avoid asking to get a **straw**. Certainly freddo (cold espresso coffee; very popular during summer in Greece) may need a straw, but there are very fancy paper straws in commerce (and multiple use straws)...you may keep a bag of them at hands. However, juices and soft drinks can be enjoyed without a straw. Did you know that in many places straws are banned (the last one was Rio de Janeiro)?
9. Try to **play with the kids** using things you will find on the beach (shells, small woods, pebbles, sand...) instead of getting a new beach set every year. By the way, how many abandoned toys do you find in every beach you visit?
10. Use **clips for baby's pacifiers**. Pacifiers are often lost in the sand and end up in the sea.



What more can I do?



Print or note down the above list of ideas, evaluate the progress of your family in every beach trip and send us your comments.

Search online for Beeswax wrap (instead of wrapping membrane for food).

Follow BEMED initiatives on FB¹

ARTICLE 2

The travel of plastics!

Does it happen you to find a **plastic piece buried in the sand**? Most probably yes. It may come from badly behaved beachgoers, brought in by a nearby river or stranded after a long trip, started far far away.

During the long time that takes for a plastic piece to break down into fragments, **many forms of life can be harmed**, from big to small (along with the downsizing of the fragments). The longer a plastic item stays in the environment, the worse. We can read in the news about the threats related to floating plastics or plastics buried in the sand, and about the estimated decaying times of different items. **Knowing what happens when a piece of plastic is left loose, will help to think more seriously about that.**

One thing is sure: **whatever plastic piece you find, it comes from people.** There was no plastics in nature until we started dumping it. We created the problem, so it's up to us to look for solutions. Don't we teach our kids to clean up after making a mess? It is pretty much the same idea then, on a bigger scale! Plastics may strand ashore at any stage. So, **when you find plastics on the beach is the perfect occasion to take it away from the ecosystem!**

Now we know and we have no excuse for not taking action!

Ideas to discuss with your children the travel of plastics through time

- You can use the items collected on the beach to complete the sea animals in Lucia's drawings (template 1). The blog "Box of ideas"¹ may inspire you...
- You may familiarize yourselves with the sea animals and the dangers they are facing. For example, check the games and the educational resources for sea turtle *Caretta caretta* provided at Medasset website² or the beach trash homes of the Blueberry hermit crabs in Okinawa, Japan³.
- Watch together with your family a movie with environmental messages, such as 'The Lorax' or a documentary for sea creatures (for example, the Blue Planet II collection). Read a short story to pre-school kids or give to older children a book to read in the holidays, like the Planet Agents of Eleni Andreadi⁴.



1 <https://boxofideas.uk/incomplete-animals-coloring-pages-for-arts-and-crafts-game/>
2 www.medasset.org/el/
3 <https://okinawanaturephotography.com/tag/hermit-crabs-in-plastic/>
4 www.planetagents.org

ARTICLE 3

Reduce - Reuse - Recycle with a special eye on plastic

We heard many times about the three Rs: **Reduce – Reuse – Recycle**. But then life -and specially life with kids!- pushes us away from our best propositions. It's way easier to go for single-use items, to buy one more little toy to save us from a tantrum, to grab overpackaged food and save our time.

Don't you feel though, like being tricked?

There is way more satisfaction in using less, reusing more, and unleash creativity in recycling. Kids are naturally imaginative...think about hours spent building with cardboard boxes. Finding some family space for reusing and recycling with creativity can give them something unique.



But first, we shall debunk some common **misconceptions**, like it's too expensive or time-consuming to change our daily habits to more environmentally friendly. Luckily someone did the job for us..check out this article¹ and you may be convinced on the opposite!

And then, let's go with **creativity (our favourite part!)**. It does not only mean being crafty. It means setting our mind to see treasures everywhere. For examples, organising **swap parties**, a concept that gains ground in recent years, where friends gather and exchange things they no longer use. Read some swap party² rules so everyone is happy at the end.

1 peoplesdesignlab.org/en/blog/post/refuting-misconceptions

2 <http://www.frugal-mama.com/2009/10/ever-been-to-a-kids-clothing-swap/>



Did you know that **fashion industry**¹ is one of the most polluting ones?

So, why to encourage them?

Or, find the occasion for some “**empty your room**” day, when little ones can set up their own thrift market -with only minimal interference from grown-ups. We have watched it and kids really love it! You can check our “template 2” for guidance to your own successfull empty your room happening!

Here some our favorite ideas for reusing and saving plastics; we tested them with satisfaction...



- In older times in Greece, they used “zebili”, a kind of net for everyday shopping. In Japan, they traditionally used **Furoshiki**², a cloth tied in a special way to carry goods. Zebili was replaced by plastic bags, while the use of Furoshiki kept declining after...the easy availability of plastic bags in Japan! You may try create a Furoshiki³ yourself out of old fabric. It's useful to keep in the bag and use to wrap loose items, or as small emergency bag instead of plastic ones.
- Another idea is to make yarn from old cotton T-shirt, the well-known **T-yarns**⁴, and reuse them for example in gift wrapping to avoid plastic ribbons.

1 www.fashionrevolution.org

2 <https://www.1millionwomen.com.au/blog/how-furoshiki-japanese-fabric-wrapping/>

3 <https://wellnessmama.com/318001/furoshiki-wrap/>

4 <https://www.instructables.com/id/t-shirt-yarn/>

Source: Children's workshop, Municipality of Pavlos Melas, Thessaloniki Greece, June 2019



ARTICLE 4

Joining forces!

Often we are reminded, that we are not alone. And it's such a good feeling! It also means that we can do more and think broader, when our actions become part of a common vision.

Simple actions and little changes in our lifestyle can turn into great things, if done together. The fact that we are not alone also takes along some responsibilities to share. We are talking about littering in this case. Litter is definitely damage to everyone. When the damage is done we can clean up, and this is a remediation.

And before remediation?

Sure there is something we can do! It takes some **detective** skills though, and social skills too: for instance, litter can tell us a lot of things, if we can be attentive enough to find them out. About our own behavior, about the behavior of our neighbors, of our visitors, and even about specific issues -some can be very local and some very widespread.

All can be changed for better. One recent example: after the London marathon this year, hundreds (thousands?) of Lucozadesport bottles were left behind on the road. Doesn't take a fine detective mind to figure out how they got there! And it took just a little time for citizens to take a picture and drop a note to the event organizers, asking to regulate better the disposal of empty bottles.

We tend to forget our power as citizens, and as consumers, but actually we can shape things with our choices. Because we are not alone...and as we are many, **we can drive changes in policies and market.**

Other real life cases:

We can ask cosmetics brands to ban microbeads in their products, i.e. plastic particles equal or less than 1 mm in size. OK, first we have to know which ones contain them... luckily, "the plastic soup foundation" launched the Beat the Microbead¹ product database, just for that.

While on the beach, we can observe which items are most commonly found in the sand. Is there plenty of cigarette butts? Ask beach bars to provide more ashtrays. They will also enjoy having a cleaner beach.

You keep finding plastic straws here and there? Plastic straws should be banned by 2021 anyway, so it might be better for local businesses to start planning alternatives in advance. You can mention to them the idea of using pasta instead of a straw (e.g. #melissakalamakino²; in Greek). You can also use the plastic straw toolkit prepared by Lonely Whale³.

Thinking big:

Information from beached plastics is being taken very seriously worldwide. The huge amount of items from big, famous brands inspired people from #breakfreefromplastics to produce a toolkit to request brand auditing. Pictures are well supporting the petitions. You can download the kit³.

Don't throw the option to make a change (big or small) into the trash...

1 <https://www.beatthemicrobead.org/product-lists/>

2 <https://showcase.dropbox.com/s/Plastic-Straw-Toolkit-hcRnRc1tzzzH1Y87CTEQk>

3 <https://www.breakfreefromplastic.org/brandaudittoolkit>



Instructions to organize a school or neighborhood clean-up!

The goal is not just to get a cleaner school or neighborhood for one day, but to get as much information as possible from what you observe while collecting. And use this info to improve things. We will be using the same technique that researchers use for measuring biodiversity. Finding many different types of litter is diversity after all!

What you need:

- Gloves
- Trash bags
- A printout of the data collecting table (template 3)

How to proceed:

Designate two “counters”. They will hold the trash bag and have the fiche and a pencil in hands. When you find some trash, go to the “counters”. They will write down the information and put the items in the trash. Not sure about something? Use the “notes” section.

Then, you need a computer. Open an excel file and copy in there the table of your fiche. Columns are “what”; “how many” (just enter the total number); “notes”. Each line will be the name of the item (e.g. plastic bottle, snack package, fruit juice tetrapack etc). In biodiversity studies, that’s the difference: instead of types of litter, you have one species’ name per line.

You can easily extract a graph from the collected data and use it to claim for an improvement and find solutions.

Mermaid tears

What are they?

If you google the words “**mermaid tears**”, you might get into pictures of pretty glasses worked by the sea. But the ones we are talking about are also called **nurdles** and are the **pre-production pellet form of plastics** (most commonly made of polyethylene, polypropylene, and nylon). In fact, mermaids would have more reasons to cry about these than about colorful glass tumbled by the waves...

Where are they coming from? This was Lucia's first question, after finding some on the beach, more than 30 years ago (and Olympia's & Ioanna's few years later). And they are still there. Actually, there are more and more, because they come from spills of industrial processes: they are the form in which plastics is moved around before being molded. And by moving around, some gets lost. Whether spilled from containers, or from in-house industrial processes, (there is always a water stream bringing it, sooner or later), they finally end up into the sea.

When they are “born”, most pellets are transparent or opalescent. There are also other colors: blue, green, black or red, it depends from their production source and on the use they were meant for (and no, no enterprise will tell you “oh, these are mine, sorry for the inconvenience”!). With the harsh life in the sea, and because they can adsorb other substances, they turn yellowish or brownish. You can see from their darker, yellower colors and scratches on the surface, if they have been in the environment for a while. They carry around substances picked here and there; even DDT, banned in the 70's, can be found on them.

So, plastic starts being spilled in the environment even before being given a shape and being used –there is no reuse and recycle here. But there is reduce. By using less plastic, the amount of materials moved around should decrease. Also, some enterprises have started studying alternative ways to reduce in-house spills. It would be timely to ask all of them to do the same. One very active association in this respect is FIDRA¹.

1 <https://www.nurdlehunt.org.uk/>

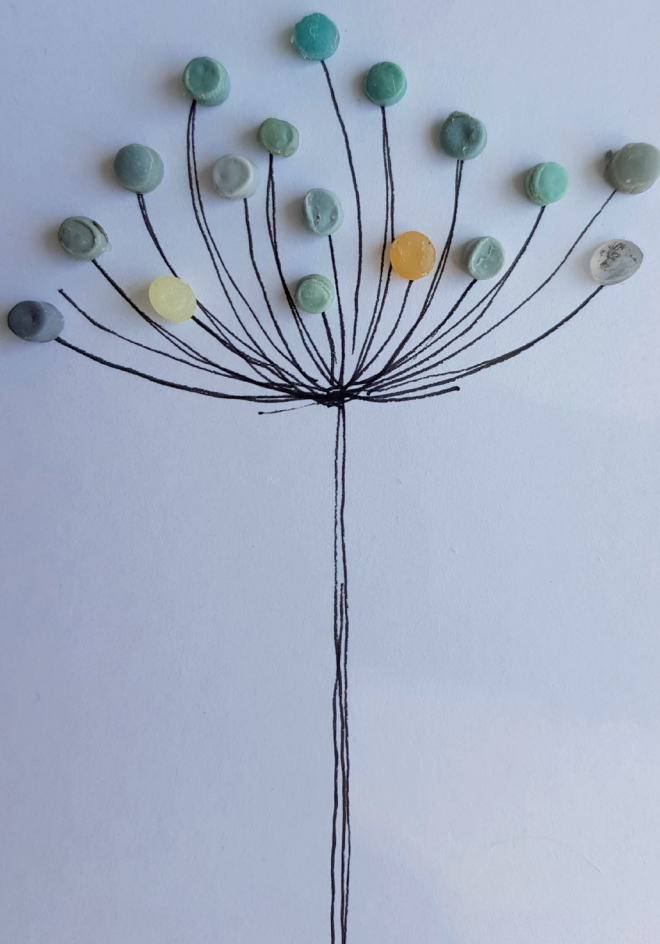
In the meantime, please start paying attention to those little things. They are not an obvious punch in the face like a plastic bag or a plastic bottle, but they still are something that is polluting our environment, and that animals can mistake for food (video²).

They are a reminder of all the small things we overlook... A good way to keep a reminder? With a flower!

In this point we want to introduce you Michelle³. She is doing amazing work on Cornish coasts, collaborates with the #2minutebeachclean⁴ and agreed so kindly to share her nurdle seed head with us!!

It's summertime and you are probably lying on a beach (at least we wish you so!). If you sieve the sand (also while playing with kids) you might see them, and after explaining to the kids what those small pellets are, give some room to art and **make your own unique flower**.

«Michelle's flower...the inspiration for our challenge! »



Michelle's directions are: "To make your Nurdle seed head, use tweezers to hold the Nurdle, pop a tiny bit of glue on the underside, taking care not to use too much. Place the Nurdle on the stem, one for each stem of the seed head. If you are using white nurdles use a coloured background card." Normal paper is fine, they are not heavy (better try recycled paper). If they want to make postcards for instance, then the paper has to be as heavy as for watercolor paint (but plain, not rough). Or just get those 50x70 boards, you will make plenty of postcards.

2 <https://www.newscientist.com/article/dn27849-plankton-snacking-on-plastic-caught-on-camera-for-the-first-time/>

3 <https://www.smartielidsonthebeach.co.uk/>

4 <https://beachclean.net/>

Mind the map!

We move around every day, doing different things in different places. This means, we use the space and we kind of have a map of it: home – school – grandparents' house – playground – supermarket – ... We get to learn our own movements with respect to important points, where things happen.

Thinking about own movements is quite easy, it is about ourselves. But tracking the effects of our actions is trickier. Let's apply that to plastic litter. By littering, plastics escapes its ideal fate (=being recycled) and most probably ends up –sooner or later, closer or further away- in the water. **A major part of the plastic found at**

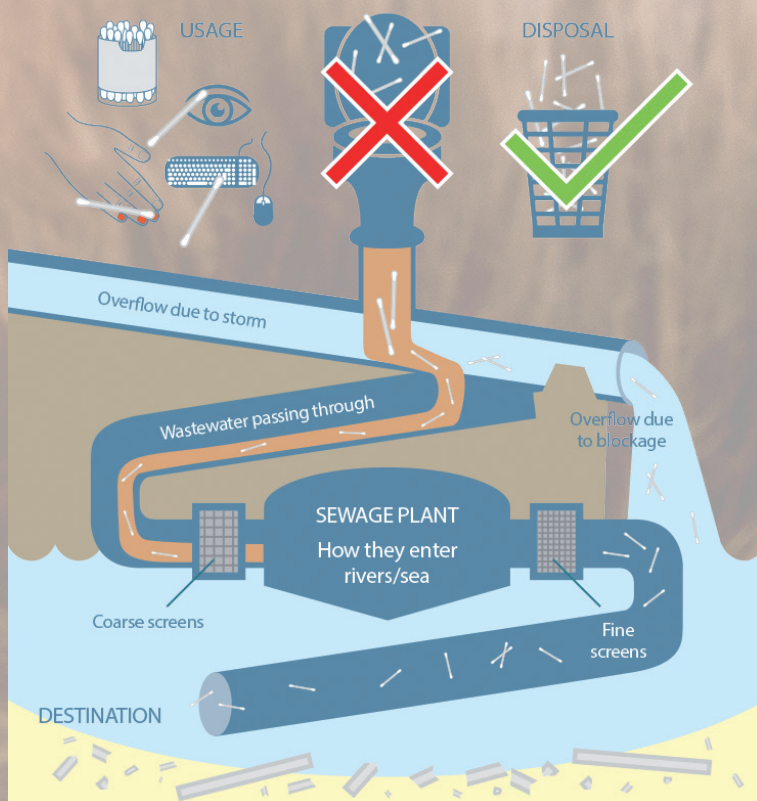
sea comes in fact from rivers. It is not only bad-mannered beachgoers or fishermen causing the vast amount of stranded plastic that we see on the beach...plastic litter finds its way there, and it is mostly a water way.

In this respect, please remember: «**a toilet is not a trash bin**», as the story of cotton is telling us. Can you recognize them? They are those little sticks you can find on the beach, but they are not from lollipops! Simply, the cotton tips go away and the light, colorful plastic stick stays. For very long. Here is the “map” of how they got there¹.

Maps are a great tool for us to observe all that. **Illustrated maps are a great way to pair information with art and make people enjoy them.** Already in old times they were defined by Ptolemy as “corography”, a conceptual representation more linked to art, and things as the mind sees them.

So, maps can bring information, not only about space. When it comes to litter, while zooming out maps, the concept of “there is no somewhere else” pops out. **Our litter can travel far and wide yet will remain a threat to our environment, the earth that hosts us.** An example: follow the hash #mappingplastics and you’ll see all the actions to stop «first world» countries using Indonesia a dumping ground for plastics.

But also see what it is happening in Cyprus². Maps can become a great tool to highlight problems and see that we are not along in tackling them (you need to hit “I agree” with the GDPR notice to see it).



1 <https://www.cottonbudproject.org.uk/how-they-get-there.html>
2 www.foecyprus.org/map/



ARTICLE 7

Most important is to participate!

We hope that the green paperboat kept you good company...this is our last post! And of course, we want to make sure we leave you with busy mind and busy hands: this time we are talking about **big-scale things**. Which is pretty obvious: we started from proposing little actions, and now is time to go ahead, think big and see where do little actions head.

Did you ever hear about **citizen science**? It is a set of actions, to which citizens are invited to participate. Why? To find out things. To get aware of what is going on at people's **own place**.

But actually **the power of citizens is so great**, that when many citizens are involved, it is not only "own place"...it is the whole city, or Region, or Country, or sea [yes we might keep thinking as the sea as of a single Country's sea...but actually is only one, shared among several, different Countries. And several different citizens].

For example, **citizens can help** finding out if rare ladybugs are still around gardens, just by looking closer to their plants (check for “the lost ladybug project”¹). But also can help about beached plastics.

Here is a link² introducing to potential citizen scientists the free app to **collect and share your data** and instruction how to start. Many organizations are now using Marine Litter Watch app, meaning that they are applying exactly the same way to collect and report data, and many people are invited to freely join, organize events, and return their contribution -in the same way as well, generating bigger and bigger datasets!



Image: Surfrider, organizer's kit (<http://initiativesoceanes.org/en/resources/kit>)

The topic is so important, that Surfrider Foundation Europe for example provides a whole “Ocean campus” **training**³. If you are interested, they also offer support at different levels to get information, take part or organize events⁴. Just mind it: notify them about your event with at least three weeks advance if you want to get the material in time!

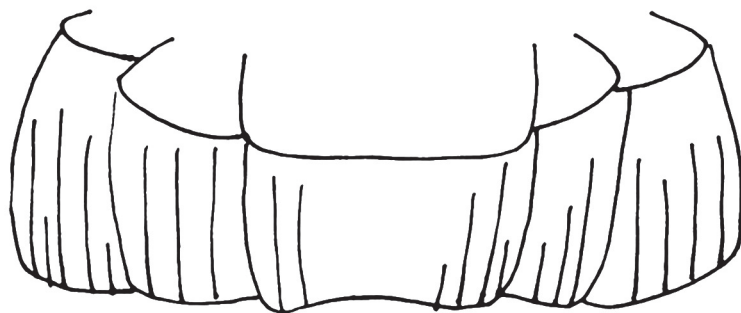
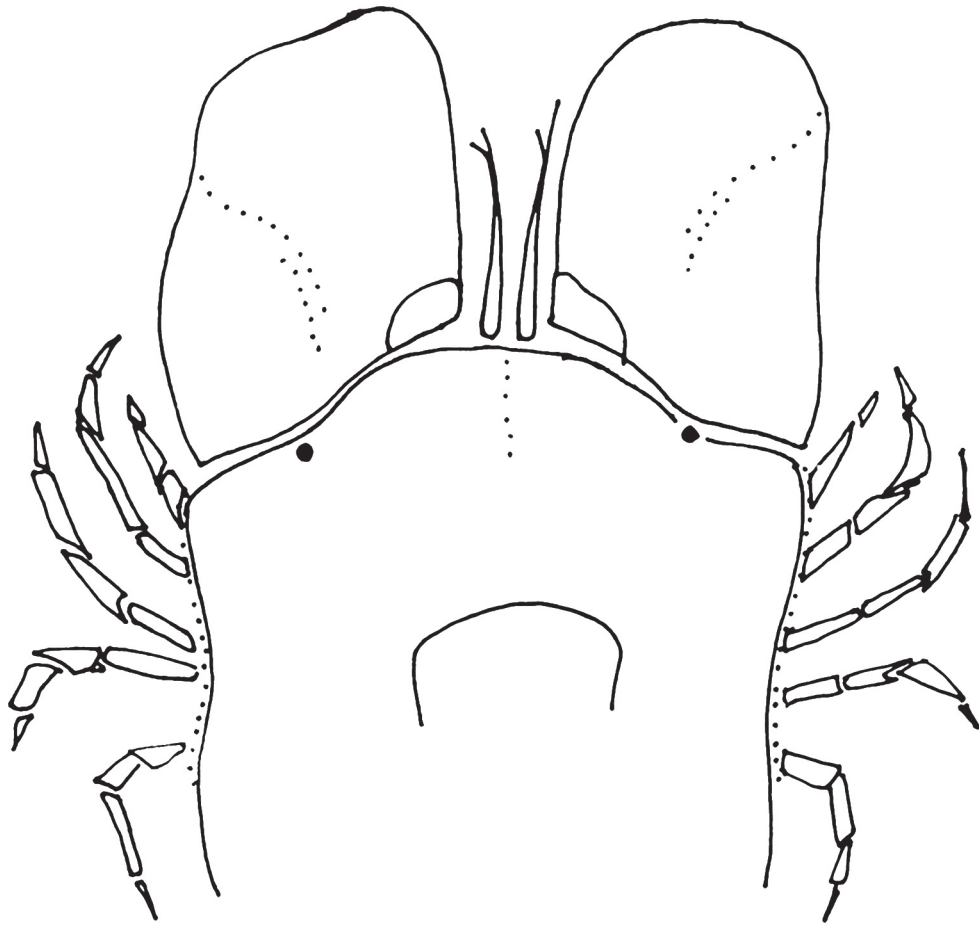
Why so much attention? Because **data are always precious**, but are most useful if organized following the same rules. So, yes most important is to participate, following own attitudes and personality, being creative and aware that we are real experts of our own place...but data collected and shared in the same way of everybody else gives them a real strength, allowing your contribution to be heard everywhere.

Talking about marine litter data, watch this video⁵.

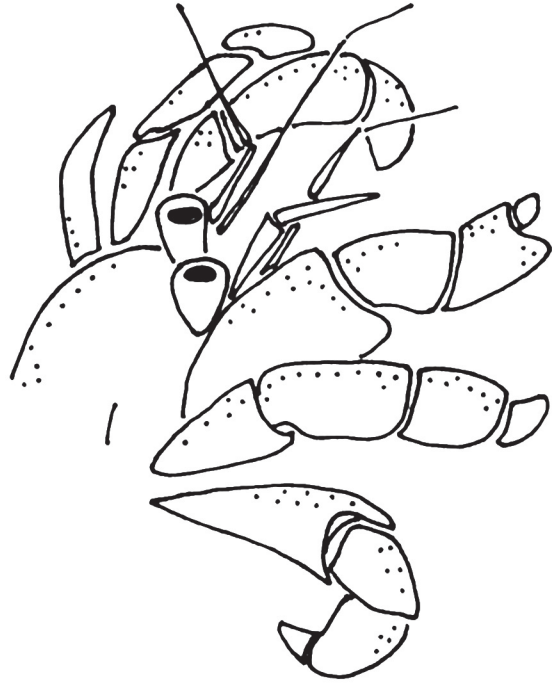
*Thank you for being our co-passenger
in this travel...*

- 1 <http://www.lostladybug.org/participate.php>
- 2 <https://scistarter.org/marine-litterwatch>
- 3 <https://en.oceancampus.eu>
- 4 <http://initiativesoceanes.org/>
- 5 <https://www.youtube.com/watch?v=PEXblfhQm64>

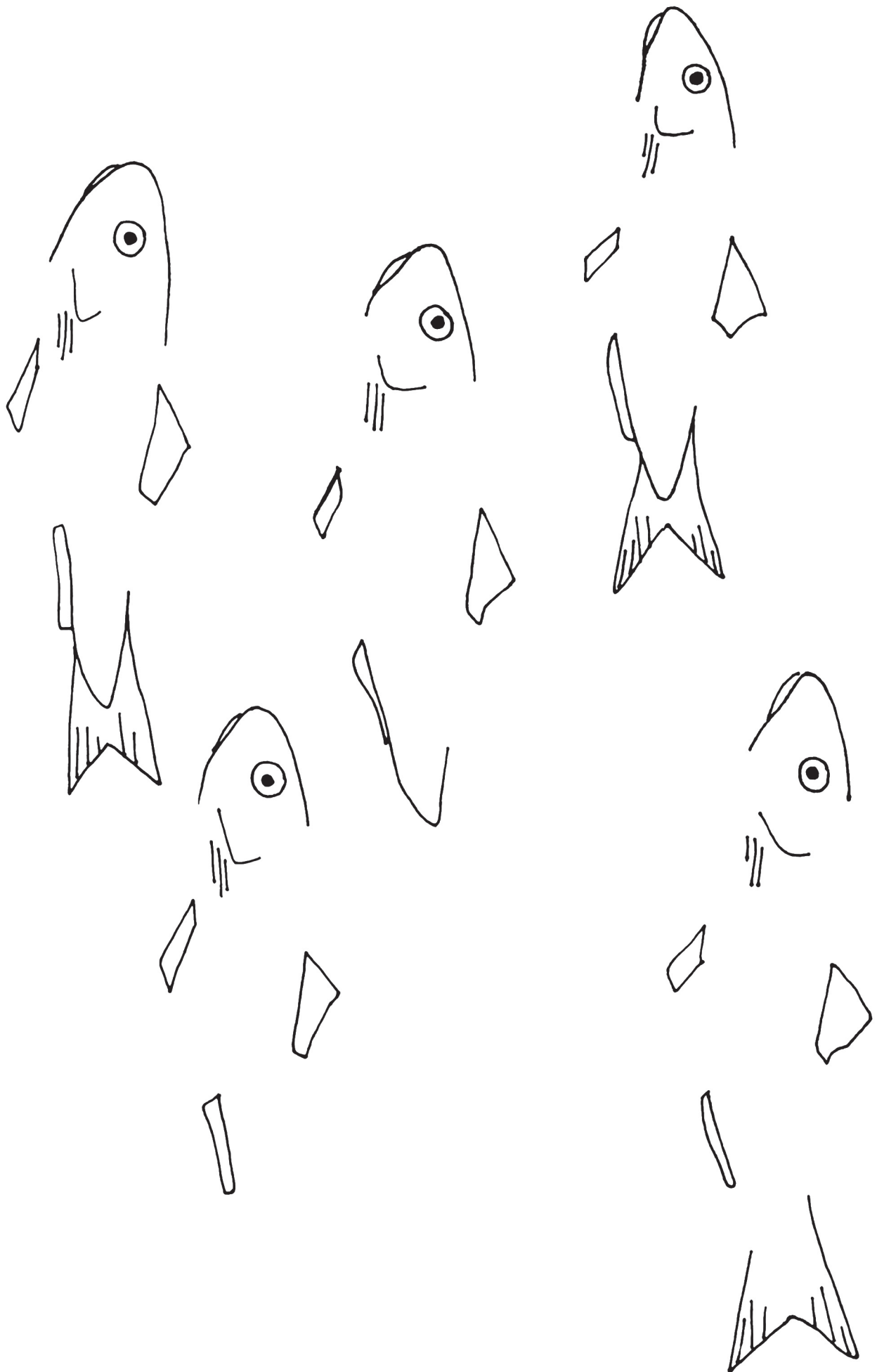
Animal sketches



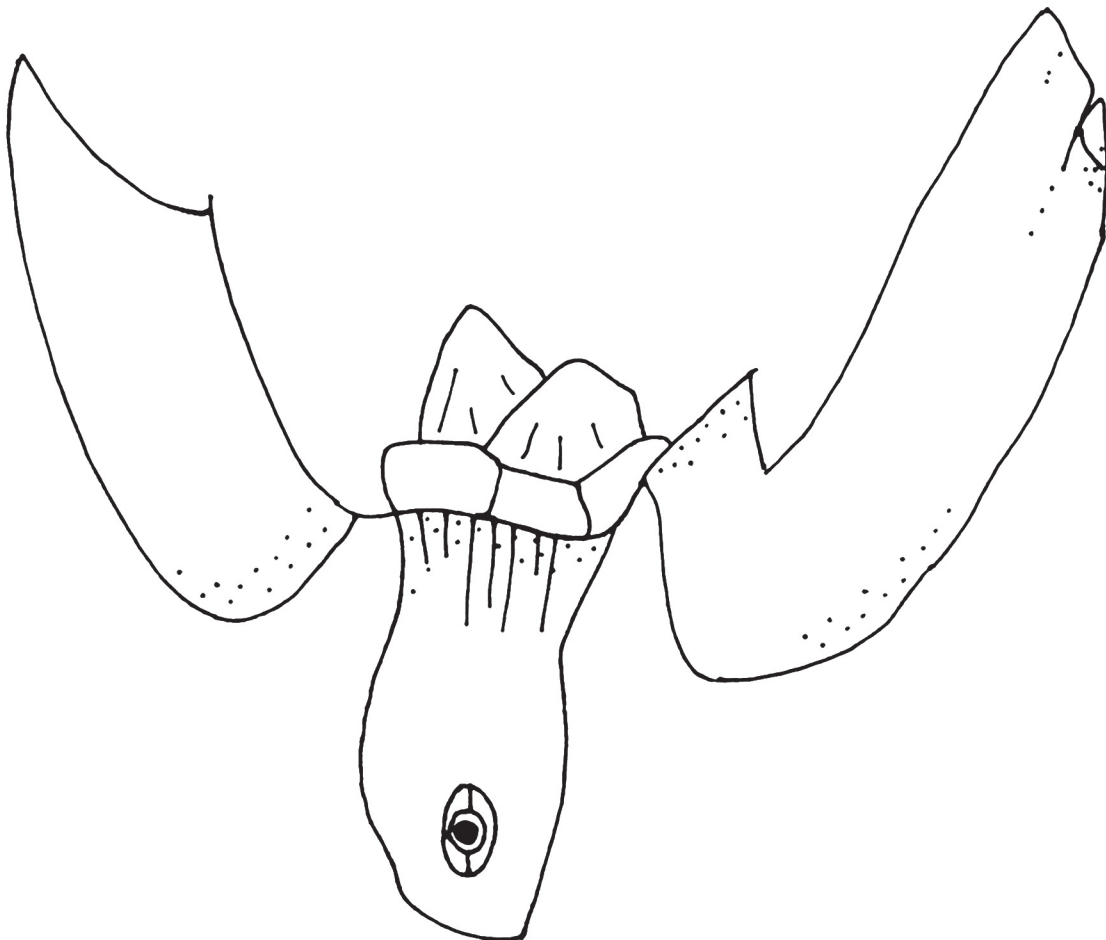
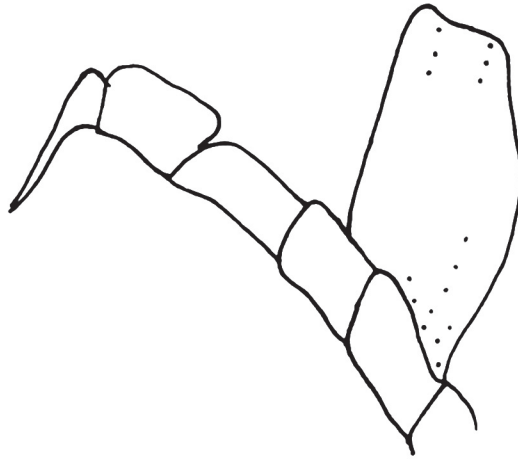
Animal sketches



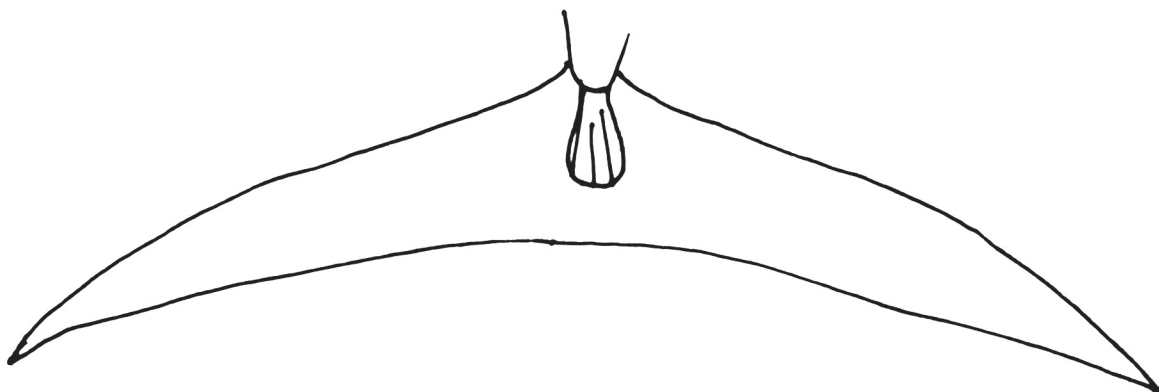
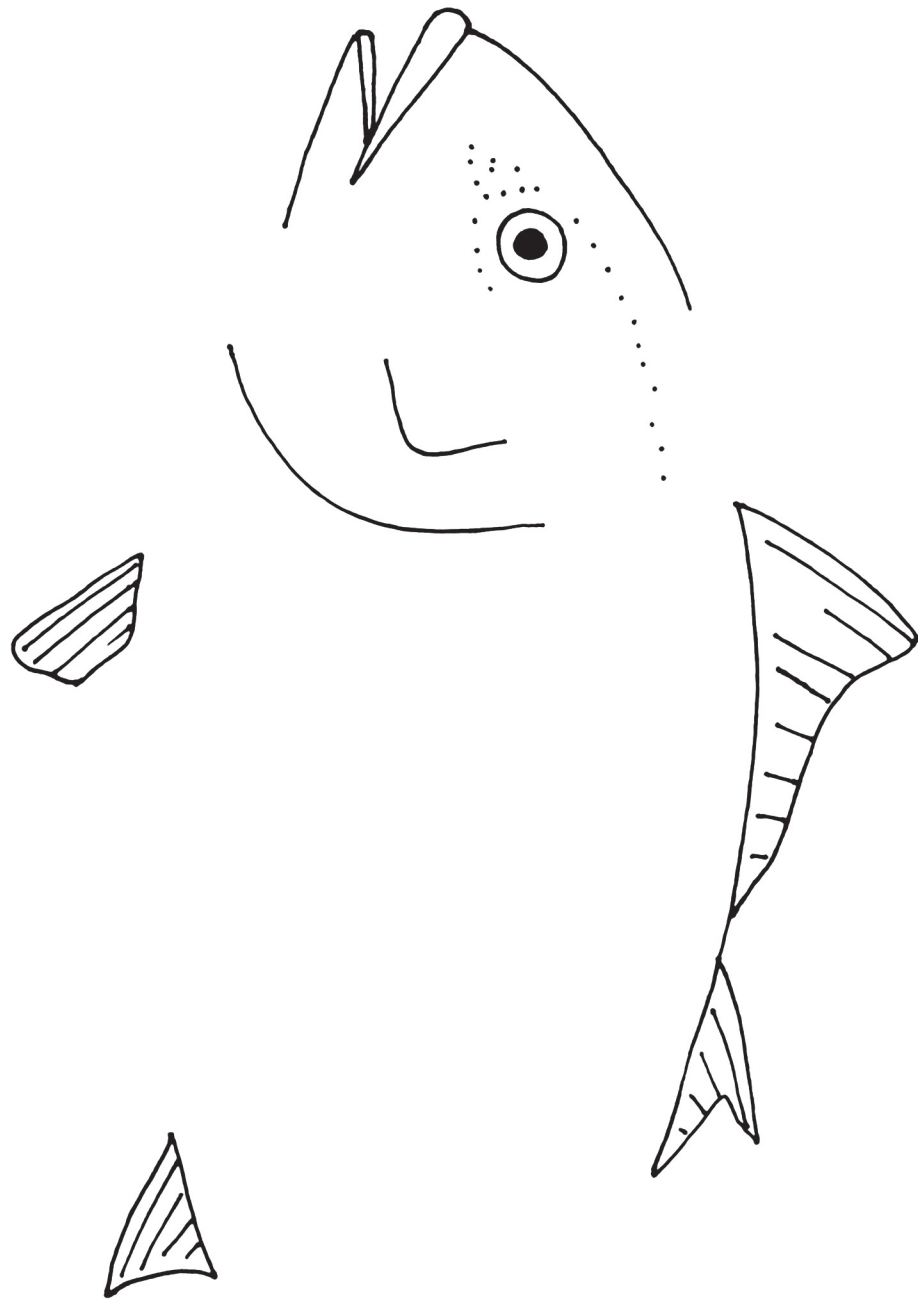
Animal sketches



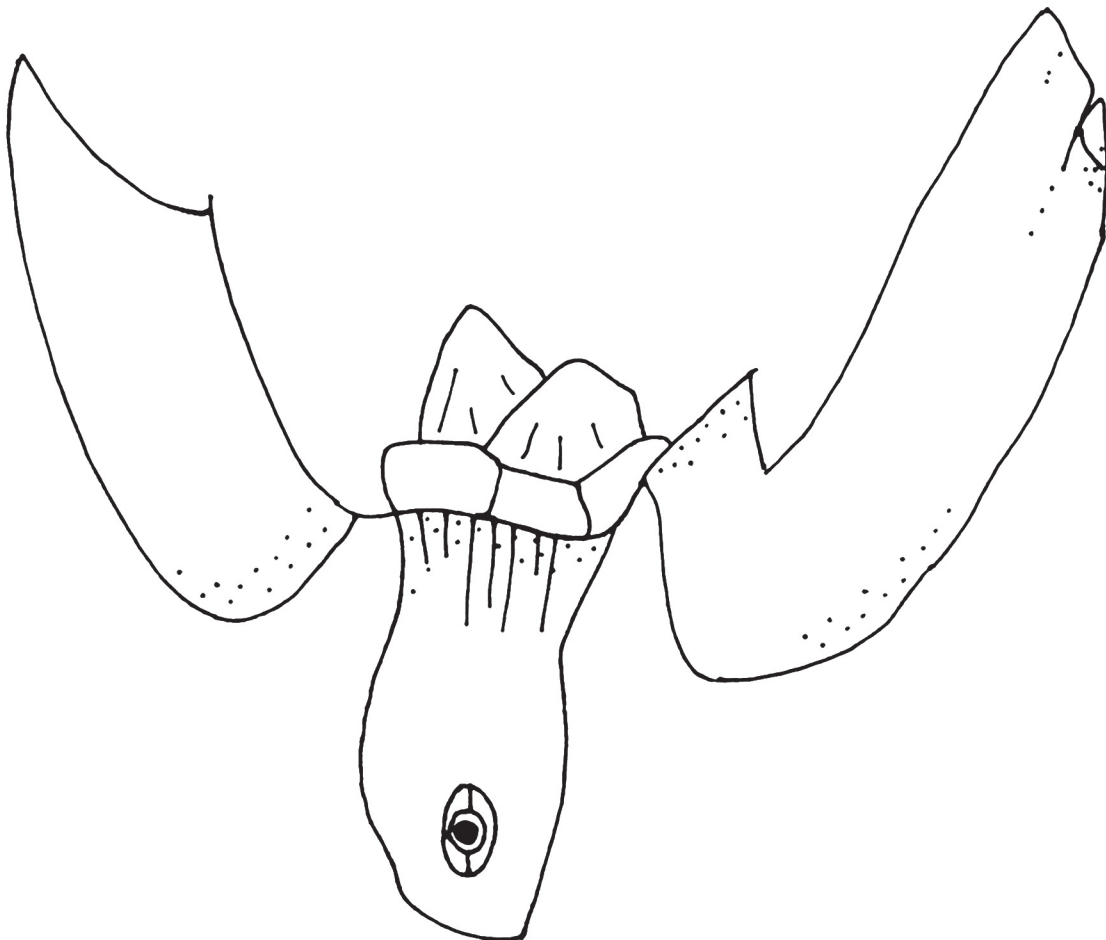
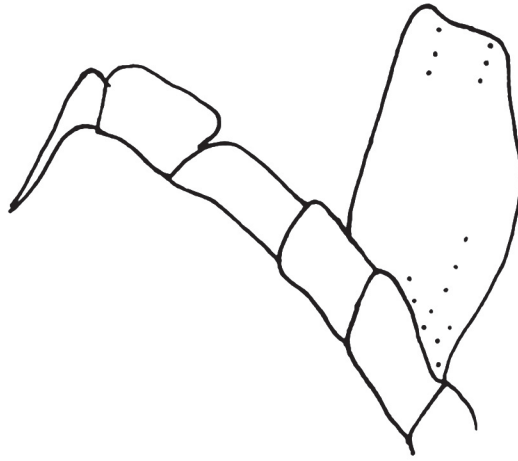
Animal sketches



Animal sketches



Animal sketches



EMPTY YOUR ROOM!

A template to give your toys a new life.



We might have heard about Reduce Reuse Recycle, but when it comes to children toys, this can be a fun activity to do in a group while passing an important message about the three Rs.

Moreover, most toys are made out of plastic, yet hardly recyclable. Shortcutting the cycle and give them plenty of deserved use is good for the environment too.

Here we are proposing a few points for organising an “Empty your room” activity, to give toys you are not using a new life, and to go sourcing new treasures from other childrens’ rooms. Similar to a sentence we came across in the back cover of a travel journal «one’s backyard it’s another’s dream place»...it’s so true in many perspectives!

And [in brackets] some suggestions for variations. You can keep personalising them to our context.

Have fun!

- A number of participants between 5 and 15 works best. Give a clear meeting point and time for the activity.

- Each participant shall select between 5 and 10 toys to bring. They all must be in good conditions: other participants are not substitutes of a trash bin! Bags (e.g. 100 g of loose lego bricks) are also allowed.

- It is better to avoid toys with batteries, as they may create conflicts about their working conditions.

- An approximate age range of the participants should be indicated. Trying to give away baby toys to primary school children might be frustrating.

- [thematic activities can be organised, e.g. beach toys special, just before going on holiday]

- The space should be well-defined and big enough to allow each participant to set up a proper display for his toys. In summertime, outdoor spaces work well.

- For children from 6 years-up it is better to limit the interference of parents. Though, at least one adult supervisor should be present, to monitor the activity and promptly solve conflicts. Younger children will obviously be accompanied by their parents.

- A simple swap of toys can be difficult. A system with coupons can be organized: each participant will get as

many coupons as the toys he brought in. S/he cannot get more toys than the coupons s/he's got.

- [For older children, money can also work, but amounts must be kept to a symbolic level, e.g. a clear rule of pricing toys within the range 0.50 – 1 € will work well, introducing the concept of use of money]



- The host should provide at least some water to drink. Possibly avoiding plasti bottles and single-use glasses :) Snacks and other drinks can be brought by participants, or offered at each toy stand.

Please let us know your feedback.

«DATA COLLECTING TABLE IN CLEAN-UP ACTIVITIES»

Time & Date

[illegible]

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