

# This Works!

A Technology Education Project

## Module 1: Message in a bottle – Rise to the challenge!

**Tip:** Hide the message in a bottle and only reveal it as the story progresses. If any of the students want to open the message and read it, let them. Otherwise, you can read the message aloud for the whole class.



### Story:

Day is dawning on a faraway planet. The Kip crew wake up, eager to start a new day. Today, they've decided to meet on the shore of a nearby lake. What interesting things will the day bring?

The first one to approach the lake is Tuka. She runs at great speed and easily jumps over large rocks. If you listen very carefully, you can hear a strange buzzing sound coming from the other direction. That's Maco. Once again, he's developed some kind of new contraption to cool the hot air. Waaba is the third one to drift onto the scene with a cheerful yet distracted smile. As usual, she's clearly dreaming about the future. But where on earth is Soca?

The three friends look around, trying to find the final member of their crew. They're used to this shy guy suddenly appearing from the strangest and most surprising places. Eventually, Maco notices that one of the rocks on the shore seems to be moving. So that's where Soca is! His funny transformation trick has worked again. The whole crew burst out into chuckles. By the way, did you know that Soca is the most talented transformer on the entire planet? Even better than the most skilled chameleon!

Just as they find Soca, Tuka notices something bright floating in the water, a little further out from the shore. "Look! There's something bobbing about strangely in the waves!" Soon, everyone is staring intently at the object that Tuka has pointed out. "A message in a bottle! But how on earth are we going to get it onto the shore?" wonders Soca. Tuka shows off her strength, flexes her bulging arm muscles and says that she'll handle this in the blink of an eye. She reaches and reaches for the bottle... until she flops onto the damp sand, right on her stomach. (Oops! That was a mistake!) Tuka brushes the water off herself and then starts laughing with the others at her funny mishap. She realises that using strength won't help in this situation. They need a completely different kind of superpower. Maco has an idea: why not use Waaba's superpower for this? Yes! The crew's only talented flier immediately takes to the air and soars over the water.

With Waaba's help, it's not long before the bottle has been brought ashore and the friends have opened it. The message inside is written very strangely, but it seems important:

(The teacher has taken out the bottle and one of the students gets to open the bottle and read the message! After the message has been read, the story continues...)



“Hmm... Who on earth is this Smeek the L D I Z A R who’s contacting us once again?” Tuka wonders aloud, before continuing: “It doesn’t matter – our super team is needed again! The Kip crew is ready for this mission!” “Of course we’re going to take part and shoulder our responsibility for this! Let’s help those in need!” Maco adds. “But I don’t think we can manage this without backup,” says Soca, cautiously. “We can only build one machine. Who can help us? I wonder if there’s anyone else around here who would be keen to build a moving machine?”

**Discussion tips:** 1) Is everyone willing to help the Kip crew with this project? Is everyone prepared to take responsibility and contribute to the team effort with their activity and output? If someone doesn’t feel ready, how can everyone work together to support them? 2) What does ‘recycled material’ mean? What materials can you reuse before they end up as waste? Can you still send a message in a bottle these days? Why is it important to protect the sea and nature? Think about this from the perspective of building a sustainable future.

**News links:**

1) Message in a bottle

[https://en.wikipedia.org/wiki/Message\\_in\\_a\\_bottle](https://en.wikipedia.org/wiki/Message_in_a_bottle)

2) Clothes out of plastic bottles

<https://blaino.wordpress.com/2011/03/05/earthtec-used-plastic-bottles-to-clothes/>

<https://earth911.com/eco-tech/bottles-are-recycled-into-clothing/>



### Game: “The Kip crew’s letter game”

Get into teams of 3 to 4 people. Form as many letters as you can using your own bodies. You can use more than one person to create a letter.



### Exercise:

Form the letters L, D, I, Z, A, and R using wooden sticks. Can you work out who sent the message by rearranging the letters? Can you build the letters so they stand upright? Did it work? What could be helpful? (Blu Tack? Frozen peas?) **Tip:** continue the construction project using sticks and peas! What’s the biggest and tallest single structure that you can build?



### Suggestion for pre-schooler cooperation: “Smeek tag”

One person is ‘it’. When someone gets caught, they have to form the letter S (using either their hands or their whole body) and then hiss. Rescuing people: someone runs opposite the person who was caught and makes the same kind of letter S.



### Suggestion for mentoring cooperation:

Paint (or otherwise mark) the aforementioned wooden sticks so that the pair always has 5 blue sticks and 5 red sticks. How many different decompositions can you do using the red and blue sticks? (Decompositions of the number 5.) You can also use the red and blue sticks to help you invent some short addition and subtraction stories.



### Oops! That was a mistake!

Discuss what mistakes are and how it feels to make a mistake. What can you do if your friend makes a mistake? Is there anyone here who’s never ever made a single mistake? Can you find the “Oops! Mistake!” sign in your student workbook? If a student makes a mistake during the module and learns from it, they can colour in the sign. Did anyone get a photo or video of their mistake?





### Documentation:

Take pictures of the stick letters or decompositions. Also take photos of the structures that you build with sticks and peas. Save these photos in your own learning portfolio. Think about all the new things you've learnt during this module!



### Homework:

1) Search your home for things that you can find at least five of. All five items should look the same. You can either photograph, draw or write about them. Ask a parent or guardian for help!

2) Bring some cardboard tubes from home (for example, from toilet rolls, kitchen towel and aluminium foil, or a potato chip tube without the end).



### Message for parents:

"The first stage in our journey with the Kip crew is now behind us. First, we solved a riddle that arrived as a message in a bottle. Through games and activities, we practiced cooperative skills, English and maths. We used wooden sticks to build structures, practice decompositions of the number 5, and do small addition and subtraction sums using the numbers 1–10. We also documented what we did and discussed what inclusion, responsibility and sustainable development mean in this context. Our homework is to search our homes for things that we can find at least five of. All five items should look the same. Parents can be assistant detectives! The objects can be photographed, drawn or described in writing. During this module, we should also bring a variety of cardboard tubes to school for a future machine construction project (for example, from toilet rolls, kitchen towel and aluminium foil, or a potato chip tube without the end). We also need some kind of bag in which we can store our supplies while we're waiting to start the construction phase."

## CURRICULUM



**When doing this module's activities with your students, you should note the following objectives and content for elementary instruction:**

- TC7: inclusion, responsibility, building a sustainable future
- ENG: sounds, letters, developing reading and writing skills
- MA: decompositions of the number 5, small addition and subtraction sums using the numbers 1–10
- ENV: developing environmental sensitivity and acting in a sustainable manner

**This is based on the Finnish National Curriculum**



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