



# IDEAS BY NATURE

## LEARNING HOW THE OUTDOORS SOLVES PROBLEMS

BIFKiDS is collaborating with Project Dirt and Dirt is Good/OMO to provide a 'Creative Problem Solving' module for Outdoor Classroom Day 2018 for kids to create new sustainable ideas that are good for our world.

We're focusing on the problem of *plastics*.

## SUSTAINABILITY CHALLENGE FOR 2018

### "HOW TO CREATE A BETTER WATER BOTTLE?"

Where 'better' means a more sustainable bottle.

## CREATIVE PROBLEM SOLVING EXERCISE

We know being outdoors is brilliant for imagination and creativity. Our BIFKiDS module is designed to direct this natural, adventurous creativity using four simple steps:

### 1. WHAT - GETTING HANDS ON OUTDOORS

We begin outdoors so kids can learn from their surrounding environment. Kids use their senses to investigate what's happening outdoors; what can they see/hear/touch/feel/etc? What do they notice? What clever things has the natural world developed? What examples can they collect?

**Goal** *physically collect examples of what the outdoors environment does to 're-use, contain and decompose'*

### 2. WHY - UNDERSTANDING THEIR OUTDOOR ENVIRONMENT

Now kids investigate and answer questions about nature. Is it about shapes? Feel the difference in shapes. Or the materials? Does it feel strong, or soft? Does it feel porous, or hard? Why are things re-used? Who or what benefits? Can they determine natural cycles?

**Goal** *use their collected examples to explain their thoughts on why nature and the outdoor environment does what it does*

### 3. BIF ... WE HAD AN IDEA!

Now using the stimulus of what they've seen and heard and touched, and their thoughts on why, kids apply this knowledge to inspire a better idea for a new kind of Water Bottle:

*Could it be shaped like something outdoors?*

*Could it be re-used in some way?*

*What if it became something else after it was used? Etc*

**Goal** *creating new and better water bottle ideas inspired by nature*

### 4. HOW - USING THINGS FROM THE ENVIRONMENT TO MAKE IDEAS REAL

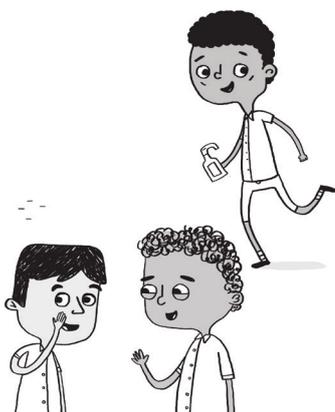
The final challenge is showcasing and celebrating their Better Water Bottle idea. We suggest 2 ways:

**Goal i** *kids use elements from the outdoors to make their idea real (it's easier to describe an idea by physically making an example of it)*

**Goal ii** *kids present their idea to the class (using their 'prototype')*

## FINALLY

We plan to take the best idea sent to us and use it as inspiration for a new BIFKiDS Creative Problem Solving resource. So please, if you can take photos and capture idea examples your kids produce then do send them in. We promise we'll reply and let you know who provides us with the best idea.





## OPTIONAL EXTENSION ACTIVITIES

For teachers and classrooms that want to deepen the Creative Problem Solving exercise, please see these optional extras below.

### a. RESOURCES

#### 1. Hands on with our Creative Problem Solving Worksheet

Our worksheet is a fun way to direct the Problem Solving exercise informed by What/Why/How. On this sheet we narrate in a simple 1, then 2, then 3, then 4 to stimulate kids' senses for adventurous creativity.

BIFKiDS worksheets are designed to be used in multiple ways:

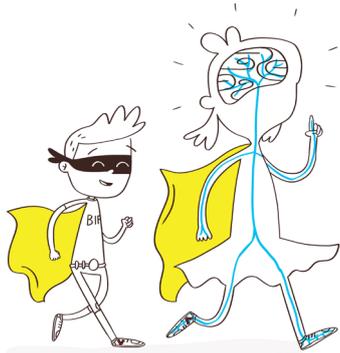
*When possible printed and used for hands on 'fill-in-your-own' sheet*

*Reproduced on a white-board to help kids be hands-on with their problem solving*

*Replicated in chalk etc on pavements, walls, boards or card*

#### 2. Teachers Problem Solving Guide

Using the same worksheet, we prompt around the content to help teachers understand the narrative and explain how to setup each section.



### b. EXTENSION ACTIVITY

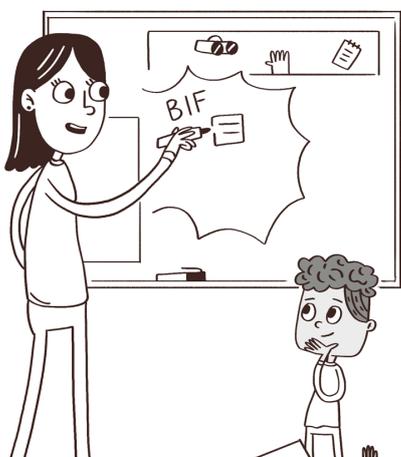
Our Sustainability Challenge can be amplified through classroom activities the week prior to help add depth and context to the challenge.

#### The Week Before – Gathering a Plastic Mountain

To help build context for the problem of single use plastics, teachers can set their classroom this challenge:

*"gather every piece of plastic they come across at home, school or otherwise and build a pile in the classroom"*

Towards the end of the week, the resulting plastic pile will be large. This rubbish 'mountain' will help visually communicate the size of the Sustainability challenge. And it can become a physical resource for a classroom mathematics exercise to further engage with the task.



/FOR MORE ON BIFKiDS INCLUDING EXTRA RESOURCES  
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 IDEAS  
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OUTDOOR  
 CLASSROOM  
 DAY

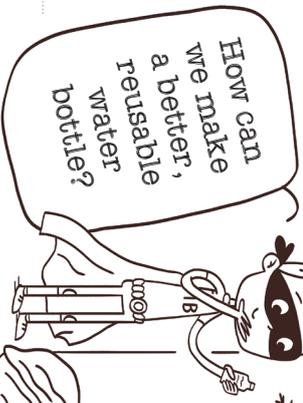
  
 Dirt is Good

Name: \_\_\_\_\_

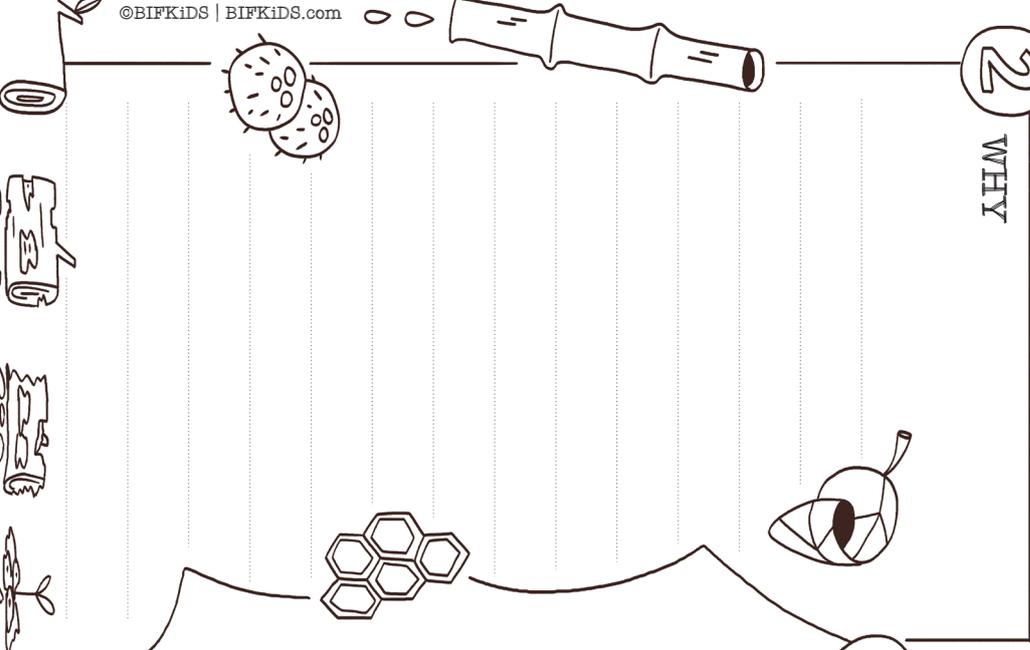
Age: \_\_\_\_\_

From: \_\_\_\_\_

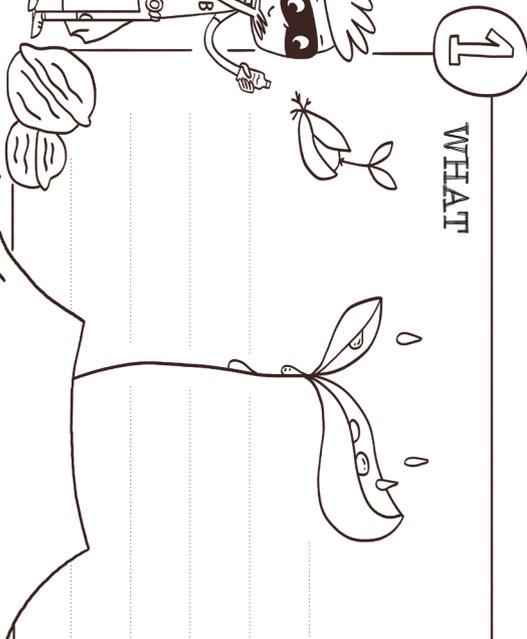
## 1 WHAT



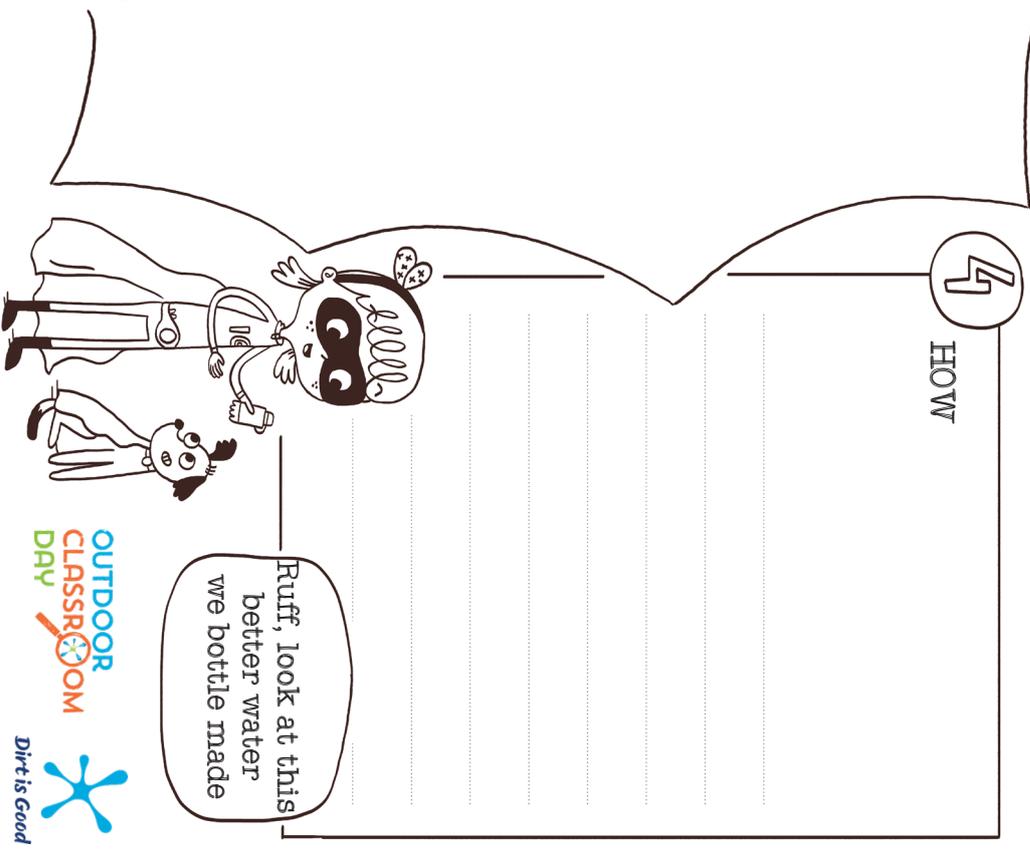
## 2 WHY



## 3 I had an idea!



## 4 HOW



Ruff, look at this better water we bottle made

Plastic takes 400 years to decompose.

(Notes for teachers)

1

Ask the children to get hands on outside... (exploring how nature moves liquids, contains and decomposes)

2

Help the kids tease out why the outdoor world does it this way...

4

Get the kids to tell you how they would make it - and if you can - collect outdoor things to make it

**BIFKIDS Sustainability Challenge**

Name: \_\_\_\_\_  
 Age: \_\_\_\_\_  
 From: \_\_\_\_\_

**1 WHAT**

How can we make a better, reusable water bottle?  
 I had an idea!

**2 WHY**

Plastic takes 400 years to decompose.

**3 HOW**

Ruff, look at this better water we bottle made

OUTDOOR CLASSROOM  
 Dirt is Good

3

Help the kids use the what and why inspiration to create their new water bottle idea.